Suicide Response Preparedness in Counseling Students: A Study of Knowledge, Attitudes, and Simulated Behavior

A Dissertation Presented for the

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Degree

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Dedication

This thing is dedicated to my Nana and my Granddad.

Be good, be nice, be sweet. Don’t get in no trouble.

Acknowledgements

First, I would like to thank my chair, Dr. Joel Diambra, for putting his faith in me since my first visit to campus way back when. He knows how bratty and stubborn I am as well as anyone, so the freedom he gave me to take this study and run with it challenged me to be a better researcher and collaborator.

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Abstract

Suicide, or "death caused by self-directed injurious behavior with (sic) intent to die as a result of the behavior," is a major public health concern in the United States. Professional counselors are likely to encounter a suicidal client even before completing their educational training. Due to the frequency of counselor trainees' encounters with suicidal clients, these students are likely to face this challenge as early as their first practicum experience. Due to the complexity of assessing and treating persons at risk for suicide, student counselors not explicitly trained in these practices are at risk for not identifying and adequately managing suicide risk. The purpose of this study was two-fold: 1) to explore and describe counseling students' knowledge about suicide, attitudes about suicide and suicide response, and simulated suicide response behavior; and 2) to identify to what extent counseling students' knowledge and attitudes about suicide and suicide response relate to and predict simulated suicide response behavior. Outcomes from this study suggests that the constructs of knowledge about suicide, attitudes about suicide and suicide prevention, and simulated behavioral response are related to one another. However, these relationships should be interpreted with caution. Only declarative knowledge about suicide as measured by the SKS (Smith et al., 2014) and a moderating effect of declarative knowledge and attitudes were able to significantly predict suicide response behavior scores.

Keywords: *suicide response, counseling students, counselor education, knowledge, attitudes, simulated behavior*

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Chapter 1: Introduction

Suicide, or "death caused by self-directed injurious behavior with (sic) intent to die as a result of the behavior" [Centers for Disease Control and Prevention (CDC), 2013, p. 1], is a major public health concern in the United States. In 2013, suicide was the 10th leading cause of death for persons nationally, due to a total of 41,149 suicide deaths (CDC, 2013). This results in a national rate a rate of 12.6 suicides per 100,000 people, or one suicide death every 13 minutes (CDC, 2013). Overall, more people die by suicide than homicide in the United States in a given year [American Association of Suicidology (AAS), 2009].

Suicide and the Counseling Profession

Prevalence

With the prevalence of suicide death and other forms of suicidality in our current culture, counselors are highly likely to encounter suicidal clients. The majority of persons who attempt suicide seek help from a mental health or related professional in the few months leading to their attempt (Goldsmith, Pellmar, Kleinman, & Bunney, 2002; Luoma, Martin, & Pearson, 2002; Fawcett, 1999). Further, upwards of 90% of clinicians work with suicidal clients at some point in their career (Feldman & Freedenthal, 2006), while over one third of mental health clinicians will experience the suicide death of a client (Gill, 2012). Specific to the counseling profession, McAdams and Foster (2000) found that 24% of all counselors experience the suicide death of a client, and Granello (2010) claimed that almost all counselors will encounter a suicidal client during their career.

While the likelihood that professional service providers in various community, education, and mental healthcare settings will encounter a suicidal client is extremely high, a growing body of research suggests that these groups are likely to experience client suicidality even before

completing their educational training. Researchers have reported that 11% (Wachter Morris & Barrio Minton, 2012; Kleespies, Penk, & Forsyth, 1993) to 17% (Kleespies, Smith, & Becker, 1990) of trainees experience a client who completes suicide. In a study of new counselors (e.g., counselors who had completed their masters training programs within the last two years and were employed in the field at the time of the study), Wachter Morris and Barrio Minton (2012) found that when asked about their field experiences prior to graduation, 83% of participants reported experiencing a client with suicidal ideation, 59% saw a client who engaged in suicidal behavior, and 70% served a client who engaged in some other form of self-injurious behavior. Binkley and Leibert (2015) suggested that due to the frequency of counselor trainees' encounters with suicidal clients, these students are likely to face this challenge as early as their first practicum experience. Due to the complexity of assessing and treating persons at risk for suicide, student counselors not explicitly trained in these practices are at risk for not identifying and adequately managing suicide risk (Binkley & Leibert, 2015; Granello, 2010).

Impact on the Counselor

Aside from the obvious negative repercussions of client suicide (e.g., loss of life, effects on loved ones, costs to healthcare system, etc.), clincial and community service providers across helping profession disciplines universally report that client suicide is a deeply detrimental experience to their professional and personal well-being (Hoffman, Osborn, & West, 2013; Miller, Iverson, Kemmelmeier, Maclane, Pistorello, Fruzzetti et al., 2011; Wachter Morris & Barrio Minton, 2012; Barrio Minton & Pease-Carter, 2011; Foster & McAdams, 1999). Bongar (2002) suggested that when working with suicidal clients, clinicians expose themselves to an occupational hazard, which can result in a myriad of negative ramifications. These include burnout (Grant et al., 2011), compassion fatigue (Hendin, Haas, Maltsberger, Szanto, &

Rabinowicz, 2004), traumatic stress (Jacobson et al., 2004), guilt (Chemtob, Hamada, Bauer, Torigoe, & Kinney, 1988a), intrusive or avoidant thoughts (McAdams & Foster, 2000), and anxiety (Neimeyer, 2000). In addition to these intrapersonal emotional and cognitive effects due to exposure to suicidality, counselors often encounter ethical and theoretical barriers in this work. When faced with suicidal clients, counselors experience high levels of fear related to professional ramifications and liability (Fleet & Mintz, 2013; Simon, 2000). They and others (Joiner, Van Orden, Witte, & Rudd, 2009) suggested that counselors face the interpersonal challenge of "duality" (Fleet & Mintz, 2013, p. 50), or negotiating the conflict between their own preference for the client to not die by suicide while the client sees suicide as a solution with a myriad of potential benefits.

As client suicide clearly negatively affects the work and quality of life of professional counselors and other service providers, early career counselors may be more at risk for these and other deleterious effects, which suggests the presence of developmental implications of suicide for counselor trainees (Hoffman et al., 2013; McAdams & Foster, 2000). When compared to more experienced professionals, trainees generally report a higher degree of anxiety, fear, guilt, anger, and even hatred about working with clients at risk for suicide (Kleespies, 1993; Knox, Burkhard, Jackson, Shaack, & Hess, 2006; Osteen, Jacobson, & Sharpe, 2014). Specifically, Kleespies et al. (1993) found that the earlier a trainee experiences suicide attempt or death in their training program, the more severe and long lasting were their distress and the overall negative impact of the suicide event. Due to lesser developed skill sets and knowledge around technical and theoretical orientations, counselor trainees may more likely perceive themselves to be incompetent or failures in the wake of a suicide death. These resulting perceptions may

severely inhibit the development of self-efficacy and self-concept as a counselor (Foster & McAdams, 1999).

The Profession's Response to Suicide

As an extensive and growing body of research clearly demonstrates the prevalence of suicide and necessity for the counseling profession to address it, the Council for Accreditation of Counseling and Related Educational Programs (CACREP; 2009) included in their standards for training in accredited counseling programs a requirement for crisis-response training in the form of "crisis intervention and suicide prevention models, including the use of psychological first aid strategies" (Section II.G.5.g.) Specifically, CACREP (2009) requires counselor training programs to demonstrate student learning outcomes in crisis intervention, and assessment and management of suicide risk. However, the extent to which counselor educations programs have historically done so suggests there is more work needed in training counselors in these arenas.

Despite the high levels of exposure to suicidal clients among counselor trainees and even more so for counseling professionals, training in suicide prevention and intervention in counselor education programs is inconsistent at best, and largely ignored in the literature (Wachter Morris & Barrio Minton, 2012; Barrio Minton & Pease-Carter, 2011). Generally, incongruence exists between the perceptions of importance of the incorporation of suicide intervention and prevention training in counselor education programs and the actual implementation of formalized or evidence-based instruction methods. While counselor educators maintain that suicide intervention preparedness is a very important component of counselor training, Reeves, Bowl, Wheeler, and Guthrie (2004) found that far fewer formally incorporate theoretically or empirically valid approaches to in their curricula. Approximately one third of counselors report having received no training in suicide issues at the master's level (Allen, Burt, Bryan, Carter,

Orsi, & Durkam, 2002). This finding aligns with Wachter Morris & Barrio Minton's (2012) outcome that less than half of surveyed CACREP-accredited counseling programs offered a course in general crisis intervention. This lack of training on behalf of counselor education programs has a detrimental impact on actual and perceived competence in developing counselors. Recent research suggests that quality and quantity of didactic preparation in suicide and other crisis response predicts counselor self-efficacy to address these issues (Wachter Morris & Barrio Minton, 2012). They also found that of those who did receive training, less than half of counselors rated their training in suicide assessment as "good" or "excellent" (Wachter Morris & Barrio Minton, 2012, p. 261).

Empirical Base: Knowledge, Attitudes, and Behaviors

Suicide remains a significant issue for clinical and community service providers. The United States federal government has partnered with other professional organizations to highlight several key areas that health service providers should target to improve suicide response preparedness. These include increasing the quality of knowledge about suicide, the accuracy and appropriateness of attitudes about suicide, and enacting behavioral change in suicide response in clinicians (U. S. Department of Health and Human Services [HHS] Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012).

An empirical model for the impact of knowledge and attitudes on suicide response behavior has had an increasing presence in the literature over the past ten years (Jacobson, Osteen, Jones, & Berman, 2012; Oordt, Jobes, Fonseca, Schmidt, 2009; Pompili, Girardi, Ruberto, Kotzalidis, & Tatarelli, 2005; Wyman, Inman, Guo, Brown, Cross, Schmeelk-Cone et al., 2008). This has resulted in a call from policy makers for clinicians and clinical training programs to focus on these specific dimensions of preparedness (Osteen et al., 2014) with two

main foci: increasing knowledge and improving attitudes about suicide. These foci, however, are not without challenges. First, researchers and educators alike have identified preparatory content knowledge about suicide as an integral factor in suicide response training, and should include risk factors, identification of warning signs and protective factors, and techniques for assessment and intervention (Brown, 1987; Pisani, Cross, & Gould, 2011; Quinnett, 2007). Second, researchers agree that attitudes about suicide and working with a suicidal client significantly affect the counselor's willingness to seek and be receptive to training in suicide response (Gibb, Beautrais, & Surgenor, 2010; Herron, Ticehurst, Appleby, Perry, & Cordingly, 2001). Although ample evidence suggests that accurate knowledge and attitudes about suicide are vital to competently working with suicidal clients, no cohesive theoretical frame exists to guide the development toward suicide response competence in counselor training.

Theoretical Framework: Bennet-Levy's (2006) Cognitive Model of Therapist Skill Development

Ultimately, the constructs of knowledge, attitudes, and behavior presented in the empirical literature comprise the larger concept of counselor competence in responding to suicidal clients. Within counselor education, competence is largely regarded as 1) developmental and 2) able to be impacted by training and experience (McAuliffe & Eriksen, 2010). While multiple theories exist that relate indirectly to counselor competence (e.g., Krathwohl, 2002; Skovholt & Ronnestad, 2001), few models related directly to counselor skill development exist. Due to this dearth in theoretical bases, Bennett-Levy (2006) incorporated empirical research and existing conceptual frameworks to create a cohesive model of therapist skill development. Bennett-Levy's (2006) cognitive model of therapist skill development consists of three systems of skill development: the declarative system, the procedural system, and the reflective system

(DPR). Grounded in a variety of other learning theories including information processing (Binder, 1999), experiential learning (Kolb, 1984), and developmental theory (Skovholt & Ronnestad, 2001), the DPR model serves as a framework to understand mechanisms by which counselors learn and how different types of counselor skills relate to one another. Bennett-Levy (2006) suggested that each of the three components of the DPR model serve an independent, but interrelated function in counselor learning and development.

Declarative System

The declarative system of the DPR model pertains to the knowledge of factual information. This component draws heavily from the work of Binder (1999) on information processing and declarative knowledge. Bennett-Levy (2006) stated that this system "is concerned with 'knowing that'" (p. 59) – the ability to identify and recall abstract or concrete facts or concepts. The declarative system includes three components: conceptual knowledge, interpersonal knowledge, and technical knowledge. Declarative knowledge is typically acquired through didactic teaching strategies (e.g., lectures, reading) (Bennett-Levy, 2006). While this system is integral to counselor competence, Bennett-Levy (2006) suggested that these training strategies alone may fail to translate this system into practical usability.

Procedural System

The procedural system includes the application and demonstration of declarative knowledge and includes the "how and when" (p. 59) of using certain skills properly and at the right time (Bennett-Levy, 2006). Bennett-Levy (2006) stated that procedural knowledge is largely implicit, and becomes increasingly refined with experience. In the case of novice counselors, they will move through a natural developmental process of acquiring declarative knowledge about how to work directly with clients in their classes. They will then transfer this

knowledge to action in clinical situations; and with repeated implementation and evaluation, the declarative knowledge of skills will evolve into automatic and fluent behavioral response (Bennett-Levy, 2006). However, during this "habit forming" phase, regular feedback is vitally important to avoid the development of inappropriate skills.

Reflective System

Bennett-Levy (2006) suggested that the third component of the DPR model, the reflective system, is solely responsible for moving the novice counselor developmentally forward into the domain of expert. Supported by the work of other theoreticians (Kolb, 1984; Schon, 1983), Bennett-Levy (2006) described reflection as "a metacognitive skill, which encompasses observation, interpretation, and evaluation of one's own thoughts, emotions and actions, and their outcomes" (p. 60). He suggested that reflection plays a more significant role in the later stages of counselor development, but serves to enhance the quality and longevity of the learning that occurs within the declarative and procedural systems (Bennett-Levy, 2006). Specifically, Bennett-Levy (2006) suggested that the reflective system allows for the counselor to develop a working awareness of his or own self- and self-as-therapist schemas (e.g., knowledge, attitudes, personal attributes), which are invariably related to the counselor's interpersonal effectiveness with clients. This is an integral component of counselor development in that some researchers suggest that the skills related to interpersonal effectiveness (e.g., open attitudes about the client, empathy, tolerance, encouragement, etc.) are less amenable to traditional didactic training than are technical skills (Bennett-Levy, 2006; Dobson & Shaw, 1993).

Integration

The aforementioned constructs described in Bennett-Levy's (2006) DPR model relate very closely to those in the empirical literature about suicide response. The declarative system is

represented by knowledge about suicide (e.g., suicide statistics, warning signs of suicide). The reflective system comprises the counselor's attitudes about suicide and his or her perceptions about confidence or self-efficacy to intervene with a suicidal client. The procedural system reflects suicide response behavior in that this is the domain in which counselors must actually implement their knowledge and navigate their own attitudes and beliefs to intervene in the event that a client is at risk for suicide. A cohesive exploration of these constructs in counseling students could generate significant implications for what it means to create competence in suicide response within counselor training.

Statement of the Problem

While the relationship among knowledge, attitudes, and behaviors regarding suicide prevention and intervention has been explored within other helping professions and the students within them (Barrio-Minton & Pease Carter, 2011; Binkley & Leibert, 2014; Fleet & Mintz, 2013; Jacobson et al., 2012; Oordt et al., 2009; Mackelprang, Karle, Reihl, & Cash, 2014; Osteen et al., 2014; Pompili et al., 2005; Wachter-Morris & Barrio-Minton, 2012; Wyman et al., 2008), no such relationship has been investigated within the counseling student population. Further, no studies with a focus on students in any of the helping professions have attempted to assess student response behavior that is simulated. This includes students that do not have to engage with "real" clients in the practicum or internship phase of their training, thusly preventing any additional risk to student or client due to lack of training (Binkley & Leibert, 2014). Still, none of the suicide response preparedness-related studies have attempted to assess the extent to which knowledge and attitudes might relate to and predict simulated suicide response behaviors in counseling students.

Purpose and Significance of Study

The purpose of this study was two-fold: 1) to explore and describe counseling students' knowledge about suicide, attitudes about suicide and suicide response, and simulated suicide response behavior; and 2) to identify to what extent counseling students' knowledge and attitudes about suicide and suicide response relate to and predict simulated suicide response behavior using Pearson correlation and hierarchical multiple regression. This study stands to contribute to the counseling and counselor education literature because it is the first to explore the status of suicide response readiness and potential contributors to it (e.g., knowledge and attitudes about suicide) in counseling students before they risk engaging with suicidal clients unprepared. By assessing simulated suicide response, this study allows for an exploration of competency by proxy; thus maintaining the safety and well-being of clients and trainees alike. Outcomes for this study may introduce implications for change needed in the timing, type, and necessity of suicide response training in counselor education to ensure the development of competent practitioners.

Assumptions and Limitations

I assume that a sample of counseling students in programs pulled from online counseling related listservs represent the larger counseling student population. As this study relies on self-report measures for data collection, I assume that participants will be honest in their responses to the survey instrument and will take the time to consider their responses carefully. I also assume that the survey instruments used in this study are appropriate for the participant sample due to their use with similar populations. Further, this study assumes that the assessment of knowledge, attitudes, and suicide response behavior as called for by the National Action Alliance for Suicide Prevention is relevant and applicable to counselor training and the counseling profession at large.

Threats to Internal Validity

Participants were not included or excluded based upon the amount and type of previous suicide response training or experience, personal or professional, received before the study, which could affect performance on measures. However, number of hours previously received in suicide prevention training were included as a control variable in the study. As participants were counseling students and client safety is always paramount, a proxy for response behavior was appropriate. I assessed behavior using the Suicide Intervention Response Inventory – Revised (Neimeyer & Bonnelle, 1997). While this scale has been tested for validity and reliability, I assume that simulated response behavior would translate to actual response behavior. Further, due to the naturalistic, non-experimental design of this study, no causal relationships among knowledge, attitudes, and behavior can be inferred. Also, due to the design of this study and the statistical analyses chosen (Pearson correlation and hierarchical linear regression), explanation of outcome for the dependent variable (e.g., simulated suicide response behavior) is limited to the identified predictor variables. For example, a number of unaccounted for extraneous variables may also contribute to the measured outcomes of the dependent variable. This is a commonly known limitation of statistical analyses based upon the linear model (Keith, 2005).

Threats to External Validity

This study also included limitations related to external validity. Due to the non-random purposive sampling structure to be used in this study, selection bias is possible. Therefore, the sample from whom data is collected may not be representative of the entire counseling student population. Participants were recruited from counseling programs across the United States in efforts to garner as representative a sample as possible. Also related to selection bias, participants

who elected to complete the survey instrument may have had pre-existing interest or experience with the study topic which may limit generalizability of results.

Definitions of Key Terms

Throughout this study, several key terms will be referred to and should therefore be clearly defined. The key terms below include definitions of the content foci of this study, investigated variables, and the target population.

Attitudes. Merriam-Webster (2016) defines attitudes as the way one thinks and feels about someone or something; a feeling or way of thinking that affects one's behavior. In this study, this term pertains specifically to attitudes about suicide, such as preventability, morality, and individual role in prevention.

Intervention. The National Suicide Prevention Lifeline (2015) defines intervention as a strategy or approach that is intended to prevent an outcome or to alter the course of an existing condition.

Knowledge. Knowledge is defined in Merriam-Webster (2016) as facts, information, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject. In this study, knowledge refers specifically to knowledge about suicidal behavior.

Counseling students. This term indicates students enrolled part- or full-time in a school or mental health master's level graduate counseling program.

Prevention. The National Suicide Prevention Lifeline (2015) defines prevention as a strategy or approach that reduces the likelihood of risk of onset, or delays the onset of adverse health problems or reduces the harm resulting from conditions or behaviors.

Risk factors. The National Suicide Prevention Lifeline (2015) defines risk factors as factors that make it more likely that individuals will develop a disorder. Risk factors may encompass biological, psychological or social factors in the individual, family and environment.

Self-harm. The National Suicide Prevention Lifeline (2015) defines self-harm as the various methods by which individuals injure themselves, such as self-cutting, self-battering, taking overdoses or exhibiting deliberate recklessness.

Simulated behavioral response. Neimeyer & Bonnelle (1997) conceptualized simulated behavioral response as the way a mental health professional or paraprofessional (i.e., volunteer, student) might verbally respond to a simulated client's indication of suicidality via brief case illustration.

Suicidal behavior. The National Suicide Prevention Lifeline (2015) defines suicidal behavior as a spectrum of activities related to thoughts and behaviors that include suicidal thinking, suicide attempts, and completed suicide.

Suicidality. The National Suicide Prevention Lifeline (2015) defines suicidality as a term that encompasses suicidal thoughts, ideation, plans, suicide attempts, and completed suicide.

Suicide. The CDC (2015) defines suicide as death caused by self-directed injurious behavior with an intent to die as a result of the behavior.

Suicide attempt. The CDC (2015) defines a suicide attempt as a non-fatal, self-directed, potentially injurious behavior with an intent to die as a result of the behavior; although the behavior might not result in injury.

Suicidal ideation. The CDC (2015) defines suicidal ideation as thinking about, considering, or planning suicide.

Summary

One of the key functions of this study was to educate the reader and to continue the professional conversation surrounding the importance of the counseling profession's role in suicide intervention and prevention in the United States and abroad. At the core of this study are the constructs of competence and ethics. While CACREP mandates training programs to focus on eight core areas of counselor development, all of them are secondary to our duty to keep our clients safe. As ample research suggests that new counselors overwhelmingly feel unprepared and averse to performing the basic task of preventing suicide death, counselor educators must respond by altering the priority and methods for suicide response training. During the practicum and internship phase of counselor training, counselor educators cannot guarantee that students will not encounter suicide risk during this process. In fact, research suggests that it is actually a likelihood. Therefore, this study stands to contribute to the literature by being the first of its kind to assess predictors of counseling students' actual response behavior in a way that protects clients and students alike. This allows for the potential identification of factors that counselor educators need to significantly consider when building courses and other training opportunities around suicide response.

The next chapter includes a literature review of suicide response preparedness, training, and contributing factors in counselors and counselor trainees. The purpose of Chapter 2 is to identify the gap in the literature where this study has the potential to contribute. Chapter 3 includes a thorough description of the research design and methodology that comprises this study, including participants, data collection methods, measures and instrumentation, and data analysis. A thorough description of the results of the statistical analyses per each research question comprises Chapter 4. Finally, Chapter 5 concludes with a discussion about the

implications of this study for the counseling and counselor education disciplines, an expansion of the limitations of this study, suggestions for future research on this topic, and final thoughts.

Chapter 2: Review of the Literature

This chapter includes a review of the empirical and conceptual literature relevant to the current study. The main purpose of this review is to examine the construct of suicide preparedness conceptualized as knowledge about suicide, attitudes about suicide, and behavioral responses to suicidal clients in the literature. The first portion of this chapter includes a review of current suicide-related statistics and the history of general suicide prevention efforts in the United States. The second portion includes a thematic summary of existing literature regarding knowledge, attitudes, and behaviors regarding suicide within mental health professionals (e.g., psychologists, social workers, marriage and family therapists, psychiatrists, psychiatric nurses, etc.), with a narrowing focus on professional counselors. The third section includes a more detailed review of the empirical and conceptual literature regarding knowledge, attitudes, and behaviors related to suicide within students in general mental health disciplines, with a narrowing focus on counseling students.

It should be noted that the purpose of this review was to explore the current status of research related to suicide response preparedness in counselors, related disciplines, and the students within them, rather than clinical or theoretical approaches or techniques (e.g., risk assessment, clinical interventions, etc.) for the treatment of suicide. Specifically, studies that focus on knowledge, attitudes, and behaviors and the relationships among them as key study outcomes were the focus of this review. For a review of studies regarding counseling and therapy processes and outcomes in the assessment, prevention, intervention, and treatment of suicide, refer to Winter, Bradshaw, Bunn, and Wellsted (2012) and Winter, Bradshaw, Bunn, and Wellsted (2013).

Note to Seminal Suicidology Theory: Emile Durkheim

The study of suicide as its own theoretical and scientific construct has existed for over a century. In that time, scholars of a variety of disciplines including medicine, psychology, psychiatry, sociology, and others collectively studied and attempted to understand what Maris, Berman, and Silverman (2000) deemed "intentional self-murder" (p. 30). However, this work truly began with French sociologist and social psychologist, Emile Durkheim (1951, original work 1897). He was the first social scientist to attempt to define and conceptualize suicide in a way that could move beyond the realm of theology and philosophy. He defined suicide as any case of death that resulted directly or indirectly from a positive or negative act of the victim, which he knows will produce the death result (Durkheim, 1951). Durkheim posited that suicide is largely a social (versus individual) phenomenon that manifests in one of four core forms: egoistic suicide, altruistic suicide, anomic suicide, and fatalistic suicide. Egoistic suicide "results from lack of integration of the individual into society" (Durkheim, 1951, p. 14), and largely results in an experience of disconnectedness, helplessness, and inadequacy. Altruistic suicide "results from the individual's taking his own life because of higher commandments" (Durkheim, 1951, p. 15), which manifests in an individual's deeply held belief that his or her self-inflicted death would serve a larger purpose (e.g., martyrs, suicide bombers, self-sacrifice to save another, etc.). Durkheim described anomic suicide as a "result from lack of regulation of the individual by society" (1951, p. 15), and is demonstrated by a sense of confusion, disillusionment, and disappointment in one's current social environment that eventually leads to an unraveling of one's social and moral norms. Lastly, Durkheim considered fatalistic suicide to be an inverse version of anomic suicide, in that where anomic suicide is due to a total lack of regulation and

structure, fatalistic suicide occurs when an individual perceives an excessive and inescapable amount of restriction and lack of freedom (e.g., prisoners, veterans, etc.) (Durkheim, 1951).

While there are many critics from other disciplines (e.g., Mayo, 1992; Menninger, 1938; Schneidman, 1993) of Durkheim's theory and other theories that have been more successful in predicting actual suicide death (Joiner et al., 2009), he is largely considered to be the father of suicidology. His endeavors to scientifically examine suicide serve as the basis for the works of all suicidologists since.

Epidemiology of Suicide

As discussed in the previous chapter, suicide is a significant public health issue within the United States and internationally. In 2013, suicide was the 10th leading cause of death in the United States, which results from one death by suicide every 13 minutes (CDC, 2013). The reach of suicide appears to be even greater when parsed out among demographic and cultural groups. Results from the CDC's national injury reporting survey revealed that suicide was the third leading cause of death for persons aged 10-14, and second for persons aged 15-34 (2013). In 2011, suicide was most common in middle aged adults (56% of all suicides were completed by this population), whose suicide rate increased by nearly 30% between 1999 and 2010 (Sullivan, Annest, Luo, Simon, & Dahlberg, 2013). Suicide discrepancies also exist across genders, with males completing suicide nearly four times as frequently as females. This results in suicide being the seventh leading cause of death for males and 14th for females across all age groups (CDC, 2013). Further, researchers have recently begun to explore the prevalence of suicide among racial and ethnic groups. Within Native American and Alaska Native populations, suicide is the eighth leading cause of death across all ages, and the second leading cause of death in in youth and young adults (ages 10-34), with a suicide rate is 1.5 times higher than the national average

(Kann, Kinchen, Shanklin, Flint, Hawkins, Harris et al., 2014). As suicide rates remain constant and even increasing among some groups over the past ten years, this public health concern also introduces significant financial burden to individuals and larger systems. Overall, suicide results in $51 billion in combined work loss, medical, and other instrumental costs per year (CDC, 2013).

While death by suicide is a significant national healthcare issue, other aspects of suicidality (e.g., suicidal thinking, fantasizing, planning, non-suicidal self-injury, etc., Meyer, Salzman, Youngstrom, Clayton, Goodwin, Mann et al., 2010) are even more prominent. Each of which introduce their own negative repercussions on the quality of life for persons who experience suicidality first hand, those surrounding suicidal persons, and the larger systems in which they live. In 2013, an estimated 9.3 million adults experienced suicidal thinking, a phenomenon most common among adults ages 18-25 [Substance Abuse and Mental Health Services Administration (SAMHSA), 2014]. In the same year, emergency departments treated over 494,169 people with self-inflicted injuries throughout the United States (CDC, 2013). Often regarded as a developmental next step in suicide risk (Joiner, 2005), making plans to complete suicide is also prevalent in adults throughout the United States, with an estimated 2.7 million persons engaging in this activity in 2013 (CDC, 2013). Further, a total of 1.3 million persons attempted suicide in 2013 (CDC, 2013). However, this statistic and all suicide-related statistics are theorized to be lower than the actual number of attempts due to faulty reporting, lack of training for medical examiners and coroners in identifying signs of suicide, and surveillance systems historically in place (CDC, 2013; Joiner et al., 2009).

While non-fatal suicidality naturally does not result in death directly, extensive research suggests that it is predictive of increasingly risky suicidal behavior, including eventual death by

suicide (Van Orden, Witte, Cukrowicz, Braithwaite, Selby, Joiner et al., 2010; Joiner, 2005; Joiner et al., 2009). Suicide not only affects those who die or attempt it. McIntosh (2010) indicated that approximately five million Americans became suicide survivors over the last 25 years, with six additional people vicariously yet seriously affected per every suicide death. Therefore, suicide is not a problem that one public sector will solve. Rather, the involvement of a variety of professional and community groups is needed to prevent suicide and its high societal costs.

History of Suicide Prevention in the United States

While suicide prevention became a targeted area for change in the United States in the 1950s, these early efforts expanded over the next several decades. This culminated in a call from the Surgeon General in 1999 to prevent suicide (U. S. Department of Health and Human Services [HHS] Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012; U. S. Public Health Service, 1999). Shortly following was the release of the first National Strategy for Suicide Prevention in 2001 (U. S. Department of Health and Human Services (HHS) Public Health Service, 2001), which elicited a domino effect of suicide prevention efforts, including programming, federal funding streams, training opportunities, and research agendas across the nation. The National Action Alliance for Suicide Prevention partnered with the Surgeon General to revise the 2001 National Strategy in 2012. This was an effort to incorporate the most current and rigorous research findings with input from practitioners, community leaders, and persons with lived experience with suicide (U. S. Department of HHS Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012). This release contained a total of 12 goals grouped within four strategic directions; including creating healthy individuals and communities, clinical and community preventive services, clinical treatment and

support services, and surveillance and research efforts (U. S. Department of HHS Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012).

Even though the 2012 National Strategy endeavors to enlist persons from a variety of professional, community, and individual sectors to engage in suicide prevention, it specifically targets community, school, substance abuse, and mental healthcare service providers (U. S. Department of HHS Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012). Therefore, as counseling professionals commonly work in these respective systems, counselor educators, counselors, and counselors-in-training are strategically positioned to reduce and ideally eliminate suicide in the United States. While this appears to be a daunting task, the National Action Alliance provided some guidance around practice areas on which counselors and our peers should focus. Specifically, the National Strategy calls for counselors to be trained in, implement, and conduct research on evidence-based suicide prevention, intervention, and treatment approaches (U. S. Department of HHS Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012). Members of the National Action Alliance placed especially high emphasis on the training of mental health and related practitioners, and highlighted the dimensions of knowledge, attitudes, and behaviors as core dimensions of competence and foci for mental health educators and researchers (Schmitz, Allen, Feldman, Gutin, Jahn, Kleepsies et al., 2012; U. S. Department of HHS Office of the Surgeon General and National Action Alliance for Suicide Prevention, 2012).

Suicide Response Preparedness in Mental Health

When a mental health professional has a client who dies by suicide, a myriad of repercussions follow for the clinician. These include, but are not limited to questioning from self and others about the clinician's competency, emotional duress, and potential for ethical and legal

ramifications (Chemtob et al., 1988a; Chemtob et al., 1988b; Schmitz et al., 2012). Because of these issues and the obvious desire to protect the lives of suicidal clients, calls for the necessity and improvement of suicide prevention and intervention training within mental health have been present, though sparse, in academic literature and policy work for over three decades (Boldt, 1976; Kleepsies et al, 1993; Maris, 1973; Osteen, Frey, & Ko, 2014; Pisani et al., 2011; Quinnett, 2007; Schmitz et al., 2012). Osteen and colleagues (2014) identified that over the course of this research agenda, the constructs of knowledge about the status, warning signs, theory, and treatment for suicide; attitudes about the preventability of suicide; and behavioral responses to suicidal clients have emerged as the core components of suicide prevention and intervention preparedness. Negative attitudes about suicide and low confidence to work with suicidal clients can inhibit clinicians from providing effective, necessary, and often time-sensitive care to their clients who may be at risk (Pompili et al., 2005). Despite the creation and implementation of clinician-focused trainings [e.g., Assessing and Managing Suicide Risk (AMSR)], no consistent research regarding which training components or structures are most effective for the retention and application of suicide response skills within specific clinical groups (e.g., psychologists, counselors, practicum/internship students, etc.) currently exists (Osteen et al., 2014). Schmitz et al. (2012) went so far as to claim that despite the need and potential effectiveness of formal training during and after graduate level study, "virtually nothing has been done by licensing boards, training programs, or professional organizations" (p. 297) to systematically incorporate it.

Scholars and policy makers have dedicated their efforts to the implementation and evaluation of training within mental health to some degree. This section will focus on the presence of empirical research on knowledge, attitudes, and behavioral response to suicide

within mental health professionals. This includes psychologists, psychiatrists, psychiatric nurses, and social workers. A more narrow focus on the research on these constructs specifically within the counseling field will conclude the section.

Knowledge, Attitudes, and Behaviors: Preparedness within Mental Health Professionals

While an existing body of research exists regarding the importance of knowledge about suicide for general gatekeepers (i.e., community members, educators, emergency room personnel, etc.; Smith, Silva, Covington, & Joiner, 2014) as well as general suicide assessment and intervention competencies (Granello, 2010; Osteen et al., 2014; Rudd, Cukrowicz, & Bryan, 2008; Suicide Prevention Resource Center, 2011), less is known empirically about the role that knowledge about suicide plays in suicide response among mental health professionals. Osteen et al. (2014) identified knowledge as one of the core components of suicide response preparedness in mental healthcare providers. Also cited as a key factor in suicide response competence, attitudes about suicide is more prevalent in the literature surrounding mental health professionals. Primary skills and response behaviors include identification and assessment of at-risk persons, and referral for additional mental health services (Osteen et al., 2014). Mental health professionals, however, should be competent in the delivery of more advanced services, including "comprehensive assessment and suicide risk screening and short- and long-term risk management and treatment" (Osteen et al., 2014, S219). Suffering a similar issue as knowledge about suicide, little empirical research exists regarding suicide response behaviors in mental health professionals. It should be noted that for the purposes of this review, response behaviors does not include treatment outcome studies of specific clinical approaches. This review focused on studies in which 1) clinicians served as participants, and 2) clinician knowledge and/or attitudes were assessed. This section explores the presence of empirical research on knowledge,

attitudes, and behavioral response to suicide within mental health professionals. This includes psychologists, psychiatrists, psychiatric nurses, and social workers.

Descriptive Research. A literature review study conducted by Pisani and colleagues (2011) revealed that a total of 12 formalized suicide prevention and intervention workshops exist that target mental health professionals; however, none of the research on these trainings includes an evaluation of improvement in knowledge. However, a call from the AAS Task Force (Schmitz et al., 2012) suggested that despite the lack of overt investigation of knowledge acquisition and retention in professional suicide response training, this construct is still of utmost importance to competence in suicide risk assessment, intervention, and management.

Feldman and Freedenthal (2006) conducted a descriptive survey study of 598 professional social workers to assess attitudes about their graduate-level training in suicide intervention and prevention. Regarding attitudes about the level and type of training received, approximately two thirds (67.4%) either somewhat or strongly disagreed with a statement indicating the receipt of enough training in suicide response in graduate school. Conversely, 72% of participants somewhat or strongly agreed to having received enough training after graduate school to appropriately intervene with a suicidal client. In addition, three out of four participants ranked suicide intervention training during graduate school as very or somewhat important, while 22.6% rated training in suicide intervention at the graduate level as very unimportant. Feldman and Freedenthal (2006) also explored social workers' experiences with suicidal clients. Using an internally created instrument, researchers garnered participant feedback on the types of training received, hours of training received, and amount of experience working with suicidal clients. Nearly all participants (92.8%) indicated having provided services to at least one suicidal client, and more than a third were seeing a suicidal client at the time of the study. However,

"suicidal" was not clearly defined in the survey instrument (i.e., informally assessed vs. formally assessed using evidence-based assessment methods, level of suicidality, etc.). This finding is particularly alarming considering that only 21.2% reported having any formal training in suicide response, and almost half (41%) reported not covering suicide in any of their graduate coursework. Of those who did receive coursework or practicum-level training in suicide response, 24.6% to 46.3% reported having less than two hours dedicated to the topic. Despite the fact that researchers gathered data on a large sample of social workers, a significant limitation in this study is the lack of inferential or descriptive statistical analysis to explore relationships between attitudes and behaviors.

In a similar study, Sanders, Jacobson, and Ting (2008) conducted a descriptive mixed methods study of 515 professional social workers that investigated the frequency of suicide attempt and death, the level of education of those participants who had experienced an attempt or death, and attitudes and perceptions regarding past and future training. Most notably, researchers attempted to assess participant attitudes and perceptions regarding beneficial components of training they had received, and suggestions and their for future training using qualitative thematic analysis. The most common themes emerged as: 1) the need for training in coping techniques in the wake of suicide completion or attempt; 2) the need for training in suicide assessment; 3) "debriefing the suicidal behavior" (p.11) (i.e., peer support, legal/ethical consultation, supervision, etc.); 4) inclusion of the dimensions of clinician power and control with suicidal clients; and 5) the need for training in suicide-specific treatment interventions.

Gagnon and Hasking (2012) conducted an exploratory study of Australian psychologists' (N = 81) attitudes towards suicide and self-harm. To assess attitudes to self-harm, researchers used the Attitudes towards Deliberate Self-Harm Questionnaire (ATDHSQ), a 33-item

assessment of confidence in assessment and referral, dealing effectively with deliberate self-harm, empathic approach, and ability to cope with legal and hospital regulation. Participants provided their opinions regarding suicide via the Suicide Opinion Questionnaire, a 100-item instrument with eight internal scales including suicide reflects mental illness, right to die, normality of suicide, etc. Researchers also collected demographic data, such as age and years of experience. Results indicated that participants generally had positive or appropriate attitudes about suicide and self-harm, though this was not related (assessed via Pearson bivariate correlation) to age and years of experience. Moreover, younger, less experienced participants generally ranked their confidence in assessment and referral higher than their more experienced peers. However, experience with a larger number of suicidal or self-harming clients was related to attitudes of confidence in their treatment and expression of empathic attitude. Gagnon and Hasking (2012) suggested that the higher level of confidence in younger clinicians may be due to an inflated sense of competence due to naiveté, or possibly to improved graduate level training. However, data on these variables were not collected in this study.

In efforts to explore therapists' attitudes about the concept of rational suicide, Werth and Liddle (1994) conducted a quantitative survey study of 400 professional members of the American Psychological Association. Authors reported 81% of participants indicated a belief in the concept of rational suicide, but varied in their degree of acceptance of rational suicidal ideation. Participants also indicated differences in the extent and types of preventative and intervening behavior as a function of contextual circumstances. Specifically, results suggested that participants were most accepting of suicidal ideation and least prone to intervene in cases of terminal illness, and were less accepting of the client's decision to die and more prone to intervene in situations involving physical pain, psychological pain, and bankruptcy, respectively.

Quasi-Experimental Research. In an effort to move beyond descriptive research regarding clinician attitudes, Oordt et al. (2009) utilized a pre/post/follow-up design to explore the outcomes of an empirically-based training in suicide risk assessment and treatment could impact a variety of variables, including clinician attitudes, namely confidence, beliefs, and behaviors. This study targeted a total of 82 active duty mental health professionals (including psychiatrists, doctoral level psychologists, doctoral level social workers, master's level social workers, mental health technicians, and psychiatric nurses) within the United States Air Force, and their outcomes after receiving the *Air Force Guide for Managing Suicidal Behavior* (AF-MSB), a 12-hour educational intervention targeting suicide risk assessment, management and treatment, and military-specific content. Using internally created quantitative survey questionnaires, researchers assessed clinician confidence with three questions (e.g., "I am confident in my ability to successfully assess suicidal patients;" "…to successfully treat suicidal patients;" "I am hesitant to ask a patient if he or she is suicidal," p. 24) with a 5-point agree-disagree Likert scale response system. Researchers also created three survey items to assess attitudes and beliefs about treating suicidal persons (e.g., "I believe that suicidal patients are best treated by hospitalization;" "…clinicians should be legally responsible for protecting patients from self-harm;" "…my current practices are sufficient to protect me about liability issues in the case of a suicidal death," p. 24). Researchers did not report any reliability or validity assessments for either of these scales. Assessed using single sample *t*-tests, results indicated no statistically significant increase in confidence in assessing risk at posttest, but did show a statistically significant increase at six-month follow-up. Confidence in treating suicidal behavior increased significantly at posttest and sustained at follow-up. The vast majority of participants indicated no hesitancy in asking participants about suicide at pretest, and no statistically significant change

occurred at pretest or posttest. None of the items regarding attitudes and beliefs about treating suicidal patients showed statistically significant change at follow-up. Researchers concluded that brief, professionally-focused training can impact clinician confidence, though the precise effects of specific training components on attitudes remain unknown. Oordt and colleagues (2009) also investigated clinician behaviors. At posttest, 97% of participants agreed or strongly agreed that they would make at least one change in their procedures for working with clients at risk for suicide. At follow-up, 83% indicated that they made behavioral change in their clinical work, while 66% reported formal changes to clinic policy. While these results are promising for this specific training (AF-MSB), generalizability to other means of suicide response preparation is limited. Further, as with Feldman and Freedenthal's (2006) study, Oordt et al. (2009) did not assess for relationships or predictability among attitudes or behaviors.

In a similar study, Jacobson et al. (2012) conducted a pre/post/follow-up study to assess changes in attitudes and other variables in a total of 452 clinicians after receiving the Recognizing and Responding to Suicide Risk (RRSR) training. Based upon 24 core competencies identified as best practices, this two-day skills training relies on case application to translate knowledge about suicide to behavioral practice. Participants included clinicians from a variety of helping disciplines including psychology, counseling, social work, psychiatrists, nurses, and medical doctors. Researchers collected data immediately before the training, immediately after the training, and four months after the training. Attitudes were assessed using Herron's et al. (2001) *Attitudes toward Suicide and Suicide Prevention* scale (ASP), a 14-item five-point Likert scale self-report measure designed to assess the direction (e.g., positive or negative) of attitudes about suicide and suicide prevention. This measure has demonstrated adequate to good internal consistency and test-retest reliability alpha scores (.77 - .85; Herron et

al., 2001). Using repeated measures analysis of variance (ANOVA), researchers identified a statistically significant improvement in attitudes across all three time points, although participants indicated positive attitudes at pretest. These researchers also explored the impact of this training on use of risk assessment skills and ability to respond to suicide risk. Approximately 91% percent of participants reported having worked with a suicidal client at the time of the study, and 24% had experienced a client's death by suicide. Using scales adapted from Gask et al. (2006) as well as clinical vignettes, researchers found statistically significant increases in participants' ability to assess for suicide intent at posttest, which was maintained at follow-up. However, potentially due to the high scores at pretest, assessment of suicide risk and management of suicide risk did not increase significantly. Perhaps the most interesting contribution of this study was the use of clinical vignettes to assess the application of practice skills, opposed to the reliance on self-report commonly used in gatekeeper and similar training outcome studies. The researchers stated, "Lacking the ability to observe actual clinical practice, the use of vignettes to assess clinical skills is a reasonable proxy and has been used to assess outcomes from suicide training when direct observation of clients and clinical practice with clients is blocked" (Jacobson et al., 2012, p. 482). Jacobson et al. (2012) claimed that while other trainings have shown improvement in attitudes at posttest, very few have managed to maintain these effects at follow-up periods. A potential reason for this could be the unique emphasis on applied skill utilization within this RRSR training. While this was a novel approach to assessing actual response to suicidal clients, the researchers did not attempt to explore any relationships among behavior the other study variables (e.g., attitudes).

Similarly, Gask, Dixon, Morriss, Appleby, and Green (2006) used a pretest/posttest/follow-up design to evaluate the outcomes from the eight-hour Skills Training on

Risk Management (STORM) delivered to 458 health and mental health professionals. Results indicated that, despite initial increases in attitudes and self-efficacy, improvements in actual suicide interview skills were not maintained at the 4-month follow-up.

Osteen et al. (2014) identified the difficulty in directly linking knowledge to response behaviors, as well as issues related to existing research and instrumentation being related to specific trainings (Jacobson et al., 2012; Osteen et al., 2014). However, Smith et al. (2014) created and piloted a measure designed explicitly to assess for knowledge about suicide among healthcare workers, including but not limited to mental health professionals. This measure, the Suicide Knowledge Scale contains nine statements about suicide prevalence and preventability designed to elicit a true/false response. I describe this measure in greater detail in Chapter 3. Despite the dearth of literature on the dimension of knowledge about suicide within mental health professionals, more research on this topic exists within mental health trainees and students. I discuss this portion of the literature in a following section.

Knowledge, Attitudes, and Behaviors: Preparedness within Professional Counseling

As discussed earlier, CACREP (2009) requires counselor training programs to demonstrate student learning outcomes in crisis intervention, and assessment and management of suicide risk. Schmitz et al. (2012) identified that the counseling profession was the only one out of all of its mental health peers to include explicit language about the assessment and management of suicide risk in its accreditation requirements. However, Schimitz et al. (2012) also brought attention to the fact that no state licensing boards, counseling and otherwise, require formal suicide-specific continuing education. While some authors have contributed conceptual articles regarding assessment strategies (Granello & Granello, 2007; Granello, 2010) and counselor development and supervision models (McGlothlin, Rainey, & Kindsvatter, 2005),

relatively little research exists on the relationship among professional counselors' knowledge, attitudes, and behaviors regarding suicide response. A more narrow focus on the empirical research on these constructs within professional counselors comprises this section.

Quantitative and Mixed Methods Research. Building upon the empirical work of Werth and Liddle (1994) on psychotherapists' attitudes about rational suicide and the conceptual work of Kiser (1996) on counselors and physician-assisted suicide, Rogers, Gueulette, Abbey-Hines, Carney, and Werth (2001) conducted a mixed methods survey study of 241 professional counselors. Authors used a non-specified quantitative survey adapted from that used in the Werth and Liddle (1994) study. This survey included demographic items (including religious orientation), questions related to experience with suicidal clients, and a clinical vignette reflecting a case of a client who wished to die by suicide. The vignette was followed by three seven-point Likert-scale questions that asked participants to rate their level of behavioral intention to prevent the suicide as a professional and as a friend, as well as their level of perceived viability of the suicide for self. The survey also included open-ended items including rationale for each rating of the Likert-scale items and personal beliefs and attitudes about the concept of rational suicide. Participants reported similar rates of experience with suicidal clients to other studies (71% clients with suicide attempt; 28% clients with suicide completion). Researchers found that participants indicated on average a mid-level degree of intention to intervene with the client in the case vignette (3.38 to 4.79), reflecting a moderate level of acceptance of rational suicide. This was significantly related to the counselor's religious orientation, with persons who identified as Catholic being the most opposed, as well as the gender of the client in the vignette. While this study used a unique approach to relate intended behaviors, attitudes, and personal experience and history, it may be limited in its generalizability

due to a low response rate (24%), recruitment pool of only members of the members of the American Mental Health Counseling Association, and ambiguous assessment measures.

In another study, King, Price, Telljohann, & Wahl (1999) assessed school counselors' attitudes of confidence and self-efficacy to identify students at risk for suicide. Using an internally created and validated survey instrument, researchers collected data from 186 high school counselors about efficacy expectations, outcome expectations, and outcome values regarding adolescent suicide. Results revealed that only 38% of participants believed that they could identify a youth at risk for suicide, while 44% believed that they could confer with teachers or parents to assess youth suicide risk. However, 79% indicated that they could ask a youth about suicide, and 85% could refer a suicidal youth to a mental health professional. In addition, the majority of participants (82%) indicated the belief that one of the most important things they could do as a school counselor would be to prevent suicide.

Building off of this work exploring counselor attitudes, Wachter Morris and Barrio Minton (2012) collected quantitative survey data from 193 new professional counselors. Specifically, the authors investigated new counselors' (e.g., those who graduated within two years prior to data collection) perceptions of their graduate-level preparation in crisis response (including suicide), engagement in crisis and suicide response behaviors, and crisis and suicide-related self-efficacy. The survey for this study was adapted from earlier studies by the authors and existing literature, and contained items related to demographics, training experiences, participation in crisis and suicide intervention, and self-perceived skills. Results indicated that the majority of participants received little or no formal training (e.g., a for-credit course) in crisis intervention, although they rated their level of preparation as adequate. However, multivariate analysis of variance revealed a statistically significant difference in ratings of didactic

preparation and self-efficacy existed between participants who had a crisis course and those who did not. Multiple regression also revealed receiving a course in crisis preparation predicted current self-efficacy and self-efficacy at graduation. This is one of very few quantitative studies addressing the status of crisis and suicide preparedness in counselors. However, the lack of validated instruments limits the comparison to similar research done in other disciplines.

Qualitative Research. In a phenomenological exploratory constant comparative study of four practicing counselors, Reeves and Mintz (2001) used semi-structured interviews to explore counselors' behavioral, cognitive, and emotional responses to working with suicidal clients. Researchers found that the participants experienced a variety of emotional reactions to suicidal clients, including "anxiety, fear, panic, impotence and doubts about their ability to practice, as well as doubting their own professional competence to work safely and competently" (p. 174). Participants indicated that when conducting a suicide risk assessment, they largely executed this process in an informal way. None of the participants reported using a formal or evidence-based means of assessing suicide risk. In regards to skill development and theoretical knowledge, participants asserted that they did not receive adequate training to effectively work with suicidal clients. Rather than basing their response behaviors on theory or evidence-based models, or their own clinical judgment, participants reported using agency or organizational policy as the premise for their procedural decision making.

Moerman (2012) used a similar structure to explore seven person-centered counselors' experiences and conceptualization of working with suicidal clients "within the confines of their work ethos" (p. 215). The author posed the argument that the often directive and behavioral nature of suicide assessment and intervention may conflict with the person-centered counselor's theoretical beliefs and practices of working with clients. The researcher asked participants

several questions regarding values and beliefs, meaning making of client suicidal thoughts, practices of suicide contracting, influence of organizational policy on their response behavior, perceptions of risk assessment, and feelings about participating in the study in a semi-structured interview format. The researcher identified three main themes: 1) impact of the act of risk assessment on the self; 2) counselor's experience of self; and 3) therapeutic process related to risk assessment. The first theme included concepts of emotional and attitudinal impact on the counselor (e.g., helplessness, hopelessness, apprehensiveness, anxiety, fear, lack of knowledge and control over the client's behavior, etc.). The first theme also included behavioral impact of suicidal risk on the counselor, in which participants indicated changing the style and type of language they used when presented with suicide risk (non-directive to directive). The second theme included importance of personal and professional lived experience with suicide and the impact of personal beliefs and biases (i.e., personal life-affirming attitudes/values) on behavioral response to suicidal clients. The concepts of the importance of therapeutic relationship, the need for supervision and support, and consequences of client attempt or death comprised the third theme. This study garnered a level of detail about the counselor's experience of working with suicidal clients that the counseling or related professions had not been seen at the time of publication. However, it was not without limitation. Participants were recruited from the author's own professional network, potentially influencing responses. Further, due to the overt emphasis on person-centered counselors, generalizability to the larger counseling profession is limited.

In a unique grounded theory study of counselor supervisors perspectives of providing supervision to counseling students working with suicidal clients, Hoffman et al. (2013) conducted semi-structured interviews with five counselor educators serving as clinical supervisors to counseling students. Generally, participants were asked to describe their

experiences providing supervision to counselors working with a suicidal client. Data analysis revealed emergent themes related to 1) the role of the supervisor; 2) the learning experience of working with suicidal clients; 3) effects of client suicidal behavior on the supervisory relationship; and 4) effects of client suicidal behavior on the structure of supervision. Most relevant to this review, participants indicated that behavioral exposure to working with suicidal clients within the structure of a supervisory relationship is beneficial to the development of knowledge and response skills for counselors-in-training. However, participants also suggested that more emphasis on didactic (classroom-based) and experiential (role-playing) training early in trainee development is vital for the creation of competence in working with suicidal clients.

Suicide Response Preparedness in Mental Health Trainees

While knowledge that client suicidality impacts the mental health professional in a variety of ways, research suggests that it may affect trainees in various mental health fields differently and possibly more severely (Foster & McAdams, 1999; Gill, 2012; Kleespies, 1993; Kleespies, Smith, & Becker, 1990; Knox et al., 2006; Osteen, Jacobson, & Sharpe, 2014). In tandem, researchers as far back as the 1970s have identified the status of graduate training in suicide response to be far less than satisfactory or sufficient (Barrio Minton & Pease Carter, 2011; Bongar & Harmatz, 1989; Chemtob et al., 1988a, 1988b; Kleespies, 1993; Henn, 1978; Wachter Morris & Barrio Minton, 2012). In the same calls for enhanced attention to suicide prevention and intervention preparedness in mental health professionals, policy makers and researchers alike have emphasized the need for increased incorporation, regulation, and research of suicide-specific training in mental health training programs (Schmitz et al., 2012). As knoweldge, attitudes, and behaviors were identified in these calls as the core components for suicide response competence for trainees and professionals alike, this section includes a review

of the literature on these constructs and the relationships among them as explored in graduate-level students in mental health programs. It will conclude with a review of knowledge, attitudes, and behaviors regarding suicide response within counseling students specifically.

Knowledge, Attitudes, and Behaviors: Preparedness in Mental Health Students

It is not new knowledge that graduate students in various mental health disciplines are not shielded from working with clients at risk for suicide during their field work experiences (Chemtob et al., 1988a, 1988b; Kleespies, Penk, & Forsyth, 1999; McAdams & Foster, 2000; Wachter Morris & Barrio Minton, 2012). Even still, training across these disciplines at the graduate level has remained inconsistent at best, under-attended at most, and non-existent at worst (Dexter-Mazza & Freeman, 2003). A few scholars have worked to create curricular models for suicide care for multidisciplinary mental health graduate trainees (Cramer, Johnson, McLaughlin, Rausch, & Conroy, 2013; Lomax, 1986; McAdams & Keener, 2008; Perlin, 1975; Rudd et al, 2008). As early as the mid 1980s, Lomax (1986) proposed a core curriculum for psychiatry residents with a conceptual focus on knowledge, attitudes, and behavioral skills. In his model, he suggested the need for formal didactic training in suicide epidemiology and risk factors, experiential skills development and supervision, and guidance toward functional and appropriate attitudes towards persons at risk for suicide and the clinican's role in their care. However, these scholars and their peers have done little work to explore the efficacy and accuracy of these models. Schmitz et al. (2012) and Osteen et al. (2014) identified that the discrepancy between aspiration and implementation is alarmily and frustratingly wide. Further, within the graduate level training that does exist, little theoretical or empirical knowledge exists regarding the best ways to create learning around knowledge, attitudes, and response behaviors in trainees. This section will highlight the research that has been done on these topics.

In an exploration of psychology interns' perspectives on the quanitity and quality of their tarining in suicide response, Dexter-Mazza & Freeman (2003) surveyed 238 participants using an assessment tool used by Bongar & Harmatz (1991). They collected information on demographics, the graduate program, amount and type of suicide specific training, and self-assessment of competence and knowledge. Nearly all (99.2%) of trainees reported having treated at least one suicidal client, only half reported their programs offering formal training in suicide, and less than one third (29.4%) reported receiving training in addressing suicidal behavior beyond the risk assessment phase. Despite only half reporting formal training, most participants rated their ability to assess suicide risk, to work with and manage a suicidal client, and their knowledge of suicide and working with suicidal clients quite high. Using point biserial correlations, researchers found weak, but statistically significant relationships between ability ratings and formal training received, ability to manage suicidal clients and formal training received, and knowledge and formal training received. The authors concluded that this discrepancy in formal training and high self-ratings on these dimensions of preparedness may indicate a false sense of confidence in treating suicidal clients, potentially leading to the provision of poorer quality of care.

Mackelprang et al. (2014) conducted a similar study recently in which they collected survey data from 59 clinical psychology doctoral trainees at the pre- (n = 19) and interim practicum/internship (n = 40) levels. These data included demographics, exposure to training and supervision regarding suicide assessment, exposure to bereavement by suicide, attitudes and confidence regarding providing care to clients at risk for suicide, and suicide intervention skills. To assess skills, researchers used the Suicide Intervention Response Inventory – Revised (SIRI-2, Neimeyer & Bonnelle, 1997), a quantitative measure containing 25 items in which participants

are asked to rate the appropriateness of responses to client statements with some degree of suicidal risk. Results of this study revealed that, unlike its predecessors, the majority of participants (76.3%) reported receiving in-class training in suicide assessment or intervention. Of participants that were in the practicum phase of their training, 50% reported treating clients with suicidal ideation while only 20% reported receiving supervision regarding suicide assessment. Researchers found no significant difference in SIRI-2 scores between students who reported formal training and those who did not, but did identify a trend toward significance regarding year in practicum with second year students producing better SIRI-2 scores than first year students. Using chi-square analyses, researchers found SIRI-2 scores to vary significantly as a function of self-ratings of perceived knowledge and perceived confidence. This study was one of very few to explore relationships among training, knowledge, attitudes, and skills regarding suicide in graduate students in any mental health field. This study, while making significant progress toward answering the call from previous researchers and policymakers, was not without limitation. First, the authors did not use psychometrically validated scales to assess perceived knowledge or confidence, and authors provided little information on the questions used to assess these variables. Second, all participants for this study were selected from one graduate psychology program, thus limiting the generalizability of results. Third, the sample size for this study was relatively small considering the number of analyses conducted.

In one of few training outcomes studies found in this review, Jacobson et al. (2012) conducted a randomized control trial of the Question, Persuade Refer (QPR; Quinnett, 2007) suicide gatekeeper training with 73 social work graduate students in the second year of their field placement. QPR is a 2-hour introductory gatekeeper training designed to teach trainees how to identify and intercept a suicidal person, and manage imminetn suicide risk for long enough to

refer the person at risk to a professional who can intervene. In this study, 35 students were randonly assigned to participate in QPR, while 38 were placed in a control group. Students in both groups were similar in demographics and training histories. Researchers measured knowledge about suicide and suicide prevention, attitudes to suicide prevention, perceived preparedness, experience with suicidal clients, and suicide prevention behaviors at pre-training, post-training, and six-month follow-up. Scales used to assess knowledge, perceived preparedness, and suicide prevention behaviors were all self-report measures created and used by Wyman et al. (2008). Items on the behaviors scale are retrospectively phrased and most appropriate for use with participants who have experience with suicidal clients. Attitudes about suicide and suicide prevention were assed with Herron's et al. (2001) Attitudes to Suicide Prevention Scale. Students who attended the QPR training demonstrated significantly more improvement at post-training than the control group in the following areas: knowledge about warning signs, self-evaluation of knowledge, efficacy to perform the gatekeeper role, and suicide prevention behaviors. While these differences between groups sustained over time, they were not statistically significant at follow-up. This study is one of only two identified to use a randomized control research design, which was a significant strength. Another strength of this study was the assessment of multiple dimensions of knowledge, attitudes, and behaviors. However, similar to the Mackelprang et al. (2014) study, all participants were selected from one Master of Social Work (MSW) program. This study also relied on scales that were created and used with a non-mental health sample, and no validity or reliability analyses were conducted in this study. Finally, while QPR is an evidence-based training, it was designed for community-level gatekeepers, not mental health clinicians. While this training is appropriate and far better than

nothing for beginner clinicians, more advanced training in the assessment, intervention, and management is suicide risk is needed.

Similarly, Osteen et al. (2014) conducted a randomized control trial with 73 MSW internship students from whom baseline data using the same scales as in the Jacobson et al. (2012) study. Results from this study indicated mid- to low-level scores on the different dimensions of knowledge, low to moderately positive scores on attitudes to suicide prevention, and low incidence of experience with and/or referring suicidal clients. Using bivariate correlations, researchers found the following: 1) moderate but statistically significant positive relationships between attitudes and knowledge scores; 2) no relationship between knowledge of warning signs and behaviors; 3) large correlations between knowledge of institutional resources and behaviors; 4) moderate but statistically significant positive relationships between perceived preparedness and behaviors; and 5) no relationship between scores on the ASP (Herron et al., 2001) and behaviors. This exploratory study was also novel in its investigation of relationships among these dimensions of suicide preparedness, though it exhibits similar limitations to the Jacobson et al. (2012) study, in addition to only having reported baseline data. Results from this study offer more questions than answers, and thusly the more research is needed.

Knowledge, Attitudes, and Behaviors: Preparedness within Counseling Students

As mentioned previously, of the mental health fields, only the accreditation body for counseling, CACREP, requires some degree of didactic preparation in crisis response, which includes suicide (CACREP, 2009; 2016). The Association for Counselor Education and Supervision (ACES) Ethical Guidelines for Counseling Supervisors (1993), as well as the American Counseling Association (ACA) Code of Ethics (2014) specifically discuss the need for competence and the use of evidence-based practice in guiding students through crisis situations.

Considering the fact that the terminal degree in the counseling profession has a distinct focus on education and training future counselors, it stands to reason that counselor educators and researchers are uniquely suited to build upon the existing research and policy work regarding suicide response preparedness in graduate students.

However, only a select few researchers within the counseling and counselor education disclipline have focused explictly on suicide response preparedness in any depth (Barrio Minton & Pease Carter, 2011; Binkley & Leibert, 2015; Foster & McAdams, 1999; Granello, 2010; Juhnke, 1994; McAdams & Foster, 2000, 2002; Reeves et al., 2004; Wachter Morris & Barrio Minton, 2012). For example, Juhnke (1994) and Foster, McAdams & colleagues (1999, 2000; 2008) were among the first counselor educators to explore the extent and impact of working with suicide clients within counselors and counselors in training. They identified the fact that inadequately trained and supported student counselors' development may be negatively and permanently affected by clients with suicide attempts or deaths. In response to this, McAdams & Keener (2008) formulated a conceptual framework for counselor development regarding response to client crisis, including suicide. Using a temporal frame, McAdams & Keener (2008) suggested that crisis curriculum should be multiphasic, segmented into pre-crisis, in-crisis, and postcrisis; each including components of knowledge, attitudes, and skills, with an emphasis on reflective self-awareness.

Still, very little empirical research exists regarding counseling student preparedness on any of these dimensions. Wachter Morris and Barrio Minton (2012) stated that in a review of the literature, they only identified one empirical study regarding crisis-related preparation in CACREP-accredited master's level counseling programs. Since the publication of that article, Binkley and Leibert (2015) conducted a survey study of 113 pre-practicum master's level

counseling students, in which they investigated type of suicide response training received (e.g., no training, in-class training, out-of-class training, both in- and out-of-class training), and its relationship with participants' self-reported confidence and anxiety about providing counseling to clients at risk for suicide. Researchers created the Counseling Students' Perceived Preparation for Suicide Counseling (PPSC) scale to examine confidence and anxiety. This scale consists of eight statements for which participants indicate their level of agreement using a 5-point Likert scale, and demonstrated good internal reliability and validity in its initial validation. Using one-way ANOVA, the authors found that students with no training in suicide response reported signficantly lower confidence than students with any type of response training. No signfiicant differences were identified among the different types of training. This is the only study to date on suicide-related preparedness in counseling students at the pre-practicum level. The researchers suggested that identifying students' attitudes and reactions related to their anticipated work with suicidal clients is an important component in assessing and intervening in their readiness to enter the field (Binkley & Leibert, 2015). The unique contribution of this study to the literature is its emphasis not only on the receipt of training, but the timing of training. Despite educators and supervisors' best efforts to ensure student counselors only practice within their areas of competence during their practicum and internship work, ample research suggests that these students will encounter a suicidal client during this portion of their training. These findings, in alignment with the other work cited throughout this review, suggest that counselor educators should dedicate more efforts to the provision of suicide response training throughout the graduate training process. This study also includes several limitations. First, all data for this study was collected within a single counseling program. Second, researchers did not account control for the amount of previous suicide response training, or for any demographic variables

that could have affected outcomes. As with several of the other studies cited throughtout this review, data were collected only on participants' perceived sense of confidence to work with suicidal clients, versus using an assessment of appropriateness of attitudes such as the ASP (Herron et al., 2001). This study also did not explore participant knowledge or response behaviors, which are integral components of comprehensive suicide resposne preparedness.

Summary

The purpose of this review was to explore the status of the historical, conceptual, and empirical presence of suicide preparedness conceptualized as knowledge about suicide, attitudes about suicide and suicide response, and suicide response behaviors in mental health and counseling profressionals and students. Perhaps the most notable theme throughout this body of literature is the disparity in the proposed necessity of suicide response preparedness in professionals and students in counseling and related disciplines, and the actual implementation and empirical investigation of it. Further, while examination of suicide related knowledge, attitudes, and behaviors are present in the literature, inconsistency in definitions and measurement of these constructs makes drawing any conclusions about the relationships among them difficult. The next chapter includes the research methodology for the present study, which attempted to build upon the work done by the authors cited in this review by exploring the relationships among knowledge, attitudes, and response behaviors in counseling students.

Chapter 3: Research Design and Methodology

Introduction

The purpose of this study was to explore and describe counseling students' knowledge about suicide, attitudes about suicide and suicide response, and simulated suicide response behavior. A secondary purpose of this study was to identify if and to what extent counseling students' knowledge and attitudes about suicide and suicide response predict simulated suicide response behavior using bivariate correlation and hierarchical multiple regression.

Research Questions and Hypotheses

This study seeks to answer several research questions.

RQ1: How do counseling students perform on assessments of knowledge about suicide, attitudes about suicide, and simulated behavioral response to suicidal clients?

$H_1$1: This question was assessed using descriptive statistics, and thusly did not have a corresponding hypothesis.

RQ2: How does counseling students' knowledge about suicide relate to attitudes about suicide?

$H_1$2: Counseling students' knowledge about suicide is positively related to attitudes about suicide.

$H_0$2: Counseling students' knowledge about suicide is not positively related to attitudes about suicide.

RQ3: How does counseling students' knowledge about suicide relate to simulated behavioral response to suicidal clients?

$H_1$3: Counseling students' knowledge about suicide is positively related to simulated behavioral response to suicidal clients.

$H_0$3: Counseling students' knowledge about suicide is not positively related to simulated behavioral response to suicidal clients.

RQ4: How do counseling students' attitudes about suicide relate to simulated behavioral response to suicidal clients?

$H_1$4: Counseling students' attitudes about suicide are related to simulated behavioral response to suicidal clients.

$H_0$4: Counseling students' attitudes about suicide are not related to simulated behavioral response to suicidal clients.

RQ5: To what extent do counseling students' knowledge and attitudes about suicide simultaneously predict simulated behavioral response to suicidal clients after controlling for previous suicide response training?

$H_1$5: There will be a significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide and attitudes about suicide.

$H_0$5: There will be no significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide and attitudes about suicide.

RQ6: To what extent does the interaction between counseling students' knowledge and attitudes about suicide predict simulated behavioral response to suicidal clients after controlling for previous suicide response training?

$H_1$6: There will be a significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide, attitudes about suicide, and the interaction between knowledge and attitudes.

$H_0$6: There will be no significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide, attitudes about suicide, and the interaction between knowledge and attitudes.

Research Design

This study used a non-experimental cross-sectional survey research design with graduate students enrolled in school or clinical mental health counseling programs as the target population. This design was appropriate for this study as its key function is to explain the nature and strength of relationships among counseling students' knowledge about suicide, attitudes about suicide and simulated behavioral response to suicidal clients. While being able to identify presence and magnitude of relationship, this design is limited in that while it may identify predictive relationships, it cannot identify causal relationships among study variables.

Participants

Power analysis and sample size

I conducted separate power analyses for hierarchical linear regression with four predictors (i.e., knowledge, attitudes, knowledge*attitudes, and number of hours of previous suicide response training) using G*Power software to determine a sufficient sample size. For the bivariate correlation, using an alpha of .05, a power of 0.80, a medium effect size ($\rho = .3$), and one tail t-test (Faul, Erdfelder, Buchner, & Lang, 2013), the desired sample size is 64 or more. For the hierarchical linear regression, using an alpha level of .05, a power level of 0.80, and a medium effect size ($f^2 = .15$) (Faul et al., 2013). Based on these criteria, the desired sample size is 85 or more.

Sample

The target population for this study was graduate students enrolled either part- or full-time in master's clinical mental health or school counseling programs. Two core sampling strategies were used in this study: purposive sampling and snowball sampling. The sample included participants recruited electronically through counseling email listservs (CESNET, Counsgrads) from counseling programs throughout the United States. The electronic recruitment email also invited recipients to forward the request for participation to their peers and/or students.

Inclusion and Exclusion Criteria

As previously stated, participants in this study were master's level graduate students enrolled in a school or clinical mental health counseling program in the United States. The only exclusion criteria for this study was if a student currently holds a master's or doctorate degree in a related field (e.g., psychology, social work, marriage and family therapy, nursing, or medicine) as this level of prior training had potential to skew results.

Procedures

Participant Recruitment

Before recruiting participants, I secured approval from the University of Tennessee Institutional Review Board (IRB) to conduct the present study. Upon receiving IRB approval, I recruited participation in the present study via counseling-focused email listservs (Counsgrads and CESNET). The initial recruitment solicitation email (Appendix A) included a description of the following: target population, description of the study, rationale for the study, anticipated time requirement, a summary of incentives, a link to the online consent form and survey instrument, and contact information for myself and my major advisor. I resent the recruitment email one

additional time within two months of the initial recruitment email send. Upon one month of the initial recruitment email, the desired sample size was achieved and data collection was closed. In addition, all participants who completed the survey instrument received a $5 Amazon, Starbucks, or Walmart electronic gift card.

Data Collection

Data collection occurred electronically via an online survey constructed using the HIPPA-compliant Qualtrics survey platform. The recruitment solicitation email sent to the CESNET and Counsgrads listservs included a link to the consent form (Appendix B) and survey (Appendix C). Upon clicking the link embedded in the initial email, participants were directed to the study consent form, where they selected "Yes" or "No" to indicate their consent to participate in the study and to grant permission for me to analyze and report on their data in aggregate form. The consent form collected no identifying information. Upon provision of consent, the website directed participants to the survey. If participants declined their consent, the website directed them to a page containing a message thanking them for their consideration. The survey included a total of 66 items and required 25-30 minutes to complete. Participants had the option to skip any question as they saw fit. Upon completion of the survey, participants had the option to receive a $5 electronic gift card. If participants chose to receive the gift card, the survey included instructions for them to click a link that directed them to a separate online form (Appendix D) that was not connected to the survey data they submitted. On this form, I asked participants to provide an email address to which they wish to have the gift card sent.

I stored survey data in the secure, encrypted, password protected Qualtrics survey platform until completion of all data collection. I downloaded the data in a .CSV Excel file and immediately transferred it to a password-protected SPSS database for analysis. I downloaded gift

card request data separately and stored it in a separate password-protected Excel database. Upon distribution of all gift cards, I deleted all recipient email address data. I will maintain the anonymous survey data in a secure password protected database in Excel or SPSS indefinitely.

Measures

Variable Construction

This study included a total of six variables. Predictor variables included knowledge (scores on the SKS, scores on the WSC), attitudes (scores on the ASP), the interaction of knowledge and attitudes, and the number of hours of previous suicide response training as a control variable. The outcome variable for this study was simulated suicide response behavior (SIRI-R; Neimeyer & Bonnelle, 1997). Knowledge comprised declared knowledge of suicide (Smith et al., 2014) and knowledge of suicide risk warning signs (AAS, 2015). The attitude variable comprised attitudes toward suicide prevention (Herron et al, 2001).

Measures

Demographics. Demographic data were collected for descriptive purposes for this study. This includes gender, age, race/ethnicity, training status (i.e., practicum, internship), type of program (i.e., school or clinical mental health), and number of hours of suicide response training received prior to the time of the study.

Knowledge. To assess knowledge, I used two self-report scales. First, the Suicide Knowledge Survey (SKS; Smith et al., 2014) is a nine-item scale composed of statements about suicide designed to elicit either a true or false response. I selected this scale to assess declarative (e.g., factual) suicide knowledge. Creators of the scale used the Kuder–Richardson Formula 20 (KR20) to calculate reliability for this scale as responses are binary and the level of difficulty of the questions varied ($\alpha = .50$). The low alpha indicates that the knowledge items are various and

reflective of different facts about suicide, and thus were not expected to factor together well. Scores for the SKS are calculated by tallying the number of responses correctly indicated as true or false, resulting in a possible score range of 0 to 9. Second, participants completed the Warning Signs of Suicide Checklist (WSSC; AAS, 2015). I created this checklist to reflect the 12 key warning signs of suicide as identified by the American Association of Suicidology. I used the Kuder–Richardson Formula 20 (KR20) to calculate reliability for this scale as responses are binary and the level of difficulty of the questions varied (α = .48). Scores on this scale result from the sum of the number of correctly identified warning signs, resulting in a possible score range of 0 to 11. The survey instrument (Appendix C) includes both measures.

Attitudes. To assess attitudes about suicide and suicide response, I used one self-report measure. The Attitudes to Suicide Prevention Scale (ASPS; Herron et al, 2001) is a 14-item scale composed of statements reflective of perceptions of accuracy and interpretation of suicide risk assessment, responsibility of clinician to prevent suicide, practicality of suicide prevention, and impact of non-clinical factors on suicide. Each of these themes is presented as statements to be rated on a 5-point Likert-type scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree." In its original validation study, this measure showed good internal consistency (Cronbach's α = 0.77) and high test–retest reliability (Herron et al. 2001). I calculated scores on this measure by summing the response scores, resulting in a possible score range of 14 to 70. The survey instrument (Appendix C) includes this measure.

Behavior. To assess suicide response behavior, the outcome variable for the study, I used the Suicide Intervention Response Inventory – Revised (SIRI – R; Neimeyer & Bonnelle, 1997). Creators of this 25-item self-report measure developed it to assess the ability of paraprofessional and professional counselors to indicate appropriate responses to suicidal clients. It includes a

total of 25 hypothetical client remarks, each followed by two hypothetical counselor responses. For each client remark, one of the counselor responses reflects a facilitative reply, while the other indicates a neutral or detrimental reply. Participants rate each counselor reply using a 7-point Likert-type scale, with -3 indicating a highly inappropriate response and +3 indicating a highly appropriate response. The original version of this measure (Neimeyer & MacInnes, 1981) included a similar structure, but required participants to select one counselor response or the other for each client remark. This resulted in a ceiling effect when administered to higher-level clinicians (Neimeyer & Bonnelle, 1997). Therefore, researchers implemented the Likert-type scale to address this issue in the revised version. The original validation study revealed acceptable construct and discriminant validity, and high internal consistency (Cronbach's α = .90). I calculated scores on this measure by identifying the difference between the mean rating of members of an expert panel and the participant's rating on each counselor response item. The survey instrument (Appendix C) includes this measure.

Data Analysis

I conducted all descriptive and inferential statistics using SPSS version 23. I tested each hypothesis in accordance with the statistical procedures recommended by Cohen, Cohen, West, and Aiken (2003) and Keith (2006). Specific to the regression models (research questions 4 and 5), I entered variables hierarchically; control variable (number of hours of suicide response training received) in the first step, main effects in the second step (knowledge and attitudes), and interactions (knowledge * attitudes) in the final step along with the previously entered variables. I centered the main effect variables used to create the interaction variables first, and then multiplied them together in the final regression model.

To investigate research question 1, I conducted descriptive statistics on all study variables. This included frequency statistics and measures of central tendency when appropriate. To answer research questions 2, 3, and 4, I conducted a series of Pearson correlations. Specifically, I conducted separate Pearson correlations to assess the strength and direction of relationship between knowledge and attitudes, knowledge and simulated behavioral response, and attitudes and simulated behavioral response. A Pearson correlation expresses the strength or magnitude of the relationship or co-occurrence between two continuous variables and is measured with a value between -1 and +1. Represented by *r*, a positive value indicates a positive relationship between variables (as the value of one variable increases, the value of the other variable increases); whereas a negative value indicates a negative relationship between variables (as the value of one variable increases, the other decreases). The closer to 0, the weaker the relationship between the two variables, with an *r* of 0 indicating no relationship at all.

To examine research questions 5 and 6, I conducted hierarchical linear regressions to assess if the predictor variables predict the criterion variable. The hierarchical, or blockwise, method is a version of forward selection multiple regression that is completed in blocks or sets. For this method, the researcher groups the predictors into blocks based on psychometric consideration or theoretical reasons and applies a stepwise selection. The analysis applies each block separately while ignoring the other predictor (Halinski & Feldt, 1970; Keith, 2006). In this study, the predictor variables included knowledge as measured by the SRS and WSSC, attitudes as measured by the ASPS, interaction between knowledge and attitudes, and number of hours in suicide response training received as a control variable. The criterion variable was simulated behavioral response as measured by the SIRI-R. Since number of hours trained temporally precedes the other variables to be measured in the study, it was necessary to statistically control

for its potential effects. This eliminated any potential confound that the control variable may otherwise introduce into the hypothesized relations between predictors and outcomes.

Research question 5 asked to what extent counseling students' knowledge and attitudes about suicide simultaneously predict simulated behavioral response to suicidal clients after controlling for previous suicide response training. I entered simulated behavioral response as the criterion variable. I entered number of hours of suicide response training received prior to the time of the study as a control variable or covariate in the first step. I entered knowledge and attitudes in the second step as hypothesized predictors of simulated behavioral response.

Research question 6 asks to what extent the interaction between pre-practicum counseling students' knowledge does and attitudes about suicide predict simulated behavioral response to suicidal clients after controlling for previous suicide response training. This analysis will follow a similar structure to the model for research question 4. However, I added the interaction between knowledge and attitudes to the second step as an additional hypothesized predictor of simulated behavioral response.

Before completing the data analysis, I examined whether the assumptions of bivariate correlation and hierarchical linear regression—normality, linearity, homoscedasticity and absence of multicollinearity—were met. Normality assumes an equal distribution of scores on each measure. I assessed normality using histograms, as well as statistical analyses of skewness and kurtosis. Linearity assumes a straight line relationship between the predictor variables and the criterion variable, and homoscedasticity assumes that scores are normally distributed about the regression line. I assessed linearity and homoscedasticity by examination of a scatter plot. The absence of multicollinearity assumes that predictor variables are not too related and were

assessed using Variance Inflation Factors (VIF). VIF values over 10 suggested the presence of multicollinearity (Keith, 2006).

Summary

The purpose of this chapter was to describe the research methodology of the present study. In summary, this study used a quantitative explanatory survey design to identify relationships and predictability among counseling students' knowledge about suicide, attitudes about suicide, and simulated behavioral response to suicide. Chapter 4 will include the results of the data analysis of the present study. Chapter 5 will include a discussion of the implications of the present study, limitations of the present study, and directions for future research.

Chapter 4: Results

Introduction

The purpose of this study was to explore and describe counseling students' knowledge about suicide, attitudes about suicide and suicide response, and simulated suicide response behavior. A secondary purpose of this study was to identify if and to what extent counseling students' knowledge and attitudes about suicide and suicide response relate to and predict simulated suicide response behavior using bivariate correlation and hierarchical multiple regression. This chapter includes a description of the outcomes of the descriptive and inferential statistical analyses used to answer the research questions for this study.

Descriptive Analyses

Research Question 1

RQ1: How do counseling students perform on assessments of knowledge about suicide, attitudes about suicide, and simulated behavioral response to suicidal clients?

$H_1$1: This question was assessed using descriptive statistics, and thusly did not have a corresponding hypothesis.

A total of 119 participants completed the survey instrument in this study; $N = 119$. A total of 139 participants provided consent to participate in the study, but I did not include 20 participants in the analyses due to data integrity issues or non-completion of the survey instrument. Ad hoc power analysis using G*Power software revealed a minimum sample size of 85 using an alpha level of .05, a power level of 0.80, and a medium effect size (f^2 =.15) (Faul et al., 2013) for all analyses; the sample size used in this study surpassed the minimum sample size needed for sufficient statistical power.

Of the 119 participants, 88.2% identified as female (n = 105), 10.9% identified as male (n = 13), and .8% (n = 1) indicated preference not to disclose. The majority of participants identified their ethnicity as not Hispanic or Latino (95%, n = 118) with 3.4% (n = 4) endorsing a Hispanic or Latino ethnicity and 1.7% (n = 2) preferring not to disclose. A total of 89.1% (n = 106) identified their race as White or Caucasian, followed by 4.2% (n = 5) as Multiracial, 2.5% (n = 3) as Black or African American, and the remaining 4% (n = 5) distributed amongst American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, Arab or Arab American, or other.

The survey instrument asked participants to indicate the type of counseling graduate program in which they were currently enrolled. The sample comprised 94 mental health counseling students (79%) and 25 school counseling students (21%). Participants also indicated their status in their respective training programs, resulting in 66.4% (n = 79) currently enrolled in the practicum or internship phase of their graduate programs, and 33.6% (n = 40) in the pre-practicum phase of their graduate programs. As a criterion for inclusion in this study, participants indicated whether or not they held a graduate degree in a closely related field, but no participants in this sample endorsed this item. As a control variable in this study, participants disclosed the number of hours in suicide-related training they had received before completing the survey. Participants responses varied widely (0 – 60), with an average of M =9.03, SD = 7.02 hours of training.

Knowledge

I assessed knowledge of suicide and suicide prevention with two self-report measures. The first scale, the Suicide Knowledge Survey (SKS; Smith et al., 2014), was used to assess participants' declarative knowledge about suicide. Using the Kuder-Richardson Formula 20

(KR-20), internal reliability was for this scale was low (α = .48), but consistent with the results of the validation study of the instrument (α = .50). The low alpha indicates that the knowledge items are various and reflective of different facts about suicide, and thus were not expected to factor together well. Scores for the SKS were calculated by tallying the number of responses correctly indicated as true or false, resulting in a possible score range of 0 to 9. The overall mean score on this scale was *M* =7.19, SD = 1.22, indicating a moderately high level of suicide knowledge. However, only 11.3% of participants correctly identified all statements as true or false. Participants performed worst on items regarding suicidality in persons with borderline personality disorder (56.5% responding correctly) and the prevalence of suicide in youth versus geriatric persons (58.9% responding correctly). Participants performed best on items regarding the predictability of suicide with 95.2% correctly identifying that suicide is not always unpredictable. Tables 4.1, 4.2, and 4.3 contain the results of the descriptive analyses of this scale.

Second, participants completed the Warning Signs of Suicide Checklist (WSSC; AAS, 2015) to assess knowledge of predominant warning signs of suicide. I used the Kuder–Richardson Formula 20 (KR20) to calculate reliability for this scale as responses are binary and the level of difficulty of the questions varied (α = .56). The low alpha on this scale is likely attributed to a similar phenomenon as that with the SKS (Smith et al., 2014). However, this scale was significantly correlated with the SKS (Smith et al., 2014) with *r* = .672, suggesting convergent validity. Scores on this scale result from the sum of the number of correctly identified warning signs, resulting in a possible score range of 0 to 11. The overall mean of this scale was *M* =8.69, *SD* = 2.34, indicating moderately high knowledge of suicide warning signs. Despite the mean being relatively high overall, only 35.3% of participants were able to correctly identify all 11 warning signs of suicide. Participants most commonly missed warning signs that pertained to

non-depression related mood issues including rage (46% correct), anxiety or agitation (65.3% correct), and dramatic changes in mood (72.6% correct). Tables 4.1, 4.2, and 4.3 contain the results of the descriptive analyses of this scale.

Attitudes

The Attitudes to Suicide Prevention Scale (ASPS; Herron et al, 2001) is a 14-item instrument with statements related to attitudes about suicide and suicide prevention. I calculated scores on this measure by summing the response scores, resulting in a possible score range of 14 to 70, with a lower score demonstrating more appropriate attitudes. This measure demonstrated good internal reliability with this sample (Cronbach's $\alpha = .71$). The mean score on this measure was $M = 31.78$, $SD = 4.56$, which represents moderately positive/appropriate attitudes about suicide. Participants indicated their disagreement most commonly with statements regarding suicide prevention not being their responsibility ($M = 1.3$), feeling resentful about being asked to do more about suicide ($M = 1.44$), and incomplete suicide attempts being ploys for attention ($M = 1.44$). However, participants indicated uncertain to inappropriate attitudes regarding working with suicidal patients as rewarding ($M = 3.73$). Tables 4.1, 4.2, and 4.3 contain the results of the descriptive analyses of this scale.

Behavior

To assess suicide response behavior, I used the Suicide Intervention Response Inventory – Revised (SIRI – R; Neimeyer & Bonnelle, 1997), a scale designed to assess the ability of paraprofessional and professional counselors to indicate appropriate responses to suicidal clients. Scores on this scale were determined by subtracting the difference between the participants' rating on each item from the expert panel rating, and summing the total difference. Scores closer to 0 indicate more appropriate or correct suicide response behavior. This instrument

demonstrated high internal validity with this sample (Cronbach's α = .89). The mean score on this measure was *M* =47.93, *SD* = 12.38, indicating moderately appropriate response behaviors consistent with the validation study (Neimeyer & Bonelle, 1997). Of note, participants on average indicated that they would not respond the way the counselor did when the counselor's response was reflective of being combative with the client (e.g., "You shouldn't feel that way…"; *M* =.40; "You're not even giving me a chance…"; *M* =.58), and being dismissive or coddling of the client (e.g., "Try not to worry so much about it…", "Things can't be all that bad…"; *M* =.58). However, participants did not respond in a way that was consistent with the expert panel on items related to reflecting feelings of anger or aggression from the client (e.g., "You sound pretty angry…"; *M* =2.96), and items related to resistance or silence (e.g., "Go on. I'm here to listen to you talk…; *M* =2.03; "You can tell me. I'm a professional…"; 1.69). Tables 4.1, 4.2, and 4.3 contain the results of the descriptive analyses of this scale.

Table 4.1.

Descriptive Statistics of Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Suicide Knowledge	119	2	9	7.19	1.22
Attitudes	119	23	43	31.78	4.56
Warning Signs	119	2	11	8.69	2.34
Suicide Intervention Response	119	27.68	81.28	47.93	12.38

Table 4.2.

Descriptive Statistics of Study Variables per Gender

	Female			Male		
	N	Mean	SD	N	Mean	SD
Suicide Knowledge	105	7.10	1.23	13	7.85	.80
Attitudes	105	31.97	4.66	13	30.15	3.62
Warning Signs	105	8.57	2.40	13	9.46	1.61
Suicide Intervention Response	105	48.82	12.72	13	41.51	6.66

Table 4.3

Descriptive Statistics of Study Variables per Type and Status in Program

	Mental Health			School			Pre-Practicum			Practicum		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Suicide Knowledge	94	7.22	1.16	25	7.08	1.44	40	6.80	1.34	79	7.39	1.22
Attitudes	94	31.89	4.56	25	31.36	4.47	40	32.40	4.75	79	31.47	4.45
Warning Signs	94	8.67	2.36	25	8.76	2.28	40	8.30	2.40	79	9.46	1.61
Suicide Intervention Response	94	47.82	12.48	25	48.34	12.22	40	48.28	14.35	79	47.75	11.35

Inferential Analyses

Assumptions Diagnostics

Before completing all correlations, I ran diagnostic analyses to ensure the assumptions of normality and linearity were not violated. To assess for normality, I conducted skewness and kurtosis analyses of all variables. All variables met the minimum criteria for normality. To assess for linearity and homoscedasticity among each predictor variable and the outcome variable, I used scatterplots as a visual assessment. All predictor variables met both assumptions. Additional assumptions were assessed specifically for the regression analyses. I tested for normality of residuals using residual histograms for both regression analyses. Residuals for both regressions fit the normal distribution, thusly meeting this assumption. I assessed collinearity within each regression model using VIF, with values over 10 suggesting the presence of multicollinearity (Keith, 2006). No values surpassed 10 and this assumption was met. Table 4.4 contains the results of the normality diagnostics tests.

Table 4.4 Normality Diagnostics

	Skewness	Kurtosis
SKS	-.982	2.00
WSSC	-.766	-.253
ASPS	.496	-.287
SIRI-R	.553	-.520
Hours Trained	.975	-1.85

Research Question 2

RQ2: How does counseling students' knowledge about suicide relate to attitudes about suicide?

$H_1$2: Counseling students' knowledge about suicide is positively related to attitudes about suicide.

$H_0$2: Counseling students' knowledge about suicide is not positively related to attitudes about suicide.

To answer this research question, I conducted two Pearson product moment correlations. The first correlation included scores on the SKS (Smith et al., 2014) and the ASPS (Herron et al., 2001). The second correlation included scores on the WSSC (AAS, 2015) and the ASPS (Herron et al., 2001). Results of the first Pearson correlation analysis revealed a strong statistically significant negative relationship between knowledge as measured by the SKS and attitudes as measured by the ASPS (r = -.640, p < .001). Results of the second Pearson correlation analysis revealed a strong statistically significant negative relationship between knowledge as measured by the WSSC attitudes as measured by the ASPS (r = -.543, p < .001). The negative relationship indicates that as scores on both knowledge assessments increase, scores on the attitudes assessment decrease. Per the reverse scoring convention on the ASPS (e.g., lower scores indicate more appropriate attitudes), this suggests that as knowledge about warning signs and facts about suicide improves, appropriateness of attitudes also increases. Therefore, $H_0$2 was rejected. Table 4.5 contains the results from both correlation analyses.

Research Question 3

RQ3: How does counseling students' knowledge about suicide relate to simulated behavioral response to suicidal clients?

Table 4.5.

Correlation Matrix of Study Variables

		Warning Signs	Suicide Knowledge	Attitudes	Suicide Intervention Response
Warning Signs	Pearson	1	.672**	-.543**	-.385**
	Sig. (2-tailed)		.000	.000	.000
	N	119	119	119	119
Suicide Knowledge	Pearson	.672**	1	-.640**	-.496**
	Sig. (2-tailed)	.000		.000	.000
	N	119	119	119	119
Attitudes	Correlation	-.543**	-.640**	1	.360**
	Sig. (2-tailed)	.000	.000		.000
	N	119	119	119	119
Suicide Intervention Response	Pearson	-.385**	-.496**	.360**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	119	119	119	119

**. Correlation is significant at the 0.01 level (2-tailed).

$H_1$3: Counseling students' knowledge about suicide is positively related to simulated behavioral response to suicidal clients.

$H_0$3: Counseling students' knowledge about suicide is not positively related to simulated behavioral response to suicidal clients.

To answer this research question, I conducted two Pearson product moment correlations. The first correlation included scores on the SKS and the SIRI-R. The second correlation included scores on the WSSC and the SIRI-R Results from the first Pearson correlation revealed a statistically significant negative relationship between the SKS and the SIRI-R (r = -.496, p < .001). Results from the second Pearson correlation revealed a statistically significant negative relationship between the WSSC and the SIRI-R (r = -.385, p < .001). The negative relationship indicates that as scores on both knowledge assessments increase, scores on the suicide response behaviors assessment decrease. Per the reverse scoring convention on the SIRI-R (e.g., lower scores indicate more appropriate response behaviors), this suggests that as knowledge about warning signs and facts about suicide improves, appropriateness of suicide response behavior increases. Therefore, $H_0$3 was rejected. Table 4.5 contains the results from both correlation analyses.

Research Question 4

RQ4: How do counseling students' attitudes about suicide relate to simulated behavioral response to suicidal clients?

$H_1$4: Counseling students' attitudes about suicide are related to simulated behavioral response to suicidal clients.

$H_0$4: Counseling students' attitudes about suicide are not related to simulated behavioral response to suicidal clients.

To answer this research question, I conducted a Pearson product moment correlation. This correlation included scores on the ASPS and the SIRI-. Results revealed a statistically significant positive relationship between the ASPS and the SIRI-R ($r = .360$, $p < .001$). The negative relationship indicates that as scores on the attitude assessments increase, scores on the suicide response behaviors assessment decrease, and as attitudes scores decrease, response behaviors scores also decrease. Per the reverse scoring convention on the SIRI-R (e.g., lower scores indicate more appropriate response behaviors), this suggests that as attitudes about working with suicidal clients improve, appropriateness of suicide response behavior increases. Therefore, $H_0$4 was rejected. Table 4.5 contains the results from this correlation analysis.

Research Question 5

RQ5: To what extent do counseling students' knowledge and attitudes about suicide simultaneously predict simulated behavioral response to suicidal clients after controlling for previous suicide response training?

$H_1$5: There will be a significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide and attitudes about suicide.

$H_0$5: There will be no significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide and attitudes about suicide.

I used hierarchical linear regression to assess the extent to which counseling students' scores on the SKS, WSSC, and ASPS simultaneously predicted their SIRI-R scores. I included the number of hours of previous suicide related training in the first step or block of the model as a control variable. I included the main effect variables (SKS, WSSC, and ASPS) in the second step.

The model in the first step included the control variable of hours of previous training and was not significantly related to SIRI-R scores, R = .148, and predicted only 2.2% of the variance in SIRI-R scores. For Step 2, a statistically significant relationship exists among these variables as evidenced by significance of the overall model, F (4, 119) = 9.789, p < .001, which explained approximately 26% of the variance in the outcome variable, R^2 = .256. Of the predictor variables, only scores on the SKS (Smith et al., 2014) significantly contributed to the model (B = -4.06, p = .001). From this model, I identified a prediction model of $\hat{Y}$ = *76.35 – 4.056*SKS Score - .413*WSSC Score + .148*ASPS Score - .041*Hours of Training.* Therefore, $H_0$5 is rejected. Table 4.6 contains the results from this analysis.

Table 4.6.

Hierarchical Regression Model for RQ 5

Variable	*B*	*SE*	*β*	*t*	Sig.	*F*	R^2
Step 1						2.61	.02
Hours of Training	-.107	.066	-.145	-1.62	.109		
Step 2						9.79	.26**
Hours of Training	-.041	.060	-.057	-.692	.490		
Knowledge – WSSC	-.413	.592	-.078	-.697	.487		
Knowledge – SKS	-4.06	1.24	-.399	-3.27	.001**		
Attitudes - ASPS	.148	.291	.055	.509	.612		

**p ≤ .001
*p ≤ .05

Research Question 6

RQ6: To what extent does the interaction between counseling students' knowledge and attitudes about suicide predict simulated behavioral response to suicidal clients after controlling for previous suicide response training?

$H_1$6: There will be a significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide, attitudes about suicide, and the interaction between knowledge and attitudes.

$H_0$6: There will be no significant prediction of counseling students' simulated behavioral response to suicidal clients by knowledge about suicide, attitudes about suicide, and the interaction between knowledge and attitudes.

I used hierarchical linear regression to assess the extent to which counseling students' scores on the SKS, WSSC, ASPS, and the interaction between scores on the SKS and the ASPS predicted their SIRI-R scores. I included this interaction effect based on the assumption the unique effect of knowledge on behavioral response could be moderated by his or her attitudes about suicide. Similarly, it is possible that the effect of one's attitude's about suicide on their behavioral response could be impacted by their existing knowledge about suicide. This model was identical to the previous, with the addition of a third step which included the interaction effect of standardized scores for the SKS and the ASPS. I chose to use the SKS instead of the WSSC due to its statistical significance in the previous model.

For step 3, a statistically significant relationship exists among these variables as evidenced by significance of the overall regression model, F (5, 119) = 8.985, $p < .001$. The overall model explained approximately 28% of the variance in the outcome variable, $R^{2 =}$ .284. The third step individually accounted for an additional 2.9% of the variance in the outcome

variable beyond the model in step 2. Of the predictor variables, scores on the SKS (Smith et al., 2014) maintained their significant contribution to the model (B = -2.93, p < .05). The interaction effect of SKS and ASPS scores also significantly contributed to the model (B = -1.84, p < .05). From this model, I identified a prediction model of $\hat{Y}$ = *66.209 – 2.932*SKS Score – 1.839*SKS Score*ASPS Score - .207*WSSC Score + .123*ASPS Score - .051*Hours of Training.* Therefore, $H_0$6 is rejected. Table 4.7 contains the results of this analysis.

Table 4.7.

Final Hierarchical Regression Model for RQ6

Variable	*B*	*SE*	*β*	*t*	Sig.	*F*	R^2
Step 3						8.99	.28**
Hours of Training	-.051	.059	-.071	-.869	.387		
Knowledge – WSSC	-.207	.591	-.039	-.350	.727		
Knowledge – SKS	-2.93	1.33	-.288	-2.20	.030*		
Attitudes – ASPS	.123	.287	.045	.427	.670		
Interaction – SKS*ASPS	-1.84	.862	-.223	-2.13	.035*		

**p ≤ .001
*p ≤ .05

Summary

The purpose of this chapter was to provide a detailed explanation of all of the data analyses completed to answer each of the research questions for the present study. Based on the results of these analyses, all null hypotheses were rejected. Outcomes from this study suggests

that the constructs of knowledge about suicide, attitudes about suicide and suicide prevention, and simulated behavioral response are related to one another. However, these relationships should be interpreted with caution. Only declarative knowledge about suicide as measured by the SKS (Smith et al., 2014) and a moderating effect of declarative knowledge and attitudes were able to significantly predict suicide response behavior scores. Chapter 5 will offer a thorough discussion of the present study's alignment with existing theoretical and empirical findings, the potential implications of the present study for the counseling and counselor education arenas, limitations of this work, and directions for future research.

Chapter 5: Implications and Conclusions

Researchers within counselor education have recently increased their attention to crisis preparation beginning at the graduate level. However, we still lack understanding in how to conceptualize suicide prevention competency, and how to create pedagogical intervention to create said competency. This study attempted to answer some of these questions by seeking to identify and better understand the relationships among the levels of knowledge, attitudes, and simulated response behavior related to suicide in counseling students.

Discussion of Descriptive Findings

Knowledge

Policy makers, theorists, and scientists generally agree that a thorough knowledge of suicide statistics, risk factors, warning signs, and interventions are vital to the general preparedness of mental health providers. Bennett-Levy (2006) described knowledge as part of the declarative system of counselor competence, which mainly includes didactic and factual information about a given construct. In this study, knowledge was measured with two scales designed to garner an understanding of counseling students' general knowledge about suicide (SKS, Smith et al., 2014) and specific knowledge about the warning signs or risk factors for suicide (WSSC, AAS, 2015).

Overall, scores on these measures indicated a moderately high level of suicide knowledge; on average identifying about 8 of the 11 presented warning signs. However, only a third of participants were able to correctly identify all warning signs present in the WSSC. The signs that were most often correctly identified pertained to overt demonstrations of risk (e.g., the client stating the desire to die, seeking lethal means) and symptomology akin to depression (e.g., hopelessness, few reasons for living). Participants were far less successful at identifying

emotional and behavioral dysregulation not overtly related to suicide (e.g., rage/agitation, sleep disturbance, drastic changes in mood, and increases in substance use). This may suggest the presence of a general assumption that only persons who are depressed or "down" are at high risk for suicide; an assumption that is simply not true and one that could lead to missed intervention opportunities.

Participants in this study performed similarly on the SKS. While scores indicated a moderate to high level of knowledge about suicide, a closer examination of specific SKS items reveals potential areas of need. Of particular importance, 35% of participants indicated a belief that few people want to die by suicide. This belief contradicts earlier findings by Smith, et al (2014). This suggests an erroneous assumption about the frequency of suicidality, which is inherently different from suicide itself. In other words, despite suicide completion being relatively uncommon, counselors are all but guaranteed to encounter persons' desire to die by suicide and behavioral approximations of suicide (Feldman & Freedenthal, 2006; Gill, 2012). Participants also misidentified that older persons are at lower risk for suicide than adolescents (older persons are at higher risk). While this item pertained only to age-based demographic groups, this lack of knowledge may also extend to suicide rates and risk levels among other demographic and multicultural groups. Lastly, participants' responses to an item that pertained to suicidal behavior in persons with borderline personality disorder (BPD) indicated a common misconception that suicidality is not "real" with this population. On the contrary, this highly stigmatized disorder can result in high lethality suicide attempts and completions (Linehan, 1993). Accurate knowledge about this and other forms of psychopathology that often accompany high suicide risk (e.g., post-traumatic stress disorder, bipolar disorder, substance use disorders) is essential in the development of competent clinical mental health and school counselors.

Attitudes

Similar to knowledge about suicide, leaders in a variety of helping-related professions generally agree that appropriate attitudes about suicide are integral components of suicide response competence. Described in Bennett-Levy's (2006) theoretical model as the reflective system, appropriate and insightful attitudes tend to occur later in the counselor development process, but are vital for the maintenance of competence over time. In this study, I used the ASPS (Herron et al., 2006) to measure participants' attitudes and beliefs about suicide and their role in suicide prevention.

Participants generally had appropriate (as identified by the authors of the measure in the form of a low score) attitudes about suicide and their role as care providers to prevent suicide. As counselor training heavily emphasizes self-reflection on and self-awareness of one's personal biases and attitudes in all areas of counseling, appropriate attitudes can be expected. In regard to the preventability of suicide, all participants indicated at least some belief that suicide could be prevented. While about 50% of participants identified a belief that most suicides are preventable, only 8% demonstrated the optimistic, but necessary attitude that all suicides are preventable. Further, some participants indicated that working with suicidal persons wasn't rewarding. This could be due to low levels of self-efficacy to work with suicidal clients that novice counselors tend to have (Wachter Morris & Barrio Minton, 2012). One other scale item reflected varying attitudes pertained to a person's right to take his or her own life. The generally accepted assumption in the mental health community is that a person is entitled to the right to take his or her life (Herron et al., 2006). However, due to the religious, moral, and/or philosophical underpinnings related to this assumption, it is not surprising that this item generated more response variability.

Behavior

While Bennett-Levy (2006) maintained that knowledge and attitudes were essential in developing competency in counselors, they are only as valuable as their ability to be demonstrated in what he identified as the procedural system. The procedural system involves the behavioral activation of acquired knowledge and internal, reflective attitudes in real world situations with clients (Bennett-Levy, 2006; Wyman et al., 2012). For counseling students, this is most obviously reflected in the practicum and internship portions of their graduate training (CACREP, 2016). As previously discussed, counselor educators and supervisors have little to no way of preventing a student from encountering a client at risk for suicide during their practica and internship experiences (Binkley & Leibert, 2015). For this reason, a main focus of this study was to describe counseling students' performance using the SIRI-R (Neimeyer et al., 1997), a measure designed to assess helper simulated behavioral response to suicidal client scenarios.

Participants' scores on this measure pointed to moderately to highly appropriate simulated behavioral response to suicidal clients (M = 47.93, SD = 12.38). Scores were generated based upon how participants ranked the appropriateness of a series of "counselor" responses to client prompts compared to an expert panel's rankings. The creators of this measure assumed that if a participant responds to a client prompt similarly to the expert panel, then the participant may respond to a real client in a clinically appropriate way (Neimeyer et al., 1997). In this study, participants deemed the "counselor's" response inappropriate if he/she was combative, argumentative, or dismissive of the client's experience; which aligned closely with the expert panel. While maintaining therapeutic connection with clients is a general counseling skill, it is especially important when a client discloses suicidality, as interrupted connectedness is a significant predictor of suicide death (Joiner et al., 2009). Conversely, participants deviated from

the expert panel's responses on items in which the client displayed resistance to the counselor via aggression or silence and the counselor responded by encouraging the client to disclose more. Bernard & Goodyear (2013) suggested that successfully managing difficult or resistant clients requires a skill set that many counseling students do not develop until later in their careers. Therefore, it is not unexpected that the novice counselors in this study struggled with tolerating silence (Cochran & Cochran, 2015) and high levels of emotional dysregulation (Joiner et al., 2009; Linehan et al., 1993). Therefore, it is possible that a practicum or internship level counselor's skill execution may falter upon the introduction of suicide risk.

Discussion of Inferential Findings

Correlational Analyses

The core research questions in this study asked about the relationships that exist among knowledge, attitudes, and simulated behavior response related to suicide in counseling students. To answer these questions, I conducted Pearson correlations to identify basic, non-directional relationship. These analyses generated results which are consistent with the empirical and theoretical bases for this study. Essentially, results from this study suggest that knowledge, attitudes, and simulated response behavior are all related to one another to a statistically significant degree. Relationships among knowledge (on both knowledge measures) and attitudes were consistent and moderate (r = -.54) to moderately high (r = -.64). This finding suggests that as knowledge improves, so do attitudes, and vice versa. In his integrative theory of counselor competence, Bennett-Levy (2006) maintained that attitudinal change is much more difficult to achieve in traditional didactic training formats. Results from this study suggest that as knowledge and attitudes may be a function of each other, the simple provision of suicide-specific didactic training focused on growing knowledge may indirectly improve counseling students' attitudes

about suicide. On the other hand, the acquisition of knowledge about suicide may be preceded by one's attitudes about suicide. For example, a student who practices a religion that includes a deeply held belief that suicide is morally wrong may be less receptive to training about suicide. Understanding the relationships among these variables may provide insight into how to structure suicide specific counselor education in a culturally and developmentally appropriate way. However, due to the non-directionality of this relationship and the research design of the study, I cannot infer that knowledge or attitudes predict or cause changes in one another.

All key variables were significantly related to scores on the SIRI-R. Knowledge as measured by the SKS demonstrated the strongest relationship (r = -.496) while attitudes had the weakest relationship (r = .360). Despite its statistical significance, this correlation coefficient is relatively low (Mukaka, 2012). While this could be due to a number of factors (e.g., relatively high sample size, large error percentage, etc.), this relationship should be interpreted carefully. Of particular interest, this finding is in contrast with the generally accepted assumption that the counselor's attitudes and his or her skill-based behaviors are strongly related (Bennett-Levy, 2006; Wyman et al., 2012). Bennett-Levy (2006) also suggested that attitudes are one component of the reflective system among the final dimensions to emerge in the counselor development process. Given this perspective, this study sample included both pre-practicum and post-practicum level students which may have introduced some unaccounted for variance into the measures that are sensitive to developmental differences. The SKS and WSSC scores generated moderate statistically significant relationships with simulated behavior scores. This finding suggests that the more factual knowledge a counseling student has about suicide and warning signs of suicide, the better he or she is likely to be in managing suicidality with clients.

Predictive Analyses

To identify if knowledge and attitudes predict simulated behavior response, I conducted two hierarchical linear regressions. The first regression model included hours of previously received training in suicide response as a control variable; WSSC scores, SKS scores, and ASPS scores as predictor variables, and SIRI-R scores as the outcome variable. The first step contained hours of training, was not statistically significant, and accounted for only 2.2% ($R^2 = .022$) of the variance in SIRI-R scores. This finding suggests that any training that participants received before this study was not effectual on their suicide response behaviors. This does not, however, mean that training is not effective. In order to answer this question, between-groups comparison studies using quasi-experimental or experimental research design are necessary, and extend beyond the scope of the present study.

The second step included the predictor variables and contributed an R^2 change of .234, resulting in the total model accounting for 25.6% of the variance in SIRI-R scores. Results indicated that statistical significance of the overall model (F (4, 119) = 9.789, $p < .001$), with only SKS scores producing individual statistical significance ($B = -4.06$, $p = .001$). As the correlation between attitudes as measured by the ASPS and response behaviors was not significant, its lack of significance in the regression model is to be expected. Practical interpretations for this outcome are similar to those in the correlations (e.g., knowledge and attitudes are related to response behaviors and should be conceptualized as a "unit" in suicide specific training). However, this analysis provides additional robustness to the argument that improving counseling students' knowledge about suicide is integral to improving their response behaviors when working with suicidal clients.

The second hierarchical linear regression in this study included an additional step to the regression model. The final step included an interaction effect between knowledge as measured by SKS scores and attitudes as measured by ASPS scores. I added the interaction effect to the model due to the strong correlations between SKS and ASPS scores, which suggested the potential for an additional impact of the relationship between these variables beyond that of the individual variables themselves. This addition was statistically significant and resulted in an R^2 change of .029 which totaled 28.4% of the variance in SIRI-R scores being accounted for by the variables in the model. This finding suggests, as is supported by the correlation analyses, that knowledge and attitudes about suicide serve as a function of one another and should be considered by researchers and instructors as tandem constructs in the creation of competency in suicide response.

Limitations

This study also included several limitations that should be considered when interpreting its results. First, this study included a non-experimental survey research design. While correlational and even predictive relationships can be inferred from this design, it cannot identify causality. For example, one of the conclusions of this study is an increase in knowledge may predict increases in appropriate behavioral response in working with suicidal clients. However, I cannot conclude that improving knowledge levels will cause counseling students to respond with more clinically appropriate behaviors.

Another limitation of this study pertains to the sample; in both strategy and structure. I relied on a non-stratified snowball convenience sampling approach, which resulted in a relatively low level of control over the participants that completed the survey. Regarding the structure of

this sample, the majority of participants identified as white females. As the sample was relatively homogenous, the generalizability of this study to other demographic groups is limited.

A widely known limitation of linear regression is a regression model can only be as strong and comprehensive as the variables that are included in it. In this study, a relatively small (though theoretically and empirically based) number of predictors were included in the regression model. These included WSSC scores, SKS scores, ASPS scores, and hours of previously received training. These predictors accounted for a total of 28% of the variance in simulated response behaviors. While this amount of prediction is considered satisfactory within the social sciences (Keith, 2006), it suggests that a number of other constructs need to be investigated to more fully understand suicide response behaviors in counseling students. These could include self-efficacy to prevent suicide, the type of training previously received, personal lived experience with suicide, social desirability, religious affiliation, theoretical orientation, direct experience working with suicidal clients, and other factors.

Finally, some limitation may be present with the measures used in this study. While all assessments demonstrated usability with this sample, the extent to which they captured a true measure of knowledge, attitudes, and behavioral response is debatable. For example, none of the measures used in this study included a latent factor structure of variable sub-scales. For example, while the SKS and ASPS include items that pertain to several different types of suicide knowledge and attitudes, the scoring structure for these measures is cumulative. The SIRI-R demonstrates a similar problem, with multiple different types of client suicide scenarios (e.g., varying levels of lethality/immediacy, types of affective escalation, etc.) but no factors were included in the scoring structure. Further, many of the items on the SIRI-R are non-technical and atheoretical. Aside from basic counseling skill-based responses, this measure places little

emphasis on suicide-specific evidence-based therapeutic intervention techniques (e.g., risk assessment, warning signs identification, lethal means restriction, safety planning, etc.).

Implications

Suicide is not a new problem for healthcare providers in the United States, counselors notwithstanding. Especially within recent years, policy makers and providers alike have increased their attention to the reduction of these preventable deaths (Schultz et al., 2012). Despite these efforts, suicide is increasing both in its frequency, as well as its reach (CDC, 2013). While many persons who die by suicide do not have contact with a mental healthcare provider, there are many more that do. Counselors often serve as part of the last line of defense against death by suicide. Therefore, this field has an ethical and professional responsibility to ensure that all individuals who identify as a professional counselor are competent as well as confident in their ability to prevent suicide death. Ultimately, this duty falls to counselor education. The results from this study stand to add to the argument that the counselor education community need to increase their focus on incorporating suicide-specific training into their curricula. One particular finding of this study that unfortunately aligns with the existing literature is that nearly a third (27%) of participants had received no training in suicide response. And while a lower percentage, the fact that 13% of participants enrolled in practicum/internship at the time of this study had zero hours of training in suicide is even more alarming. CACREP (2016) is the only social science accrediting body that requires instruction in suicide and crisis intervention; however, this discrepancy still exists. As previous research suggests, counseling students are likely to encounter a suicidal client as early as their first practicum placement (Binkley & Leibert, 2015). Counselor education as a whole runs the risk of violating its own ethical code (ACA, 2014) by sending students into the field unprepared to identify, manage, and

treat suicidal clients. Therefore, counselor educators must prioritize the implementation of quality, evidence-based training in suicide.

Identifying the need for *more* suicide response training is merely a small step in the opportunities for counselor educators. A task that counselor educators are perhaps most apt to undertake is the creation and evaluation of thorough, comprehensive, and theoretically and empirically sound suicide response curricula. Results from this study suggest that a significant portion of such a curricula should include knowledge about suicide risk factors, warning signs, rates and statistics, symptomology when co-occurring with other forms of psychopathology, theoretical and empirical models of suicide, treatment planning with suicidal clients, and actual evidence-based skills and techniques for how to intervene with suicidal clients. Another important component of such training would be an emphasis on the exploration of students' attitudes about their role in preventing suicide, beliefs in their capacity to prevent suicide, and feelings of anxiety or fear over the prospect of encountering a suicidal client. A universal shift in the assumption that suicidal clients are "scary" is needed, and could be mitigated by increasing knowledge about levels of support that are available to counseling students in such an event. In addition, results from this study build upon the work of Binkley and Leibert (2015) and support their argument that counselor educators should closely consider the timing, in addition to the amount and type, of suicide response training for counseling students. The fact that the majority of the participants in this study were already seeing clients in practicum/internship, but also reported no previous suicide response training is alarming. Considering the frequency of students' encounters with suicidal clients (Chemtob et al., 1988a, 1988b; Kleespies et al., 1993; Kleespies, Penk, & Forsyth, 1999; McAdams & Foster, 2000; Wachter Morris & Barrio Minton, 2012), counselor educators should embed suicide response training as early as possible (e.g., before practicum). Finally, behavioral rehearsal is a very important component in many different sectors

of counselor education, and suicide response is no exception (McAuliffe & Eriksen, 2011). As counselor educators build curricula to address this piece of counselor competency, frequent use of clinical case illustration, video observation, and role play are vitally important.

As the need to increase suicide-specific competence in counseling students is clear, counselor educators may not need to reinvent the wheel. Multiple gatekeeper (QPR, ASIST) and clinician-focused trainings (AMSR, Suicide 2 Hope) are available at cost from national leading organizations that focus on suicide (Suicide Prevention Resource Center, Living Works, QPR Institute), while others are provided for free in online formats (Columbia Suicide Severity Rating Scale). Prioritizing access and requirement of these and similar trainings early in the counselor development process is key in ensuring competence in suicide response in counseling students.

Finally, while the measures used in his study are not without limitation, they may serve as a solid means for counselor educators to assess students' knowledge, attitudes, and behavior response in the classroom. While researchers have developed general counselor competency measures (Swank, Lambie, & Witta, 2012), no such measure exists for suicide or crisis-specific work.

Directions for Future Research

Findings from the present study may serve as a foundation from which to build future research in suicide response competency in counselor education. Perhaps most obvious, training effectiveness needs to be further investigated within the counseling student population. An opportunity for pedagogically based research exists here as virtually no research exists around the implementation and effectiveness of any current training models (e.g., ASIST, AMSR, etc.) with counseling graduate students. This could also include the development and evaluation of new suicide response curricula on suicide knowledge, attitudes, and behaviors in counseling

students, or the assessment of existing trainings with counseling students. The most rigorous means to do so would be through randomized control trials in which students are randomized to one of many suicide response trainings, or randomized to a time series condition to allow for students to serve as a control as well as receive training. In alignment with this, testing the comparative and longitudinal effectiveness of specific pedagogical interventions (e.g., role plays, case illustrations, discussions, reflective practice, didactic presentation) on the acquisition of knowledge, appropriate attitudes, and competent behaviors is needed.

Another significant need is the development of more comprehensive and theoretically sound measures that assess knowledge, attitudes, and behaviors. The measures used in the present study could serve as a means to establish concurrent validity with newly developed measures. Future studies should also include other components when considering factors that contribute to behavioral response. Again, these could include personal characteristics such as lived experience with suicide, theoretical orientation, performance using other counseling skills, personal emotional regulation in the face of high stress client scenarios, and other attitudes such as social desirability and self-efficacy. This could be achieved through the inclusion of more intuitive measures, the factors previously discussed, and analysis using structural equation modeling. This would allow for the development of a theoretical model of suicide response competency; a significant need within counselor education.

Finally, to more comprehensively understand suicide response preparedness, researchers should consider the developmental nature of the construction of these skills and attitudes. Therefore, a study that would allow for the comparison of knowledge, attitudes, and simulated response behaviors at varying levels of counselor development (e.g., pre-practicum, internship,

new professional, mid-career, advanced) could provide insight into developmental mechanisms of change that currently evade suicidology researchers.

Conclusion

Confronting suicide is among the most anxiety inducing experiences new counselors face. With it comes the high cost of an error, the risk (or perceived risk) of litigation, and uncertainty about one's role in encouraging a person to live when they wish not to. While the field of suicidology has expanded significantly over the past 15 years, its translation into clear, clinical practice has not been very transparent. This is also true for educators whose duty it is to train new professionals in empirically and theoretically grounded approaches to preventing suicide. This is not to say that suicidologists have failed the larger social science community. Rather, the social science community has not yet sought out the knowledge gained by suicidologists to an extent that could greatly enhance the training and preparation of students in the helping professions.

Counselor education should also take heed of this relatively new knowledge. As the gatekeepers of the counseling arena, a rapidly growing and increasingly needed profession, counselor educators are charged with creating and ensuring student competence. However, counselor education researchers have generally paid little attention to the field of suicide response competence in counseling students. Therefore, the purpose of this study was to investigate factors related to this competence based upon existing theoretical and empirical notions of what this should include: knowledge about suicide and warning signs of suicide, attitudes about suicide and the counselor's role in suicide prevention, and simulated behavior response. This study demonstrated that knowledge and attitudes may be related to one another and tangible behavior, and furthermore may help to predict counseling students' behavior with

suicidal clients. This study was designed to serve as an exploratory, introductory investigation of suicide response competency at the student developmental level. Researchers and educators alike can build upon this work to continue the fight in preventing, and ultimately eliminating suicide.

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Appendix

Appendix A: Recruitment Solicitation Email

Dear colleagues,

You are invited to participate in a dissertation research study examining knowledge, attitudes, and simulated behavioral response regarding suicide and suicidal clients in counseling students. The overall objective of this research study is to explore how counseling students' knowledge and attitudes relate to and predict how they might respond to a client at risk for suicide at a time in their training before they come into contact with real suicide risk. The study is conducted under the advisement of Dr. Joel Diambra and is under review of the Institutional Review Board (IRB) at the University of Tennessee. The IRB is a group of people who review research to protect your rights.

I am seeking participants who are currently enrolled in a master's degree program in clinical mental health, mental health, or school counseling.

Participants will be deemed **ineligible** if:

Completed a master's or higher degree in counseling or closely related field (e.g., social work, psychology, marriage and family therapy) at the time of this study.

The anonymous survey will take approximately 25-35 minutes to complete and all information will be kept confidential. For agreeing to participate in this study, the first 110 participants will receive a $5 electronic gift card for one of the following vendors of their choice: Amazon, Walmart, or Starbucks. To maintain confidentiality, participants will provide their email addresses for receipt of the gift card in a separate form at the conclusion of the survey.

Findings from this study may help inform counselor educators about the current status of suicide response preparedness in students before they provide counseling to real clients. Findings may also help inform how counselor educators should build training around this important dimension of counseling.

To participate in this study, please click the link below. To counselor educators and supervisors, please forward this request to any students eligible to participate in this study.

https://utk.co1.qualtrics.com/SE/?SID=SV_5hcBp8cbUcPY9AV

Thank you for considering this request.

Breanna Banks, M.A.
Doctoral Candidate
Counselor Education
Department of Educational Psychology and Counseling
University of Tennessee

Appendix B: Informed Consent

The following information is provided to inform you about this research project and your participation in it. Please read this form carefully and feel free to email the Principal Investigator (PI), Ms. Breanna Banks (contact information below) to ask any questions you may have about this study and the information provided below. Your participation is voluntary and there is no penalty for refusing to complete this survey.

The purpose of this study is to survey approximately 90-110 students enrolled in mental health/clinical mental health or school counseling programs. This research is being conducted in partial fulfillment of the PI's Doctor of Philosophy degree in Counselor Education at the University of Tennessee – Knoxville. This study uses a one-time survey to learn about counseling students' knowledge about suicide, attitudes about suicide, and how they might respond to suicidal clients. Findings from this study will help inform counselor educators about the current status of suicide response preparedness in students before they provide counseling to real clients. Findings will also help inform how counselor educators should build training around this important dimension of counseling.

Procedures: You are being invited to complete a 25 to 35-minute electronic survey about knowledge, attitudes, and behaviors regarding suicidal clients.

Privacy: The PI will keep your information private except as otherwise required by law. Your name and any other information that could be used to identify you will not be collected as part of the survey. You will have the opportunity to provide your email address for receipt of an electronic gift card as incentive for your participation. Should you elect to receive the gift card, you will enter your email address in a form completely separate from the answers you provide in the survey. Data regarding your email address will be destroyed upon completion of the study. At that time, only anonymous electronic study data will be maintained indefinitely. The PI will analyze all survey data and report on it aggregate form. The survey answers you provide will not be able to be traced back to you. The University of Tennessee Institutional Review Board may review your information to ensure quality assurance and participant rights.

Risks: This survey poses little (if any) risk to you. Should you experience any discomfort answering questions addressing issues of suicide, you may choose to stop the surveys at any time or skip a question, for whatever reason at your discretion. You may also contact the National Suicide Prevention Lifeline at 1-(800) 273-8255.

Benefits: Your participation in this study will not directly benefit you. However, your input may help improve training in suicide response for counselors at the local, state, and national levels.

Incentive for participation: By agreeing to participate in this study, you are eligible to receive one $5 electronic gift for one of the three following vendors: Amazon.com, Walmart, or Starbucks. At the end of the survey, you will have the opportunity to complete a form in which you will provide your email address and your selected vendor. Your email address will not be traceable in any way to the survey answers you provide.

Voluntary Nature of Participation: Participation in this study is voluntary. If you choose to participate in this study, you may skip any survey question or decide to stop at any time. Due to the anonymous nature of this study, your data will not be able to be removed in the event that you choose not to participate.

Study Contact: Should you have any questions about the study, you may contact the PI for this study, Breanna Banks at bbanks@vols.utk.edu or the co-PI, Dr. Joel Diambra at jdiambra@utk.edu. If you have any questions about your rights as a study participant, contact University of Tennessee Institutional Review Board Office at (865) 974-7697.
Do you agree to participate in this study?
Yes
No

Appendix C: Survey

Q1 Thank you for your interest in completing this survey about suicide and how counseling students respond to suicide. Let's get started with a few questions about you. Please select the answer option that best describes you.

Q2 What is your identified gender?
- ❍ Male (1)
- ❍ Female (2)
- ❍ Transgender (3)
- ❍ Other (4)
- ❍ Prefer not to say (5)

Q3 How would you describe your ethnicity?
- ❍ Hispanic or Latino (1)
- ❍ Not Hispanic or Latino (2)
- ❍ Prefer not to say (3)

Q4 How would you describe your race?
- ❍ American Indian or Alaska Native (1)
- ❍ Asian (2)
- ❍ Black or African American (3)
- ❍ Multiracial (4)
- ❍ Native Hawaiian or other Pacific Islander (5)
- ❍ Arab or Arab American (6)
- ❍ White or Caucasian (7)
- ❍ Other (8)
- ❍ Prefer not to say (9)

Q65 Please indicate your current status in your counseling program.
- ❍ Pre-practicum - never enrolled in practicum or internship (1)
- ❍ Enrolled in practicum or internship currently (2)
- ❍ Previously enrolled in practicum or internship (3)

Q5 In what type of counseling program are you currently enrolled?
- ❍ M.A/M.S. in Mental Health Counseling or Clinical Mental Health Counseling (1)
- ❍ M.A./M.S. in School Counseling (2)
- ❍ Other (3)

Q6 Do you currently have a masters or doctoral degree in another field closely related to counseling (e.g., psychology, social work, marriage and family therapy, etc.)?

- ❍ Yes (1)
- ❍ No (2)

Q7 Approximately how many hours of suicide response training have you had before today? This can include time in class, continuing education seminars or workshops, or formal suicide prevention training such as QPR or ASIST. If you have not received any suicide-related training, please enter 0.

Q8 This section is about warning signs of suicide. Please select all of the items below that you think are warning signs for suicide.

- ❑ Threats to hurt or kill him/herself, or talking about wanting to hurt or kill him/herself (1)
- ❑ Hopelessness (2)
- ❑ Rage, uncontrolled anger, seeking revenge (3)
- ❑ Looking for ways to kill him/herself by seeking access to rearms, available pills, or other means (4)
- ❑ Feeling trapped – like there's no way out (5)
- ❑ Increase in alcohol or drug use (6)
- ❑ Talking or writing about death, dying or suicide, when these actions are out of the ordinary for the person (7)
- ❑ Withdrawing from friends, family and society (8)
- ❑ Anxiety, agitation, unable to sleep, or sleeping all the time (9)
- ❑ Dramatic mood changes (10)
- ❑ No reason for living; no sense of purpose in life (11)

Q10 For this section, please read the following statements. For each statement, please indicate the extent to which you agree or disagree.

Q11 I resent being asked to do more about suicide.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q12 Suicide prevention is not my responsibility.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q13 Making more funds available to the appropriate health services would make no difference to the suicide rate.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q14 Working with suicidal patients is rewarding.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q15 If people are serious about committing suicide, they don't tell anyone.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q16 I feel defensive when people offer advice about suicide prevention.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q17 It is easy for people not involved in clinical practice to make judgments about suicide prevention.

- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q18 If a person survives a suicide attempt, then it was a ploy for attention.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q19 People have the right to take their own lives.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q20 Since unemployment and poverty are the main causes for suicide, there is little than an individual can do to prevent it.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q21 I don't feel comfortable assessing someone for suicide risk.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q22 Suicide prevention measures are a drain on resources, which would be more useful elsewhere.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q23 There is no way of knowing who is going to commit suicide.
- ❍ Strongly disagree (1)
- ❍ Disagree (2)
- ❍ Uncertain (3)
- ❍ Agree (4)
- ❍ Strongly agree (5)

Q24 What proportion of suicide to you consider preventable?
- ❍ None (1)
- ❍ A small proportion (2)
- ❍ Uncertain (3)
- ❍ A large proportion (4)
- ❍ All (5)

Q25 For this section, please read the following statements. For each statement, please indicate whether you think it is true or false.

Q26 Few people want to kill themselves.
- ❍ True (1)
- ❍ False (2)

Q27 Youth ages 10-24 have a significantly greater risk of suicide than individuals ages 65 and older.
- ❍ True (1)
- ❍ False (2)

Q28 The rate of suicide among those with severe mental illness is 6 times the general population.
- ❍ True (1)
- ❍ False (2)

Q29 If a person is serious about suicide, there is little than can be done to prevent it.
- ❍ True (1)
- ❍ False (2)

Q30 If you talk to a consumer (client) about suicide, you may inadvertently give them permission to seriously consider it.
- ❍ True (1)
- ❍ False (2)

Q31 Depression indicates a suicide risk.
- ❍ True (1)
- ❍ False (2)

Q32 Suicide is always unpredictable.
- ❍ True (1)
- ❍ False (2)

Q33 Suicidal people want to die.
- ❍ True (1)
- ❍ False (2)

Q34 Individuals with borderline personality disorder frequently discuss or gesture suicide, but do not really intend to kill themselves; instead they intend to provoke or manipulate others.
- ❍ True (1)
- ❍ False (2)

Q35 Almost done! For this section, you will be doing a bit of role play. Before beginning, imagine yourself in the role of the counselor. Below are a series of client statements. For each client statement, there are two counselor responses. For each counselor response, please rate how inappropriate to appropriate that response would be for you. Please select the first answer that comes to mind.

Q39 Client: I decided to call in tonight because I really feel like I might do something to myself . . . I've been thinking about suicide.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You say you're suicidal, but what is it that's really bothering you? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Can you tell me more about your suicidal feelings? (2)	❍	❍	❍	❍	❍	❍	❍

Q40 Client: And now my health is going downhill, too, on top of the rest. Without my husband around to care for me anymore, it just seems like the end of the world.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Try not to worry so much about it. Everything will be alright. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: You must feel pretty lonely and afraid of what might happen. (2)	❍	❍	❍	❍	❍	❍	❍

Q41 Client: But my thoughts have been so terrible...I could never tell them to anybody.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You can tell me. I'm a professional, and have been trained to be objective about these things. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: So some of your ideas seem so frightening to you, that you imagine other people would be shocked to know you're thinking such things. (2)	❍	❍	❍	❍	❍	❍	❍

Q42 Client: No one can understand the kind of pain I've been going through. Sometimes I just feel like I have to hurt myself, so I cut my wrists.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: It seems like you've been suffering so much that cutting your wrists is the only way you can make the pain go away. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: But you're so young, you have so much to live for. How can you think of killing yourself? (2)	❍	❍	❍	❍	❍	❍	❍

Q43 Client: What are you anyway? Are you a doctor? How do you know what I've been going through? You've probably always had it pretty soft.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: So you're wondering if I can understand how you feel. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: You're not even giving me a chance. I've had a pretty rough life, too; you're not the only one who's seen some hard times. (2)	❍	❍	❍	❍	❍	❍	❍

Q44 Client: My life has been worthless ever since my wife, Emma, died four years ago. The kids are grown and married now, and I've been retired from my job at the railroad for some time. It just seems that I'd be better off dead.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: But try to think of what Emma would want for you. She'd want you to continue leading a productive life, wouldn't she? (1)	❍	❍	❍	❍	❍	❍	❍

Helper B: It sounds like everything just collapsed around you when Emma died...But what has happened recently to make things even worse to make you think that dying is the only way out? (2)	❍	❍	❍	❍	❍	❍	❍

Q45 Client: I really need help...It's just...{voice breaks; silence}.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: It must be hard for your to talk about what's bothering you. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Go on. I'm here to listen to you talk. (2)	❍	❍	❍	❍	❍	❍	❍

Q46 Client: When you sum up my problem like that, it makes it seem less confusing and not so scary.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: See, it really isn't so bad after all. It certainly isn't anything you'd think of killing yourself over, is it? (1)	❍	❍	❍	❍	❍	❍	❍

Helper B: Sometimes talking about problems does make them a bit clearer. I think you realize how dangerous your suicidal feelings were, and that's why you decided to contact me. (2)	❍	❍	❍	❍	❍	❍	❍

Q47 Client: You were supposed to help me, but you've only made things worse.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: I'm sorry. I was only trying to help. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: You sound pretty angry. (2)	❍	❍	❍	❍	❍	❍	❍

Q48 Client: How could you ever help me? Have you ever wanted to kill yourself?

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: It sounds like you're concerned about whether I can understand and help you. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Sure, I've thought about suicide sometimes. But I always found more realistic solutions to my problems. (2)	❍	❍	❍	❍	❍	❍	❍

Q49 Client: I don't know. This whole thing with my wife really gets to me {sobs}. I try so hard to keep from crying.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Do you think that the reason it's hard for you to cry is because you're a man? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: With all the hurt you're feeling, it must be impossible to hold those tears in. (2)	❍	❍	❍	❍	❍	❍	❍

Q50 Client: How can I believe in God anymore? No God would ever let this happen to me; I've never done anything to deserve what's happened.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Things have gotten so bad that it's hard for you to see any meaning in the things that have happened to you. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Well, God works in mysterious ways. Maybe this is his way of testing your faith. (2)	❍	❍	❍	❍	❍	❍	❍

Q47 Client: I don't know why I'm calling you. My family is financially well off, and my husband spends plenty of time with me, even though he has a successful law career. Even my kids have

been doing well. They get good marks at school and have lots of free time activities with their friends. But nothing seems to interest me. Life us just a bore...

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Considering all you have going for you, your problems can't be all that serious. Try to focus more on the positive aspects of your situation. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: So even though things seem to be going well at one level, life still seems pretty depressing, even if it's hard to say exactly why. (2)	❍	❍	❍	❍	❍	❍	❍

Q48 Client: I have to hang up now. My mother's coming home soon and I don't want her to know I've been talking to you.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Okay, but if you keep feeling suicidal, remember you can always call back. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Alright, but first I want you to promise me you won't do anything to hurt yourself, until you call and talk to me. Will you repeat that promise? (2)	❍	❍	❍	❍	❍	❍	❍

Q49 Client: Is it really true that many people feel this way? I thought I was the only one who had such dreadful, sinful ideas.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: No, there are many people who suffer from mental illness. But with appropriate treatment by a qualified physician, some of these patients can be cured. (1)	❍	❍	❍	❍	❍	❍	❍

Helper B: It is true. You're not the only one who has suicidal thoughts. And you can be helped to get through this crisis, just as others have been. (2)	❍	❍	❍	❍	❍	❍	❍

Q50 Client: I'm so lonely, so tired {crying}. There just isn't anywhere left to turn.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You seem so alone, so miserable. Have you been feeling suicidal. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Come on now. Things can't be all that bad. (2)	❍	❍	❍	❍	❍	❍	❍

Q51 Client: {Over telephone} It's hard to talk here, with all these people...

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: Would it helped if I asked questions? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Why don't you call back some other time when you can talk more easily? (2)	❍	❍	❍	❍	❍	❍	❍

Q52 Client: I have a gun pointed at my head right now, and if you don't help me, I'm going to pull the trigger!

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You seem to be somewhat upset. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: I want you to put down the gun so we can talk. (2)	❍	❍	❍	❍	❍	❍	❍

Q53 Client: Why you should you care about me anyway?

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: I've been trained to care about people. That's my job. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Because I think your death would be a terrible waste, and it concerns me that things are so that you are considering suicide. You need help to get through this critical period. (2)	❍	❍	❍	❍	❍	❍	❍

Q54 Client: I really hate my father! He's never shown any love for me, just complete disregard.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You must be really angry at him for not being there when you need him most. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: You shouldn't feel that way. After all, he is your father, and he deserves some respect. (2)	❍	❍	❍	❍	❍	❍	❍

Q55 Client: I don't think there's really anyone who cares whether I'm alive or dead.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: It sounds like you're feeling pretty isolated. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Why do you think that no one cares about you anymore? (2)	❍	❍	❍	❍	❍	❍	❍

Q56 Client: I tried going to a therapist once before, but it didn't help...Nothing I do now will change anything.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You've got to look on the bright side! There must be something you can do to make things better, isn't there? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Okay, so you're feeling hopeless, like even a therapist couldn't help you. But has anyone else been helpful before - maybe a friend, relative, teacher, or clergyman? (2)	❍	❍	❍	❍	❍	❍	❍

Q57 Client: My psychiatrist tells me I have an anxiety neurosis. Do you think that's what's wrong with me?

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: I'd like to know what this means to you, in this present situation. How do you feel about your problem? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: I'm not sure I agree with that diagnosis. Maybe you should seek out some psychological testing, just to be certain. (2)	❍	❍	❍	❍	❍	❍	❍

Q58 Client: I can't talk to anybody about my situation. Everyone is against me.

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: That isn't true. There are probably lots of people who care about you if you'd only give them a chance. (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: It must be difficult to find help when it's hard to trust people. (2)	❍	❍	❍	❍	❍	❍	❍

Q59 Client: {Voice slurred, unclear over telephone}

	Highly inappropriate (1)	Inappropriate (2)	Marginally inappropriate (3)	Neither appropriate or inappropriate (4)	Marginally appropriate (5)	Appropriate (6)	Highly appropriate (7)
Helper A: You sound so tired. Why don't you get some sleep and call back in the morning? (1)	❍	❍	❍	❍	❍	❍	❍
Helper B: Your voice sounds so sleepy. Have you taken anything? (2)	❍	❍	❍	❍	❍	❍	❍

Q67 You're all finished. Thank you very much for completing this survey.

Appendix D: Gift Card Request Form

Gift Card Request From

Q3 For providing your time and responses in the survey, you will receive a $5 Amazon, Walmart, or Starbucks electronic gift card. All you need to do is fill out the brief form below. Thanks again for participating.

Q1 What is the email address where you would like to receive your gift card?

Q2 Which type of gift card would you like to receive?

- ❍ Amazon (1)
- ❍ Walmart (2)
- ❍ Starbucks (3)

Vita

Breanna (Bre) Banks is a Tennessee native, but lived part-time in England with her grandmother and her family during her childhood. She received a Bachelor of Arts degree in Psychology and Political Science at the University of Tennessee at Martin. She subsequently completed a Master of Arts in Mental Health Counseling from Argosy University – Nashville. During this time, she secured employment in mental health research and program evaluation at Centerstone Research Institute, where she continues to work currently. In 2013, Bre moved to Knoxville, Tennessee to attend the Doctor of Philosophy in Counselor Education program at the University of Tennessee. In the fall of 2016, she will begin a new career as an Assistant Professor in the doctoral Counselor Education program at Adler University in Chicago. Her research interests include suicide prevention and intervention, suicide response training, dialectical behavior therapy, mindfulness-based treatment and education, and evidence-based treatment for underserved youth.