

Can Demonstration Enhance the Effects of an Online Risk Assessment
Training Workshop?

by

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ABSTRACT

Despite the evidence that suicide risk assessment training is necessary only 40-50% of psychology programs offer risk assessment training (Granello & Juhnke, 2010). In the present study an online suicide risk assessment and safety plan training workshop for graduate students in the field of psychology was investigated. Participants were randomly assigned to the control condition (lecture) or the treatment condition (lecture + demonstration). Measures of declarative knowledge of suicide risk and protective factors, application to clinical scenarios, and risk assessment and management self-efficacy scales were administered before and after completion of the workshop. Two way repeated measures ANOVA's were conducted with repeated time measures to evaluate the Time X Condition interaction. While there was a significant main effect of time on all three dependent variables, there was no significant time X condition interaction. In contrast to predictions, the added component of a demonstration did not result in greater improvements in application to clinical scenario multiple choice questions or risk assessment and management self-efficacy. Post hoc moderation analysis revealed demonstration enhanced the effects of knowledge acquisition and assessment of clinical scenarios for individuals who reported the training was less relevant to their current work. Implications of findings and directions of further research are discussed.

DEDICATION

To my family, thank you for the never ending support and your willingness to test each part of my training for technological problems. Your generous time and effort were invaluable!

To my husband and partner in life, I could not have done this without you. You showed me that I had the capability to design this online training. Through your faith in me, I learned to have faith in myself. Thank you for understanding and supporting the greater purpose of my research.

To the individuals who have lost a loved one to suicide, I dedicate this work to you.

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CHAPTER 1

INTRODUCTION

Suicide is a significant health dilemma in the United States and globally, however it remains “one of the few topics that is taboo in our modern society” (Granello & Juhnke, 2010, p. 8). Suicide is defined as “the act of intentionally ending one’s own life” (Nock et al., 2008). However, this definition is far too vague, which is why more specific suicide terminology is often utilized. Non-fatal suicidal thoughts and behaviors (suicidal behaviors) are categorized into 3 categories: suicide ideation (thoughts of engaging in behavior to end one’s life), suicide plan (formulation of a specific method to end one’s life) and finally, suicide attempt (self-injurious behavior with some intent to end one’s life) (Nock et al., 2008). Nock and colleagues report that suicide is the 11th leading cause of death in the United States and the 14th leading cause of death worldwide. Suicide accounts for 1.4 percent of all US deaths with 10.8 per 100,000 persons. Suicide rates have remained somewhat constant despite significant developments in treatment research (Nock et al., 2008). It is even more striking that for every completed suicide attempt there are 25 people who attempt but do not successfully complete suicide (Holmes & Holmes, 2005).

Despite the evidence that suicide risk assessment training is necessary, only 40-50% of psychology programs offer risk assessment training (Granello & Juhnke, 2010) and 45% of former graduate students in clinical psychology reported they received no training specific to suicidality while in graduate school (Kleespies, Penk, & Forsyth, 1993). This is alarming considering 97% of psychology trainees reported working with suicidal individuals in treatment (Westefeld et al., 2000) and 25-50% of therapists

sampled lost a client to suicide (Koocher & Keith-Speigel, 2008). The lack of suicide assessment and management training is not a recent development; in fact Burstein, Adams, and Giffen (1973) identified deficiencies in professional training in suicide risk assessment more than three decades ago. This lack of formal training is not confined to the psychology profession; little routine formal training in suicidality is conducted in U.S. psychiatric residencies, social work schools or nursing programs (Berman, 1986).

Most of the current training that exists within the psychology field is informal within the context of direct supervision (Ellis & Dickey, 1998) or lectures within classes without much specificity (Dexter, Mazza & Freeman, 2003). This type of training may not include exposure to empirical literature (Oordt, Jobes, Fonseca, & Schmidt, 2009). For most clinicians, especially novice therapists or those still in training, suicide assessment is anxiety provoking (Bryan & Rudd, 2006). It is likely that insufficient training on this important topic contributes to the significant fears and anxieties many mental health professionals have in relation to working with suicidal clients (Pope & Tabachnick, 1993). Graduate training in psychology is where individuals begin the process of becoming clinical psychologists (Bongar, 1992). This trend seems to follow into professional practice, fewer than one in four psychologists and psychiatrists in the Washington D.C. area (averaging eleven years in independent practice) had any post-graduate school/residency training in suicide assessment (Berman & Cohen-Sandler, 1982). More education and training in suicide assessment early in training could alleviate the anxiety many mental health professionals feel in relation to working with suicidal clients.

Even limited training in suicide risk assessment can result in greater ability to evaluate suicide risk. For example, providing a training in utilizing checklists was associated with a higher ability to evaluate suicide risk (Juhnke, 1994). In addition, school counselors who recently participated in continuing education in ethical or legal issues felt more prepared to determine whether a student is at risk for suicide (Herman, 2002). In the present study the enhanced effects of demonstration in an online suicide-risk assessment training program were evaluated. Demonstration training enhancement was evaluated for the outcomes of suicide related knowledge, assessment of clinical scenarios, and risk assessment and management self-efficacy. An online format was utilized to increase the accessibility of the training. Numerous mental health professional programs do not offer risk assessment training, and thus students are graduating and becoming mental health professionals without sufficient suicide assessment training. It is important to be able to reach these mental health professionals in training before they go out into the world to practice to stop this perpetuating lack of training.

CHAPTER 2

LITERATURE REVIEW

Unlike many diagnostic procedures assessing relatively stable concepts, suicide assessment is much trickier because there is not yet a single test or panel of tests that can accurately predict suicide (Fowler, 2012). One reason for the lack of ability to predict suicide is that suicide risk is fluid, highly state-dependent, and variable over time (Rudd, 2006). Predicting suicide for an individual client falters because specific predictors are found among many individuals who are not suicidal, resulting in high false-positive predictions (Fowler, 2012). While prediction is unlikely at this point in time, clinicians remain responsible for assessing suicide risk and providing treatment to decrease risk (APA, 2003). Although risk factors and measures have yet to provide evidence of predictive value, experts generally agree that a multi-dimensional assessment incorporating the best known risk and protective factors is the most reasonable course of action (APA 2003; Brown, 2002; Goldsmith, Pellmar, Kleinman & Bunney, 2002; Nock, Wedig, Janis & Deliberto, 2008; Rudd et al., 2006).

Clinicians need to combine both clinical experience and evidence based research to conduct ethical risk assessments with clients (Simon, 2006). Therefore training should focus on providing novice therapists with information regarding evidence based research as well as clinical practice utilizing this information.

It is important that clinicians learn how to recognize suicide risk factors to successfully assess suicide risk and to complete safety plans/treatment plans for those at risk. Adequate assessment of risk is essential to ethical practice and should be thorough, extensive and multifaceted (Jobes, Rudd, Overholser & Joiner, 2008). There are many

important risk factors that therapists should be aware of concerning suicidality; in fact, there are so many that it can become overwhelming for a clinician to piece all of these risk factors together to evaluate the level of risk. This can be a particularly daunting task for the novice therapist. According to Granello and Juhnke (2010), there are three major types of risk factors: (1) static risk factors, which are stable over time, such as gender, age, ethnicity, and family history; (2) dynamic factors, which frequently change over time, such as hopelessness, suicidal ideation, and agitation; and (3) protective factors, which are factors likely to ameliorate suicide risk, such as coping skills, religiosity, strong social supports and strong therapeutic relationship. Dynamic factors are more episodic and therefore may be more predictive of an imminent suicidal crisis (Fowler, 2012), and will be a larger focus in the present study. When examining the empirical support for risk factors it is important to keep in mind what the risk factor is predictive of. A risk factor that is predictive of suicidal ideation is much different than a risk factor that is predictive of future suicide attempts or completions. Suicidal ideation individually is not very telling about suicide risk status because it is a common symptom of mood disorders (Joiner, et al., 1997). While there are a large amount of risk factors predictive of suicidal ideation, very few risk factors have been directly connected with suicide attempts or completions.

Static Risk Factors.

Mental health diagnosis. According to data compiled by the World Health Organization on death and mortality, 90% of all individuals who commit suicide have a diagnosable mental health disorder (Bertolote & Fleischmann, 2002). Within a meta-analysis on completed suicides without a history of mental hospital admission, 30.2%

were diagnosed with mood disorders, 17.6 were diagnosed with alcohol dependence, 14.1% were diagnosed with schizophrenia and 13% were diagnosed with personality disorders (Bertolote, Fleischmann DeLeo & Wasserman, 2004). Experts believe that while depression symptoms and suicide are closely associated, the presence of depression is neither necessary nor sufficient for suicide to occur (Sullivan & Bongar, 2009).

According to epidemiologic studies, 29% of bipolar patients admit to at least one suicide attempt in their lifetime (Chen & Dislaver, 1996) and 10-20% succeed (Goodwin & Jamison, 2007). Joint occurrence of bipolar disorder and suicide has been a particular focus of study due to the higher rates of suicide attempts in in this disorder relative to comparison to other disorders (Oquendo, Currier, & Mann, 2006). For patients with bipolar disorder in an inpatient setting, the presence of a major depressive or mixed episode, fewer reasons for living and an increased lifetime aggression were higher in those who attempted suicide in comparison to non-attempters (Oquendo et al., 2006). Within a study of clients suffering with Schizophrenia, 20-40% attempted suicide and 5% successfully completed suicide (Meltzer, 1995). In one study of 106 outpatients diagnosed with schizophrenia, the 2 patients who committed suicide during the study were the only patients with command hallucinations to self-harm (Zsook, Byrd, Kuck & Jeste, 1995). Therefore, command hallucinations to self-harm are of particular importance to consider when evaluating clients with Schizophrenia.

Demographic risk factors. In the United States approximately 70% of all suicide completers are Caucasian males and an additional 20% are Caucasian females (Sullivan & Bongar, 2009; Granello et al., 2010). According to experts, it is important to note that the suicide rates for Caucasian males increase with age, however, it is crucial not to

conceive suicide as primarily the domain of older Caucasian men (Sullivan & Bongar, 2009). There are numerous factors that are essential to consider, which make it difficult to parcel out individual factors. For example, the elderly in the United States and Japan are more vulnerable to suicide risks when unemployed (Taylor, 2003).

Adolescent suicides are often highly impulsive, subject to the effects of suicide contagion, and often occur in the absence of a mental health diagnosis (Sullivan & Bongar, 2009). For non-Caucasian males, suicide risk tends to peak between the ages of 15 and 29 (Sullivan & Bongar, 2009). The greatest increase in adolescence occurs in male Native American and Alaskan Native populations with a five-fold increase from 9.1 per 100,000 to 51.9 per 100,000 (Nock et al., 2008).

According to epidemiological data, there are strong gender differences in risks for suicide completion. Males complete suicide at a rate of 4:1 to females even though females attempt at six times the rate that males attempt (Granello et al., 2010). This is most often accounted for by the higher rates of lethal plans among males and the higher tendency to seek help among females (Westefeld et al., 2000). This gender risk factor is upheld globally; male deaths by suicide are three times more likely than females (Nock et al., 2008).

It is important to note that ethnic minorities overall are less likely to divulge their suicidal ideation. One study showed that only one out of 36 clients with suicidal ideations disclosed this information without a formal assessment and 71% of ethnic minorities did not disclose their suicidal ideations in comparison to 29% of Caucasians (Morrison & Downey, 2000).

Dynamic Risk Factors Predictive of Suicidal Behaviors.

History of attempts. History of attempts has been identified as a predictive factor of future suicide behaviors. A history of suicide attempts has been reported as the most powerful risk factor for future suicidal behavior (Pompili et al., 2010; Rudd, 2006). This risk factor was upheld across four different populations (2 outpatient facilities, one inpatient facility and an emergency room) with varying degrees of suicidal behaviors, age groups and impairment levels, even when controlling for factors such as hopelessness and diagnoses (Joiner et al., 2005). According to experts, previous attempts are a particularly powerful risk factor when the attempt was highly lethal because the client may become less fearful of his or her own death and learn from the failed attempt to bring about death in a future attempt (Juhnke & Granello, 2007). In a matched controlled study of 90 psychiatric patients, suicides risk was greatest during the three months following an attempt (Roy, 1982).

Lethal means. Access to lethal means is another important risk factor for suicide (Jobes, Rudd, Overholser & Joiner, 2008). Suicide risk has been directly related to client access to lethal methods (Juhnke & Granello, 2007). More people die by self-inflicted gunshot than by all other suicide methods combined in the United States (Miller, Azrael, & Hemenway, 2002). Reviews of medical examiner cases of adolescent suicides indicated adolescents and young men who successfully complete suicide disproportionately use firearms (58-72%) in comparison to hanging (18.7-30%) and drug overdose (2.8-5.3%) (Shields, Hunsaker, & Hunsaker, 2006; Singh & Lathrop, 2008). In a study on suicides completions in homes in Tennessee and Washington, where case subjects were compared to matched controls, the presence of one or more guns in the

home was associated with an increased risk for suicide (adjusted odds ratio, 4.8) even after controlling for factors of living alone, psychotropic medications, arrests and drug/alcohol use (Kellerman, et al., 1992). Deficient clinical screening for firearm access has been connected to increased risk of suicide completion, however, only about 20% of patients evaluated by clinical psychologists are asked about their access to firearms (Sullivan, 2004). Routine inquiry into firearm access has been suggested since all patients seeking mental health care represent some magnitude of risk, and firearm ownership in the United states has become common (up to 40% of households) (Sullivan & Bongar, 2009). Restriction of firearm access is becoming a focus of suicide prevention work. After the Israeli Defense Force put in place a policy dictating that soldiers leave their weapons at their bases before heading home for the weekend, suicide rates decreased by 40% due to the decrease in suicide rates over the weekend (Lubin, et al., 2010).

Recent Hospitalization. Recent discharge from a psychiatric hospital has been recognized as a risk factor for suicide for some time (Simon, 1988). In a longitudinal study in Denmark a sharp peak in suicide rates was shown in the first week following discharge and was particularly high among patients with affective disorders and patients who received less than the median duration of hospital treatment (Qin & Nordentoft, 2005).

Risk Factors Predictive of Suicidal Ideation

Suicidal communication. According to an investigation of 954 patients with major affective disorder, approximately 50-80% of people who commit suicide communicate pre-suicidal clues about their suicidal intention, by verbalizing their intent, putting affairs in order, giving away prized possessions, saying goodbye, or settling

estates (Fawcett, 1988). According to a large cross national survey of 84,850 adults with suicidal ideations, the conditional probability of ever making a plan is 33.6% and 29% for ever making a suicidal attempt, however, the probability of attempt for individuals with suicidal ideations with a plan is 56% but only 15.4% among those without a plan (Nock et al., 2008) Therefore, the majority of individuals who commit suicide make a plan and communicate their intent.

Life stressors. There are many environmental factors that can increase the risk for suicide. According to Granello and Juhnke (2010), proximal and distal stressors such as a recent loss, breakup or early childhood abuse are important risk factors however, it is important to remember that individuals differ in what they see as a stressor based on their internal frame of reference. According to experts, stress can come in the form of a recent undesirable life event or stress over fairly long periods of time (Bongar, 2002). Within a Pub Med literature review on autopsy studies, nearly all studies demonstrate at least one (usually more) adverse life event within one year of death, often within the preceding months (Foster, 2011). Loss of a loved one, arrest or incarceration, the end of interpersonal relationships, perceived financial strain, feelings of shame, guilt, or humiliation are examples of stressful events that might contribute to a suicidal crises (Sullivan & Bongar, 2009). In one study 67 adolescent suicide victims were matched with community controls, and results demonstrated in the year before death suicide victims were more likely to have experienced interpersonal conflict with parents and with romantic relationships, disruption of romantic attachment, legal or disciplinary problems (Brent et al., 1993). In addition, after controlling for psychopathology, legal and disciplinary problems in the past year remained correlated with an increased risk of

suicide (Brent et al., 1993). In a study with 72 active duty U.S. soldiers who attempted suicide, internal experiences of emotional distress or trauma related experiences following external life stressors were associated with a stronger desire for suicide and shorter deliberation about whether or not to attempt suicide (Bryan & Rudd, 2012).

Acculturative stress is an important factor to consider for immigrant students. In one study for acculturating Korean students (in comparison to Korean students in Korea and American students in the U.S.), suicidal ideations were associated with life stress, lack of parental support and not living with both parents (Cho & Haslam, 2010). According to a study of 263 suicide attempts matched with controls, the interaction of life stressors in the past 6 months, life stressors from age 0-15 and low social support was linked to first time suicide attempts, while, the interaction of life stressors in the past 6 months, life stressors from age 0-15 and psychopharmacological treatment before admission were linked with multiple attempts (Pompili et al., 2011).

Exposure to a suicide attempt. According to experts, a history of suicide or attempted suicide within the family is a commonly considered risk factor for suicide (Moscicki, 2001). 11% of suicides had a history of at least one other suicide among their first degree relatives (Maris, 1981). In one study of offspring of adults with a history of a depressive episode, individuals exposed to suicidal behavior were found four times more likely to have made a suicide attempt themselves (Burke et al., 2010). However, according to experts, it remains unclear whether biological or social modeling is at play, however, there is likely a partial social effect due to the social contagion effect observed, whereby suicide risk increases following the suicide of a nonrelated peer or even a celebrity or stranger (Sullivan & Bongar, 2009).

Hopelessness. Central to understanding suicidal behavior is the comprehension that death provides relief from terrible psychological pain; death becomes preferable to one's current (or anticipated) level of subjective distress (Shneidman, 1989).

Hopelessness or the loss of all other hope is a common feature of suicidal crises according to experts (Sullivan & Bongar, 2009). Hopelessness was identified to be a stronger risk factor for eventual suicide over severity of depression symptoms; in fact, a hopelessness score above 10 predicted 91% of eventual suicides in a study of 207 patients hospitalized for suicidal ideations (Kovacs & Garrison, 1985). While depression is a much larger vague risk factor, hopelessness provides the cognitive rigidity that makes it difficult for patients to see an alternative to suicide (Sullivan & Bongar, 2009).

Burdensomeness. Burdensomeness, or feeling like a burden is a risk factor for suicidal ideation, particularly in older adults. In a population of older adults, perceived burdensomeness accounted for significant variance in suicidal ideation even after controlling for depressive symptoms, hopelessness, and functional impairment (Cukrowicz, Cheavens, Van Orden, Ragain, & Cook, 2011).

Substance and alcohol use. Substance dependence has consistently been shown to be the second more prevalent diagnoses in suicidal clients (Fleischmann et al., 2005; Canapary, Bongar & Cleary, 2002). The suicide rate among people diagnosed with alcohol dependence is 50 times greater than those without alcohol dependence according to a matched controlled study of 90 psychiatric patients (Roy, 1982). In addition, according to a literature review, alcohol and drug use have a distal effect on suicidal behaviors (Borges & Loera, 2010). According to research collected regarding suicide cases (N = 250) at a poisons unit, 15-25% of those who completed suicide and

approximately 55% of individuals who attempted suicide were under the influence of alcohol (Merrill, Miller, Owens, and Vale, 1992). Experts report, this is in large part due to the impairment in judgment caused by alcohol as well as the increase in reckless behaviors associated with alcohol consumption (Granello & Granello, 2007). According to Granello and Granello (2007), “drinking within three hours of an attempt has been shown to be one of the strongest variables associated with a near-lethal suicide attempt” (p.118). In a more recent literature review, alcohol use has been associated with low risk methods and inhalant and cocaine use were associated to a higher degree with suicidal behaviors (Vijayakumar, Kumar, & Vijayakumar, 2011).

Medical illness. According to a literature review, chronic, incurable and painful physical conditions such as HIV/AIDS, cancer, spinal cord injury, Huntington’s chorea, and head injury have been associated with a greater risk for suicide (Mackenzie & Popkin, 1990). Medical illness plays a critical role in approximately 25% of those who commit suicide and this percentage increases with age to nearly 50% in people over the age of 50 and to over 70% for those 60 and above (Mackenzie & Popkin, 1990). In a study of elderly patients from an inpatient facility diagnosed with depression, individuals with a history of a suicide attempt had a higher cumulative illness rating score than matched controls without a history of a suicide attempt (Bergman, Barak, Sigler, & Aizenberg, 2011). Related, a pattern of utilization of medical care has been associated with suicide risk (Sullivan & Bongar, 2009). In one study nearly half of suicide completers age 66 or older had visited a physician within 1 week of their death (Juurink, Herrmann, Szalai, Kopp & Redelmeier, 2004). In fact within elderly patients, severe

physical pain increased suicide risk more than depression diagnosis, psychosis, or anxiety (Juurlink et al., 2004).

Protective Factors

Social support. In many studies it has been reported that being single, divorced, widowed, separated or living alone increased the risk for suicide (Sullivan & Bongar, 2009). One study in Chicago found that about 50% of people that committed suicide had no close friends in comparison to 20% of individuals with non-fatal suicide attempts (Maris, 1981). It appears to be the quality and stability of the relationships that determines if the social supports are protective. For example, in one study based on data from The National Longitudinal Mortality Study, marriage has been a protective factor against suicide (Kposow, 2000), however, the presence of high conflict or violent marriage can function as a risk factor (APA, 2003). In addition, for women having children in the home may be protective against suicide (Bromet et al., 2008), however, it was associated with an increased the likelihood of suicidal ideation (Nock, Borges, Bromet et al., 2008). Within a study of inpatients and outpatients 50 years and older diagnosed with mood disorders, greater reported family connectedness moderated the relationship between living alone and suicidal ideation (Purcell, Heisel, Speice, Franus, Conwell, & Duberstein, 2012). In addition, within a sample of veterans, post-deployment support was negatively associated with suicidal ideations (Pietrzak, et al., 2010). Overall, perceived social support specifically, has been shown to be a large protective factor. In a study with individuals diagnosed with substance abuse disorders, perceived social support and living alone were found to be a significant predictors of suicide attempts (You, Van Orden, & Conner, 2011).

Expressed reasons to live. Another protective factor that has been documented is expressed reasons for living. Both planning for the future in the long term, such as life goals, and in the short term, such as plans to attend an event were protective in a study of 51 patients hospitalized for suicide attempts (Strosahl, Chiles & Linehan, 1992). In a study with psychiatric inpatients ($N = 175$) and Seattle shoppers ($N = 197$, duty to family or religious beliefs were identified as reasons for living and distinguished those with suicidal ideation from those with prior suicidal attempts (Linehan, Goodstein, Nielson & Chiles, 1983). According to a study with African and White Americans, individuals in both groups were less likely to act on suicidal thoughts when they held religious beliefs that suicide is immoral (Neeleman, Wessley & Lewis, 1998).

Therapeutic relationship. According to a literature review, the most reliable protective risk factor may prove to be effective clinical intervention for psychological pain, physical illness and substance abuse (Sullivan & Bongar, 2009). Therapeutic concern has been a documented protective risk factor, evidenced by a remarkable study documenting the effects of long term contact through regular follow up letters to individuals ($N = 3,005$) discharged from treatment for a suicide attempt (Moto & Bostrom, 2001). During all five years of the study, the rate of subsequent suicide attempts was significantly reduced (Moto & Bostrom, 2001). A number of randomized clinical trials have demonstrated the effectiveness of interventions providing support through caring concerned letters, phone contacts and brief interviews in reducing suicide related behaviors (Motto & Bostrom, 2001; Fleishman et al., 2008; Guthrie et al., 2001).

Suicide Evaluation

While knowing what risk factors exist is important this alone is not sufficient training to conduct a suicide assessment. Clinicians are expected to put the risk factors together to evaluate how dangerous the client may be to themselves and take appropriate action. Once a counselor is able to identify that a client may be at risk, a more thorough assessment is warranted to evaluate the most relevant information. Unlike most diagnostic procedures, there is not currently a single test or panel of tests that accurately predicts suicide (Fowler, 2012). This is most likely due to the fluid nature of suicide risk, which is highly state-dependent and variable over time (Rudd, 2006). While prediction of suicide is unlikely at this point in time, clinicians are nonetheless liable for assessing suicide risk, and providing treatment to decrease risk at the level of standard care (Fowler, 2012). When thinking about risk assessment it is important to remember, “The clinician’s task is not to predict suicide, but rather to recognize when a patient has entered into a heightened state of risk and to respond appropriately” (Bryan & Rudd, 2006). Clinicians are not expected to predict the future; they are only human. They are however, expected to stay current on empirically based practices and meet the standard of care (Bryan & Rudd, 2006). According to a review of the core competencies in suicide risk assessment outlined by the Suicide Prevention Resource Center and the American Psychological Association practice guidelines (APA, 2003), effective treatments of suicidality target suicidality specifically, instead of focusing on the peripheral or associated symptoms (e.g. depression, hopelessness); This is because targeting suicidal behavior as a treatment outcome lends itself to reducing future attempt rates (Rudd, Cukrowicz, & Bryan, 2008).

A Lifeline subcommittee of American and Canadian experts in suicide prevention reviewed the literature and consulted to develop evidence-based risk assessment standards and recommended practices, which include evaluation of suicidal desire, suicidal capability, suicidal intent and protective factors against suicide (Joiner, et al., 2007). Based on a review of the empirical literature, the Lifeline's Certification and Training Subcommittee (CTS), determined that only when suicidal desire, intent and capability are present does the risk for suicide remain high, regardless of the absence or presence of protective factors (Joiner, et al., 2007). If suicidal desire and intent are present or suicidal desire and capability are present the client is at a moderate to high risk, depending on the absence or presence of protective factors and when suicidal desire, capability or intent is present alone there is a moderate to low risk depending on the absence or presence of protective factors (Joiner, et al., 2007).

Suicidal Desire. According to scale development studies for suicidal ideation with psychiatric outpatients and suicidal young adults, suicidal desire is made up of the following components: no reason for living, wish to die, wish not to carry on, passive attempt (e.g. not caring if death occurred), and desire for suicide attempt (Beck et al., 1997; Joiner et al., 1997, 2003). According to research with psychiatric outpatients and narrative literature reviews, there are many risk factors that have been shown to contribute to suicidal desire, such as feeling like a burden (Rudd et al., 2006; Joiner, 2009), feeling trapped, feeling like there is no alternative course or escape, feeling intolerably alone, psychological pain, hopelessness, and helplessness (Williams, Duggan, Crane, & Fennell, 2006). Therefore, when these risk factors are evident in session based on the client report or observation of the client, the counselor should ask about suicidal

desire specifically with a question such as “Have you had any thoughts of hurting yourself or not wanting to be here anymore?” The question is posed in a manner to assess passive suicidal desires in addition to more active suicidal desires. Suicidal desire alone is not very telling of suicide risk status because it is a common symptom of mood disorders (Joiner, et al., 1997), however, when suicidal desire is present experts recommend this should alert the clinician to examine suicidal capability and suicidal intent (Joiner, et al., 2007).

Suicidal capability. Suicidal capability is defined by fearlessness to make an attempt; competence to make an attempt, availability of means, the opportunity for an attempt, the presence of a specific plan for an attempt, and preparations for an attempt (Joiner, et al., 2007). Numerous factors have been identified as contributing to suicidal capability. In a study with young adult psychiatric patients referred for suicidal ideation a history of suicide attempts was found to be associated with increased suicide capability (Rudd, Joiner & Rajab, 1996). Within a matched control study with young people ages 10-21 who committed suicide, exposure to someone else’s death by suicide was associated with capability to commit suicide (Agerbo, 2003). In a literature review on aggression and suicide, past or present violence to others has been identified as a factor associated with suicide capability, however, this connection decreases with age and is most prevalent in adolescence (Connor, Duberstein, Cornwell & Claire, 2003). Within this study, acute symptom of mental illness, recent dramatic mood change, being out of touch with reality, and extreme agitation/rage were also identified as contributing factors of suicide capability (Connor et al., 2003). In suicidal ideation scale development studies with suicidal young adults and psychiatric outpatients, available means of killing

self/other was associated with suicidal capability (Joiner et al., 1997, 2003; Rudd et al., 2006). In addition, current intoxication or substance abuse has been identified as a contributing factors of suicide capability (Roy, 1982; Merrill, et al., 1992). To assess suicidal capability, it is essential to ask clients if they have thought of a specific plan. If the response is yes, then the clinician should ask them if they have the means and opportunity to carry out this plan. If they do not currently have the means to carry out this plan it is important to inquire how easy it would be to acquire the means and what would prevent them from doing so.

Suicidal intent. Suicidal intent, though related to suicidal desire or capability, was separated out because it's relation to suicidality is clear (those who intend a behavior often act on it) and suicidal intent has been the only significant independent predictor of suicidality (Joiner et al., 1997). Neither suicidal desire nor capability necessarily imply intent, as evidenced by those who have desire and capability but no intent and thus do not attempt to die by suicide; this is often due to buffering factors such as ties to family members. Assessing suicidal intent involves examining if an attempt is in progress (the clearest indicator of intent); if there is a plan to kill self or others, if there are preparatory behaviors and an expressed intent to die (Joiner, et al., 2007). When the intent to die is high there is no longer ambivalence about death, which is why it makes sense that intent to die has been found to be a strong predictor of lethality of attempt in a study of 75 chronically suicidal women diagnosed with borderline personality disorder (Brown, Comtois, & Linehan, 2002). However, another study including a more variable population of both males (n = 259) and females (n = 488) has documented low associations between intent and lethality of method (Eaton & Reynolds, 1985), which

may be due to a more complex relationship between suicide intent and lethality in a more variable sample, which is qualified by protective factors and capability (Joiner, et al., 2007).

Protective factors. There are numerous protective factors to suicide that have been found to lower suicide risk. Lack of access to social support is a strong predictor of suicidal behavior (Joiner, 2009). Numerous studies have shown the presence of social support is protective (Sullivan & Bongar, 2009; Maris, 1991). However, it appears to be the quality and stability of the relationships that determines if the social supports are protective. For example, marriage has been found to be a protective factor against suicide (Kposow, 2000), but on the other hand, the presence of high conflict or violent marriage can function as a risk factor (APA, 2003). For women having children in the home may be protective against suicide behaviors (Bromet et al., 2008), however, it increases the likelihood of suicidal ideation (Nock, Borges, Bromet et al., 2008). Overall, it appears that the individual's perceived support is the most important protective factor. For example, in a study with individuals diagnosed with PTSD, perceived social support moderated the relationship between the number and severity of PTSD symptoms on suicidal behavior (Panagioti, Gooding, Taylor, & Tarrier, 2014).

Another protective factor that has been documented is expressed reasons for living. This factor includes planning for the future both in the long term such as life goals and in the short term such as plans to attend an event (Strosahl et al., 1992). Duty to family or religious beliefs is another component included in reasons for living (Linehan et al., 1983). Individuals are less likely to act on suicidal thoughts when they hold religious beliefs that suicide is immoral (Neeleman et al., 1998). Another protective

factor is the supportive therapeutic relationship with a clinician (APA, 2003). A number of randomized clinical trials have demonstrated the effectiveness of interventions providing support through caring concerned letters, phone contacts and brief interviews in reducing suicide related behaviors (Motto & Bostrom, 2001; Fleishman et al., 2008; Guthrie et al., 2001).

The presence of protective factors does not automatically offset the risk based on suicidal desire, suicidal capability and suicidal intent, and actually has little affect if suicide desire, capability and intent are all present (Joiner, et al., 2007). However, protective factors may play a significant role in calculating risk for individuals with only one or two factors present out of the three: suicidal desire, capability and intent (Joiner, et al., 2007; appendix C).

Current Suicidal Risk Assessment Practices and Training

Multiple studies have found that approximately half of psychology trainees had received didactic training on suicide during their graduate education and this training was often quite limited (Dexter, et al., 2003; Kleespies, et al., 1993). Within a study of 238 pre-doctoral psychology interns from APPIC sites, 99.2% reported treating suicidal clients during their training, however, only about half (50.8%) indicated that their program offered any formal training through courses, seminars, workshops, and practicum aimed specifically at the management of suicidal clients (Dexter, et al, 2003). This is only a 10% increase from previous finding a decade ago (Bongar & Harmatz, 1991), despite numerous calls from international, national public, private and governmental organizations to do so (Schmtz, et al., 2012). Overall, 54.4 % of psychology trainees indicated they received training in crisis intervention and emergency

psychotherapy, with participants from Psy.D programs five times more likely to report they received training than participants from Ph.D. programs (Dexter, et al, 2003). In addition, psychology trainees reported the majority of suicide specific training was provided in lecture format (73.8%) with much less emphasis on workshops, colloquiums, and practicum (Dexter, et al, 2003). Within a study on social workers, less than 25% of a national sample (n = 598) indicated they received any formal training related to suicide in their Master's program and 46.3 % indicated 2 hours or less were devoted to the topic, and the majority reported their training had been inadequate (Feldman & Freedenthal, 2006). The lack of training is even more pronounced among professional counseling and marriage and family therapy training programs. Within one study, suicide specific courses were found in 6% of accredited marriage and family therapy programs and 2% of CACREP accredited counselor education programs (Wozny, 2005). In the psychiatry field, despite the finding that 91% of residency programs offer some component on the care of suicidal patients according to a sample of chief residents, the average number of seminar sessions or lectures on the topic were 3.6 and often the content was vague and nondescript (Melton & Coverdale, 2009). Psychiatry residents reported a desire for more information and training and commonly identified barriers to implementing more training were lack of audio or video teaching materials and relevant text (Melton & Coverdale, 2009).

Trainees with education in suicide assessment and management performed similarly to trainees without education on an assessment of their intervention skills (SIRI-2), questioning the efficacy of the education/training that is provided (Mackelprang, Karle, Reihl, & Crash, 2014). Only trainees who had worked with clients who endorsed

suicidal ideations or clients with a history of suicide attempts performed better (Mackelprang, et al., 2014), which may speak to the importance of direct application in risk assessment trainings.

Despite numerous calls to train mental health practitioners in suicide risk assessment and management, not a single state or mental health licensing body requires continuing education addressing suicide, suicide risk, or other behavioral health emergencies and psychologist and social worker licensing board exams do not require exam items on the assessment and management of suicidal individuals (Schmtz, et al., 2012). In contrast to the progression in the mental health field, many states have begun incorporating mandated school teacher trainings to recognize suicide warning signs and risk factors to recognize students to refer out (Schmtz, et al., 2012). Schmtz and colleagues point out that it is possible in some states that teachers have more training than mental health professionals. Numerous authors have brought up the ethics of mental health professionals who, provide service to suicidal clients without adequate training (Feldman & Freedenthal, 2006; Bongar & Harmatz, 1991; Rudd, et al., 2008).

Several evidenced-based training programs from 6-16 hours have been developed and demonstrated changes up to 4 months after training (Schmtz, et al., 2012). For example, a suicide intervention training for psychiatry residents increased comfort in treating suicidal patients and improved self-reported clinical practice (Sockalingam, Flett, & Bergmans, 2010). Another workshop on evidence-based assessment of suicide risk significantly improved the ability of psychiatry residents and psychology interns to identify risk factors for suicide and improved their ability to identify the significance of certain risk and protective factors to develop plans for intervention (McNeil, et al., 2008).

After training on the use of firearm counseling for suicide prevention, licensed social workers had more positive attitudes toward using firearm assessment (Slovak & Brewer, 2010). The scientific literature demonstrated that evidenced-based skills taught in a brief continuing education format can change clinic policy, confidence in risk assessment, and confidence in management of suicidal individuals, with sustained changes at 6 months follow up (McNeil, et al., 2008; Oordt, et al., 2009). However, despite the existence of such trainings, risk assessment and management training has not been disseminated in graduate school training (Dexter, et al, 2003; Feldman & Freedenthal, 2006; Wozny, 2005; Melton & Coverdale, 2009) and is not required by mental health professional licensing boards (Schmtz, et al., 2012), which may lead to unethical care for suicidal individuals (Sullivan & Bongar, 2009).

For most clinicians, especially novice therapists or those still in training, suicide assessment is anxiety provoking and decisions tend to verge in two extreme directions: some choose to be excessively cautious and overestimate suicidality, under the assumption that any client that mentions suicidal thoughts is at a high risk for suicide, while others underestimate suicidality with a dismissive attitude or inaccurate assessment (Bryan & Rudd, 2006). Overestimating those at risk for suicide deprives clients of their right to the least restrictive setting and overuses scarce community resources. While underestimating, on the other hand, puts the client at risk and could result in clinician liability. Neither of these outcomes is favorable, which is why risk assessment training is essential. Risk assessment training also assures clinicians avoid negligence; negligence is taking the wrong action or failing to take action due to failure to meet the standard of care, which is the degree of care that would be expected of another reasonable

professional in the same situation (Black, 1990). However, research shows that mental health providers often fail to provide appropriate suicide risk assessments or to pursue clients' suicidal comments (Bongar, Maris, Berman, & Litman, 1998; Coombs et al., 1992).

In fact, the most common practice when treating clients at risk for suicide is a no harm contract even though no research has ever demonstrated the use of no harm contracts lowered suicidal ideation, and experts strongly disagree with the use of such practices (Kelly & Kudson, 2000; Reid, 1998; Shaffer & Pfeffer, 2001; Garvey et al., 2009). In addition, clinical guidelines discourage using no-harm contracts as a way to coerce patients not to kill themselves, as this may influence the clinician's ability to gain an accurate risk assessment (Rudd, Mandrusiak & Joiner, 2006; Shaffer & Pfeffer, 2001). Experts believe that by doing so clients may withhold information about their suicide desires for fear of disappointing their clinician by violating the contract (Stanley & Brown, 2012). Lastly, no harm contracts have not been shown to protect mental health professionals legally, and are not seen by professionals as meeting the standard of care (Sullivan & Bongar, 2009).

The legal standard of care, is largely based on professional expert opinion, and thus in the suicide prevention field, expert opinion is a valuable resource in a world where accurate suicide prediction remains a somewhat elusive goal. The practices outlined below in the present study are based largely on current evidence-based recommendations by experts in the field (Stanley & Brown, 2012; Sullivan & Bongar, 2009; Granello & Juhnke, 2010; Rudd, et al., 2008), however, empirical assessment regarding the role these recommendations play in the outcomes of suicidal patients has

yet to be fully determined. For example, safety planning, has a component of means restriction, which involves removing access to a lethal method of suicide. Means restriction is an intervention with some of the strongest empirical support (Yip, et al., 2012). The probability of individuals attempting suicide decreases when they are prevented from implementing a preferred method (Yip, et al., 2012). In addition, the safety plan is strongly based in building up social support, which has been associated with a decreased risk for suicide (Maris, 1981; Pietrzak, et al., 2010; Purcell, et al., 2012; You, et al., 2011) and assisting the individual in developing coping mechanisms besides suicide. Safety planning is an intervention used to manage suicide which is currently being researched, but is widely used in crisis centers, outpatient mental health agencies and emergency departments for the empirical basis of the design (Stanley & Brown, 2012).

Safety Plan

In contrast to a no harm contract, the intent of a safety plan is to help individuals lower their imminent risk for suicidal behavior. This task is accomplished by assisting individuals to become more aware of triggers which can be recognized to consult a predetermined set of potential coping skills and a list of individuals and agencies that can be contacted for support (Stanley & Brown, 2012). A safety plan is a prioritized list of coping strategies and sources of support that patients can use during or preceding suicidal crises (Stanley & Brown, 2008). An appropriate safety plan includes (1) recognition of warning signs or triggers to suicidal thoughts; (2) identification of coping strategies, which take their mind off their problems and prevent suicidal ideations from escalating; (3) socialization strategies for distraction and support; (4) identification of social supports

who the client can contact for help when they are in a crisis; (5) contacts of professionals and agencies who can assist if the previous strategies are not effective for resolving the crisis; and (6) restriction of client access to means such as safely storing medication or restricting access to knives, guns or other lethal means (Stanley & Brown, 2012).

Warning signs. Recognizing the warning signs that precede a suicidal crisis involves identifying the personal situations, thoughts, images, thinking styles or behaviors that have preceded a suicidal crisis (e.g. feeling irritable, depressed, hopeless, having thoughts such as “I cannot take it anymore”, isolating, drinking more) (Stanley & Brown, 2012). The rationale behind this step is to address the problem before it fully emerges (Stanley & Brown, 2012).

Internal coping strategies. Within the second step clients identify what they can do without the assistance of another person if they become suicidal again to enhance the patients’ self-efficacy and create a sense that suicidal urges can be managed (Stanley & Brown, 2012). These coping activities (e.g. going for a walk, listening to inspirational music, taking a shower, playing with a pet, drawing, exercising, reading, doing chores) allow the client to feel less controlled by their suicidal thoughts and serve as a way for clients to distract themselves from the crisis to prevent suicidal ideation from escalating similar to methods employed in DBT (Stanley & Brown, 2012).

Social situations and people for distraction. If the client’s internal coping strategies are ineffective at reducing suicidal ideation, clients can utilize socialization strategies for distraction and support. Within this step of the safety plan the client identifies individuals, such as friends or family members or settings where socializing occurs naturally (e.g. coffee shops, places of worship, Alcoholics Anonymous meetings)

(Stanley & Brown, 2012). Clients should be discouraged from including environments in which alcohol or other substances may be present (Stanley & Brown, 2012). Within this step, it is important to note that family members and friends serve as distractors from the client's thoughts and worries and are not sought out to seek specific help with the suicidal crisis (Stanley & Brown, 2012). The rationale is that a suicidal crisis may be alleviated if the client feels more connected with other people or a sense of belongingness (Stanley & Brown, 2012).

People to ask for help. If the previous steps of the safety plan are not successful, the next step is for the client to reveal to family members or friends that they are in a crisis and need support in coping (Stanley & Brown, 2012). The individuals identified as important to explicitly inform of suicidal thoughts and behaviors may vary from those who serve as good distractions in the previous step (Stanley & Brown, 2012). It is important to assist the client in weighing the pros and cons of disclosing their suicidal thoughts and behaviors to a person for support; clients should be asked about the likelihood that they would contact these individuals and whether the identified people would be helpful or could possibly exacerbate the crisis (Stanley & Brown, 2012). If possible, experts suggest identifying someone the client feels comfortable sharing the safety plan with (Stanley & Brown, 2012).

Professionals or agencies to contact during crisis. If the previous steps on the safety plan are ineffective the client is instructed to contact professionals or agencies including the mental health provider as well as other professionals that may be reached during non-business hours (24 hour emergency treatment facility as well as other local or national support services that handles emergency calls) (Stanley & Brown, 2012). The

clinician should discuss any concerns or obstacles that may hinder the client from contacting professionals or agencies such as fear of being hospitalized or rescued in unacceptable manners (Stanley & Brown, 2012).

Making the environment safe. Means restriction is the last component of the safety plan so that the client has already seen the number of alternative options they have besides suicide to increase the likelihood for the client to engage in a discussion about removing or restricting their access to means (Stanley & Brown, 2012). Clinicians should ask clients about the method or means they would consider using during a suicidal crisis and collaboratively identify ways to secure or limit the client access to these means (Stanley & Brown, 2012). Clinicians should routinely ask whether patients have access to firearms, regardless of whether firearms was vocalized as a method of choice, and make arrangements for securing the firearms (Stanley & Brown, 2012). This is due to the predictive nature of lethal means and suicide completion (Daigle, 2004). For methods of lower lethality (e.g. medication with a low level of toxicity) clinicians may ask a client to voluntarily remove or restrict their access when the client is not experiencing a suicidal crisis by asking a family member to store the medication in a safe place (Stanley & Brown, 2012). For more lethal methods such as a firearm it is best not to have the client remove the means themselves because suicide risk may increase by having direct contact with the highly lethal method, therefore it is best to have the method safely stored by a designated responsible person (usually a family member, close friend, or even the police) (Simon, 2007). Clients who are unwilling to remove their access to a firearm may be willing to limit their access to the firearm by having a critical part of the firearm removed (e.g. using a gunlock and having the gunlock key removed) (Stanley & Brown, 2012).

The behaviors to make the environment safer and the length of time that the restriction will take place can be noted on the safety plan (Stanley & Brown, 2012).

Approach of intervention. When completing a safety plan it is essential that the intervention be conducted within the framework of a good therapeutic alliance in collaboration with the client. This is why the client's own words are utilized within the safety plan and the clinician can offer suggestions when the client struggles to identify triggers or coping skills and inquire in a supporting manner to help the client complete the safety plan in coloration (Stanley & Brown, 2012). Once the safety plan is completed it is essential to assess the client's reaction and the likelihood that he or she will utilize the plan (Stanley & Brown, 2012). One suggestion to increase client motivation to use the plan is to ask the client to identify the most helpful aspects of the plan (Stanley & Brown, 2012). If reluctance to use the plan is identified Stanley and Brown suggest the clinician collaborate with the client to identify and problem solve potential obstacles to utilizing the plan and even role play using the plan if time permits. The clinician should make a copy of the safety plan for the client and one for the client record and discuss with the client where they will keep their copy and how it will be retrieved during a crisis (this may include making multiple copies for various locations adjusting the size of the plan for storage in a wallet or electronic device for ease of accessibility) (Stanley & Brown, 2012). Lastly, family members or friends may be coached in how to utilize the safety plan, particularly when working with adolescents (Stanley & Brown, 2012).

Establishing a good working alliance with the client is central to completing a suicide risk assessment and completing a safety plan. Four relatively simple interventions are believed to facilitate this: acknowledging the client's ambivalence about living,

normalizing feelings of hopelessness with mental health illnesses and/or the client's life circumstances, providing an comprehensible and simple model of suicidality (e.g. an effort to eliminate psychological pain), and identifying a common goal for treatment (e.g. reduction of suffering and psychological pain) (Rudd, et al., 2008). Curiosity, concern and calm acceptance of the client's current state may directly enhance the therapeutic alliance, assisting in the exploration of the client's current distress to aid in a more accurate risk evaluation (Fowler, 2012). However, suicide often elicits negative reactions from clinicians for reasons ranging from concern over the stigma of losing a patient, to fear of the emotional trauma of losing a client, to a fear of litigation (Fremouw, de Perczel, & Ellis, 1990). An anxious trainee may be inclined to end a suicide assessment prematurely (Rudd, et al., 2008). It is essential that clinicians be mindful of personal reactions that can be non-therapeutic, such as conveying a hostile tone, taking on a savior role, blurring professional boundaries, sardonic attitudes, daring the patient, pseudo-democratic indifference and avoidance or overcompensation for negative feelings that emerge (Hendlin, 1991; Maltsberger & Buie, 1980; Shneidman, 1981).

Consultation and Documentation.

When suicide risk increases so should the amount of peer consultation and documentation (Sullivan & Bongar, 2009). In the legal aftermath of a suicide if a risk assessment was not documented it is as if it never occurred (Sullivan & Bongar, 2009). "Defensive clinical notes, written after the fact, may help somewhat in damage control, but there is no substitute for a timely, thoughtful and complete chart record that demonstrates (through clear and well written assessment, review, and treatment notes) a knowledge of the epidemiology, risk factors, and treatment literature for the suicidal

patient” (Bongar, 1992, p. 85). Within the record should be informed consent for treatment, assessment of competence, and documentation of the limits of confidentiality (Bongar, 1992). Counselors should document the risks discussed, the treatment options explored and selected, and indicate that the client was competent to understand the treatment plan (Miller, 1999). According to Granello and Juhnke (2010), “courts understand that clinical judgment is not perfect and will tend to rule on the side of clinicians who have met the standard of care concerning suicide screening and assessment and have properly documented their care” (p. 20). For clients at high risk for suicide, hospitalization should be considered when greater control over the individual’s environment are needed than outpatient treatment can provide; If an individual of high risk is not hospitalized documentation must support this rationale of how symptoms and behaviors are to be controlled outside of the hospital (Bongar, et al., 1998). In the case of *Abille v. United States* (1980), Abille decided to admit himself to inpatient treatment after experiencing depressive reactions to his prescription. All intakes are highly restricted to traveling with an accompanying staff member. However, Abille committed suicide four days later after he was provided a razor to shave for mass. The doctor reported putting him on a lower restriction level but failed to document this. The psychiatrist was held liable for his failure to document properly and the nurses were liable for their failure to provide the standard of care (Roberts et al., 2008). When courts find practitioners at fault in suicide related lawsuits the cause is usually improper and insufficient documentation (Granello & Juhnke, 2010). Psychologists should routinely seek consultation or supervision in cases where suicide risk is determined to be moderate,

after a client's suicide, and following a client's suicide attempt and document when consultation takes place (Bongar, 1992).

Standard Components of Suicide Assessment Training

Overall, the currently accepted essentials needed to develop a basic understanding of suicide assessment practice is 1) knowledge regarding the risk and protective factors for suicide, 2) understanding of a model of suicidal behavior that can be easily applied to assess risk, 3) skills to identify level of suicide risk in a therapeutic manner, 4) basic skills to manage risk (in this case the safety plan intervention is utilized) and 5) documentation skills to properly document the assessment of risk and the rationale for the action chosen. According to Rudd and colleagues (2008), it is perhaps the most important for trainees to have a solid understanding of the risk and protective factors for suicide.

Secondly, it is important for trainees to understand a simple and clear model of suicidal behavior that can be easily applied to formulate risk with a client (Rudd, et al., 2008). Utilization of clear theoretical model that is easily translated into clinical work has been identified as a common element of the effective practices that have been shown to reduce suicide risk (Rudd et al., 2008). The present model of risk assessment (Joiner, et al., 2007) was utilized for clarity and ease of application to clinical work. However, it is not just knowledge of the clinical risk factors and suicidal behavior model that are important; research has shown that suicide prevention techniques based on collaboration, therapeutic alliance and enhancing social contacts reduced rates of suicidality (Jobes, Wong, Conrad, Drozd & Neal-Walden, 2005; Jobes, Kahn-Greene, Greene & Goeke-Morey, 2009). Effective treatments emphasize crisis management and access to available emergency services during and after treatment, with a clear plan of action identified for

emergencies (Rudd, et al., 2008). The safety plan was chosen as an intervention to be taught in the current assessment training because of the emphasis on personal responsibility, collaboration between clinician and client, crisis management and the accessible use by mental health professionals with a variety of backgrounds (Stanley & Brown, 2012). Online training allows for a wide distribution of these five essential components to suicide assessment training.

Though there has been a large focus on research in the area of evidence-based treatments there has been a lack of research regarding how to transfer the evidence based practices in trainings (Herschell, Kolko, Baumann, & Davis, 2010). One of the main critiques of training research is the lack of randomized controlled trials (Herschell et al., 2010). In the area of suicide risk assessment training control conditions are commonly missing from the research design (Oordt, et al., 2009; Jacobson et al, 2012; Sockalingam, Flett, & Bergmans, 2010; Slovak & Brewer, 2010).

Demonstration/Modeling

A review of supervisory research confirmed the positive effects of behavioral modeling on skill acquisition for future counselors and clinicians (Lambert & Arnold, 1987). Behavioral modeling training (BMT) consists of observation of another person, typically an experienced individual performing a sequence of behaviors to be learned and then reproducing this sequence of new behaviors (Bryant & Fox, 1995). BMT is grounded in Bandura's social learning theory, which is composed of four component processes: attention, retention, reproduction, and motivation to transfer learning. Within this training process individuals must observe a model, recall the model, and transfer this learning to the job (Baldwin, 1992). In the present study, behavior model training was

designed to aid participants in remembering the model and applying the model to artificial clinical scenarios. The aim was to teach participants generalization to apply the model to situations that differed from the model. Generalization can be enhanced by accompanying model displays with written descriptions of key information to cue trainees to the most important behaviors in the demonstration (Decker, 1980, 1982). Summary labels (short descriptions of key behaviors), and rule codes (description and rationale for key behaviors) improved generalization over a detailed description of the modeled behavior and a control condition (Decker, 1984). Summary labels and rule codes enhance generalization by helping the trainee create general rule codes.

Mental health trainees were found to favor observing their supervisor as a teaching technique over didactic training, co-therapy with supervisor, role play, and assigned readings (Nelson, 1987). Experienced CBT counselors ($N = 120$) rated modeling as the most effective method for improving declarative knowledge and procedural systems (knowledge of how to apply declarative knowledge to practice) (Bennett-Levy, et al., 2009). Participants reported modeling provides a bridge between declarative knowledge and procedural systems (Bennett-Levy, et al., 2009). The combination of modeling and didactic supervision has been shown as superior to didactic supervision alone or modeling alone in training empathy skills to undergraduate students ($N = 96$) (Payne, Weiss, & Kapp, 1972). Modeling was more effective than lecture and didactic readings in training undergraduates ($N = 187$) in communication of empathetic understanding (Dalton, et al., 1973), as well in training psychiatric residents ($N = 34$) the information and skills needed to conduct a psychological interview (Ryan & Bunder, 1970). Modeling has also been found to produce larger counselor skill acquisition than

verbal reinforcement feedback within a sample of undergraduate students ($N = 43$) (Eisenberg & Delaney, 1970). However, it matter greatly who the model is. In one study on training listening skills to undergraduate college students ($N = 48$) observation of an experienced model produced larger effects on skill improvement in comparison to observation of a novice or self-observation (Baum & Gray 1992). Expert modeling appears to be an important component to investigate since it has been documented as more effective than lecture training alone and is rarely utilized in suicide risk assessment training. It should be noted that much of the existing research applying social learning theory to counselor training was conducted with undergraduate samples. Thus, more studies need to be conducted with graduate student samples.

Online Training Design

There has been a call for additional research in cost effective methods of disseminating evidence based trainings into the community with more recent focus on online trainings (Herschell et al., 2010). An online training program allows for education, demonstrations, practice and assessment of skills in an accessible manner. According to Romiszowski (2009) instruction tactics for specific situations include: (1) providing information through explanation, demonstration, and guidance; (2) practice of the skills learned; (3) feedback regarding the performance in practice; and (4) transfer and generalization of the skill. In an online format participants will be able to watch lectures providing information about the risk and protective factors for suicide, learn about a model of suicide behavior which can be applied to assess risk, watch demonstrations of how to apply the model to assess risk in a manner that is therapeutic and to create a safety plan collaboratively with a client. Lastly, participants will be able to apply what they

have learned to assess risk in clinical scenarios. An online format of training allows for demonstrations of skills with actors in role play. Within suicide risk assessment and management training, role plays using actors were viewed by participants as the most effective and important component of training (Fenwick, Vassilas, Carter, & Haque, 2004).

Online training allows for individuals to receive a more in depth training from the comfort of their homes. One study (N = 150) compared dialectical behavioral skills training via an interactive online training to a two day workshop and found the online training was the preferred by participants with equal effects in skill acquisition and larger effects in knowledge acquisition (Dimeff et al., 2009). Online training by itself has some advantages over face-to-face training such as the ability for the student/trainee to work at their own pace and take more control in the process of the instruction (Means et al., 2009). Online simulations are beneficial because they allow students or trainees the ability to practice a skill before they experience it, which can relieve the anxiety trainees feel when first encountering a suicidal client.

Finally, online training is superior for the evaluation of the training effectiveness. Online assessment training allows for the use of the same suicide assessment training to a large number of participants without variation in delivery. In addition, because students will be completing the suicide assessment individually from home in one sitting, this avoids participants interacting with one another during the training to influence the outcomes.

Present Study

This study was designed to assess the enhanced effects of demonstration for an online suicide assessment training program. The objectives of the training are to 1.) identify empirically supported suicide risk and protective factors, 2) Identify suicide risk and protective factors in different clinical scenarios, and 3) apply the suicide risk assessment model (Joiner, et al., 2007) to clinical scenarios to respond appropriately to low, moderate and high risk individuals. It is essential to assess knowledge of suicide risk and protective factors following the training because this knowledge has been identified as the most important knowledge for trainees to have to be able to conduct a suicide assessment (Rudd, et al., 2008). Knowledge of risk factors and the capacity to respond in an effective manner to clients who present as an imminent risk for suicide have been identified as two separate important competency areas (Inman, Bascue, Kahn, & Sharp, 1984), which is why the outcome variables of knowledge of risk and protective factors and assessment of clinical scenarios are separated. In addition, risk assessment and management self-efficacy is an important outcome variable to measure in evaluation of the suicide assessment training because high associations have been found between perceived suicide intervention skills and actual suicide intervention skills (Scheerder, Reynders, Andriessen, & Audenhove, 2010).

Experience in the format of suicide specific training and experience with suicidal clients or suicidal individuals in one's personal life has been positively related to suicide intervention skills (Botega et al., 2005; Neimeyer, Fortner & Melby, 2001; Neimeyer & MacInnes, 1981). Specifically, professionals with more years of experience or professionals in comparison to non-professionals have demonstrated higher suicide

intervention skills (Botega et al., 2005; Neimeyer, Fortner & Melby, 2001; Neimeyer & MacInnes, 1981). For this reason, suicide training and experience with suicidal clients was measured and pre-tests were administered in the present study to assure differences between the groups were not caused by differences in prior training and experience. The frequency of suicide related training and experience were explored along with correlations between prior training and experience with pre-test measures (suicide related knowledge, assessment of clinical vignettes and self-efficacy). This exploration was conducted because there is a lack of research regarding the training psychology graduate students receive and the efficacy of that training (Johnson, McLaughlin, Rausch, & Conroy). While, this was not the main focus of the present study, we felt it was important to present this information so that future studies can further analyze the efficacy of the present suicide related training graduate students receive.

Recent studies have investigated the effects of suicide risk assessment trainings (Oordt, et al., 2009; Jacobson et al, 2012; Sockalingam, Flett, & Bergmans, 2010; Slovak & Brewer, 2010) however, these studies have largely consisted of pre and post-test designs without control groups or random assignment. Modeling is thought to be a main component of skill acquisition for counseling and clinical trainees (Lambert & Arnold, 1987), however, no studies to our knowledge have investigated whether demonstrations can enhance the effectiveness of suicide risk assessment training. Presently, the primary method of training graduate students in risk assessment training is through lecture format (Dexter, Mazza & Freeman, 2003), however numerous studies have documented the effectiveness of modeling (Larson et al., 1999; Romi & Teichman, 1995; Lambert & Arnold, 1987; Bryant & Fox, 1995; Decker, 1989, 1982). There is a huge gap in research

to aid in our understanding of the processes of training that are most effective in what circumstances for what individuals (Levy, 2006). Suicide risk assessment is a complex skill that can be intimidating particularly to early trainees. The online suicide risk assessment and safety plan training was evaluated to assess if lecture and demonstration training is more effective than lecture alone. Participants were randomly assigned to the workshop with lecture and demonstration components or the control condition, the lecture portion of the suicide assessment training without any demonstrations. The lecture training was chosen as a control group to evaluate whether a demonstration of conducting a risk assessment and completing a safety plan with a client can produce larger effects on application of knowledge in clinical scenarios and self-efficacy in comparison to lecture training alone (the most prevalent method of training for graduate students)..

The first hypothesis was that suicide related knowledge acquisition effects would be significantly larger for the treatment group in comparison to the control group due to the demonstration and modeling. In accordance with social learning theory, knowledge acquisition occurs through vicarious learning (Bandura, 1971). Research has shown small effects on knowledge acquisition through demonstrations in comparison to lecture (Perry, 1975; Taylor, Russ-Eft, & Chan, 2005).

The second hypothesis was that in comparison to the control group, the treatment group would have larger improvements between pre and post assessment of clinical scenarios. A meta-analysis demonstrated that on average behavioral modeling trainings in comparison to control conditions produced small effects on the participants' abilities to respond correctly in a stimulated scenario (Taylor, Russ-Eft, & Chan, 2005). Therefore, it is hypothesized that participants in the treatment group who watched a demonstration

applying the risk assessment model as well as a demonstration of how to conduct a safety plan would demonstrate a higher score in their application to clinical scenarios in comparison to those who received lecture without any demonstrations.

The third hypothesis was that the treatment group would have greater improvements in Risk Assessment and Management Self-Efficacy (RAMSES) than those in the control group. According to self-efficacy theory (Bandura, 1971), vicarious experiences are one of the four methods of increasing self-efficacy, therefore it was expected that demonstrations would enhance the training effects of self-efficacy. Vicarious learning, or observing others model effective counseling, has been shown to enhance counseling self-efficacy (Larson et al., 1999; Romi & Teichman, 1995). Modeling (i.e., live demonstrations of counseling) led to significantly greater increases in self-efficacy than did role play particularly at the early stages of counselor skill and self-efficacy development (Larson et al., 1999). A meta-analysis demonstrated that behavioral modeling training in comparison to control groups produced moderate to large effects on self-efficacy (Taylor, Russ-Eft, & Chan, 2005). Therefore it was expected that the treatment group would report higher risk assessment self-efficacy scores than the control group.

CHAPTER 3

METHODS

Participants

Participants in the current analysis consisted of 58.3% ($n = 91$) master's students and 41.7% ($n = 65$) doctoral students from 52 counseling, psychology and marriage and family therapy schools across the country. Participants from each program ranged from 1-26 (0.6-16.7% of the sample). 10.2% ($n = 16$) of participants were from clinical psychology programs, 72.4% ($n = 113$) counseling programs, 4.4% ($n = 7$) school psychology, 7.7% ($n = 12$) PsyD, and 5.1% ($n = 8$) marriage and Family therapy programs. In terms of gender, 80.8% ($n = 126$) of the population was female and 19.2 % ($n = 30$) male. Participant age ranged from 21 to 55 with a mean age of 27.63.

Participants identified as 69.2% ($n = 108$) Caucasian, 5.8% ($n = 9$) African American, 10.9% ($n = 17$) Latino/a, 7.1% ($n = 11$) Asian American/Pacific Islander, and 7.1% ($n = 11$) other. In terms of years in graduate school, 43.6% ($n = 68$) of participants were in their 1st year of graduate school, 30.1% ($n = 47$) in their 2nd year, 12.2% ($n = 19$) in their 3rd year, 6.4% ($n = 10$) in their 4th year, and 7.7% ($n = 12$) in their 5th year or above.

Frequencies of prior training and experience were explored. Several prior studies have documented about 50% of graduate students in psychology and counseling graduate programs did not receive didactic training in suicide assessment (Dexter, et al., 2003; Kleespies, et al., 1993; Bongar & Harmatz, 1991; Feldman & Freedenthal, 2006) despite numerous calls for additional training (Schmtz, et al., 2012.). A Likert-type scale to measure participant prior suicide related training and experience was designed for the

present study ranging from zero (none) to five (very high). Frequencies of training and experience for the present sample are detailed in Table 1 below.

Table 1.

Frequencies of Prior Suicide Related Training and Experience

Training	None	Very Low (pieces of informatio n covered a few times)	Low	Moderate	High	Very High (numerous days of workshops)
Suicide risk/protective factors	8.3% (<i>n</i> = 13)	17.9% (<i>n</i> = 28)	21.2% (<i>n</i> = 33)	44.2% (<i>n</i> = 69)	5.8% (<i>n</i> = 9)	2.6% (<i>n</i> = 4)
Suicide risk assessment	10.9% (<i>n</i> = 17)	19.2% (<i>n</i> = 30)	22.4% (<i>n</i> = 35)	36.5% (<i>n</i> = 57)	9.6% (<i>n</i> = 15)	1.3% (<i>n</i> = 2)
Interventions to manage risk	14.7% (<i>n</i> = 23)	25.0% (<i>n</i> = 39)	24.4% (<i>n</i> = 38)	29.5% (<i>n</i> = 46)	4.5% (<i>n</i> = 7)	1.9% (<i>n</i> = 3)
Experience	None	Very Low (Once or twice)	Low	Moderate	High	Very High (Daily basis for years)
Working with suicidal individuals	30.1% (<i>n</i> = 47)	19.9% (<i>n</i> = 31)	16.7% (<i>n</i> = 26)	23.7% (<i>n</i> = 37)	5.8% (<i>n</i> = 9)	3.8% (<i>n</i> = 6)
Conducting suicide assessments	28.2% (<i>n</i> = 44)	18.6% (<i>n</i> = 29)	19.9% (<i>n</i> = 31)	25.6% (<i>n</i> = 40)	4.5% (<i>n</i> = 7)	3.2% (<i>n</i> = 5)
Utilizing interventions to manage risk	35.3% (<i>n</i> = 55)	19.9% (<i>n</i> = 31)	23.1% (<i>n</i> = 36)	17.3% (<i>n</i> = 27)	1.9% (<i>n</i> = 3)	2.6% (<i>n</i> = 4)

Procedures

Recruitment. 180 Psychology, counseling and marriage and family graduate students were recruited for participation in this study by emailing training directors from 200 randomly selected APA and ACA masters and doctoral programs in a request to forward the study invitation to students. In addition, an approved advertisement was emailed through the APA division 17 list serve. A few courses implementing the online

training as part of related coursework and the students completed the training online from home instead of coming to class one day. Additionally, the first 200 students to complete the training and pass the attention checks were awarded a \$10 amazon gift card through the ASU GPSA graduate research support grant. The students consented online to participate in the study and completed the online assessment training voluntarily or as part of their coursework.

Treatment Description. The 2 hour training video was split up into 9 video clips with an attention check in between each clip. The treatment group training consists of 1.) An educational video lecture with voice recorded power point slides regarding suicide risk and protective factors and ethical/legal responsibilities of clinicians (40 minutes), 2.) Audio recorded power point lectures regarding the risk assessment model by Joiner et al. (2007), assessing suicidal desire, suicidal capability, suicidal intent and protective factors to determine the level of risk for an individual client (see Appendix B & C) along with a demonstration of how to complete a suicide assessment with the model (40 minutes) (see Appendix I). 3.) Audio recorded power point lectures regarding the steps to completing a safety plan along with a demonstration (40 minutes) (see appendix H & I). After viewing all 9 video clips participants completed the post-test.

The demonstration video clips contained summary labels that appeared on the screen to describe the most essential behaviors in the demonstration. For example, when the client actor displayed different suicide risk and protective factors the written risk or protective factor appeared on the screen in writing. In addition, therapist behaviors were labeled. For example, when the therapist actor asked questions directed toward the client access to means a written label of “access to means” appeared to cue participants.

Summary labels were utilized to cue participants to the most important behaviors in the model to aid in the process of generalization.

This model of assessing suicidal desire, suicidal capability, suicidal intent and protective factors was developed by a team of experts in suicide assessment (Joiner, et al., 2007) and was chosen for its clear, concise format. The safety plan component was included as a brief intervention that can be utilized collaboratively with the client to brainstorm coping mechanisms in the same session (Stanley & Brown, 2012). For the purposes of a brief online training this intervention was the most suitable and identified as the best practice by the Suicide Prevention Resource Center/ American Foundation for Suicide Prevention Best Practices Registry for Suicide Prevention (www.sprc.org). Lastly, participants completed questionnaire items (30 minutes). All video demonstrations were created using the same volunteers who were willing to act as a client or a client family member and the researcher played the role of the counselor. The video was edited to provide the most concise and sufficient training possible. Total the workshop took three hours to complete including pre and post surveys.

The control group received the lecture material regarding all three components of the workshop without any demonstrations. Afterwards, participants completed the post test and then viewed the demonstration video clips, so as to provide participants in the control group the same access to the videos as the treatment group. The same video clips were utilized in the control condition, however, participants did not view the demonstration clips until after completing the post test.

Measures

Suicide Assessment Training and Experience (Appendix E). Participants were asked to rate their level of suicide assessment training and experience on a Likert-type scale from 0 (none) to 5 (very high). A total of six items were presented, three regarding prior training (e.g. “Please rate the level of training/instruction you have received regarding suicide risk and protective factors”), and three regarding prior experience (e.g. “Please rate the level of experience you have conducting suicide assessments”). Prior research has relied on profession type as a measure of experience (Botega et al., 2005; Neimeyer, et al., 2001; Neimeyer & MacInnes, 1981), however, this does not capture the prior experience and training in suicide assessment specifically. The prior risk assessment training scale demonstrated satisfactory reliability in the present sample ($\alpha = 0.94$), as did the prior risk assessment experience scale ($\alpha = 0.94$) Mean scores were utilized in analysis.

Risk Assessment Questionnaire (RAQ; Appendix F-items 1-26): The RAQ is a questionnaire, formatted on the contents of educational training video regarding the declarative knowledge presented on suicide risk and protective factors, suicide assessment and safety plans. Items consist of multiple choice and correct responses were determined based on the educational materials presented in the workshop. The items were designed and edited with an experienced mental health professional from the dissertation committee as well as a mental health professional who specializes in suicide assessment to assure the items representative of the content area of suicide risk assessment. Equivalent separate forms of pre and post measures were designed to lower pre-test effects. This is a criterion referenced test developed to assess a specific content area of

knowledge, thus internal reliability is not expected because the knowledge area is made up of items that cover different parts of the topic area with varying difficulty levels (Hambleton & Novick, 1973). The internal reliability estimates for the RAQ pre-test was ($\alpha = .58$) and RAQ post-test was ($\alpha = .67$).

Assessment of Clinical Scenarios (ACS; Appendix F): Participants read clinical vignette scenarios and were asked multiple choice questions which required the application of the risk assessment model, such as: (1) “Which of the following are present: suicide ideation, suicide capability, suicide intent, protective factors?” (2) “According to the suicide risk model, what level of risk is the client?”, and (3) “what action would you take first?” The items were designed to assess participant ability to apply the suicide assessment model (Joiner, et al., 2007), and to respond appropriately to low, moderate, and high risk clients. Items were edited with an experienced mental health professional from the dissertation committee to reflect the risk assessment model. Equivalent separate forms of pre and post measures were designed to lower pre-test effects. This is a criterion referenced test developed to assess a specific content area of knowledge, thus internal reliability is not expected because the knowledge area is made up of items that cover different parts of the topic area with varying difficulty levels (Hambleton & Novick, 1973). The internal reliability estimate for the ACS pre-test was ($\alpha = .55$) and ACS post-test was ($\alpha = .34$).

Risk Assessment and Management Self-efficacy Scale (RAMSES; Delgadillo, et al., 2014) (Appendix G): RAMSES is a measure of task specific self-efficacy that was developed to measure risk management in mental health care (Delgadillo et al., 2014). RAMSES consists of 18 items with three underlying factors identified through principle

factor analysis: risk assessment, case management and clinical interventions. Participants are instructed to rate their perceived self-efficacy on a scale of 0 (no confidence in ability to perform task) to 10 (complete confidence in ability to perform task). Example items include, “Use screening instruments to assess risk”, “Differentiate between people presenting high risk and low risk”. A composite self-efficacy score can be obtained by adding all the item ratings and dividing by 18. RAMSES has a high level of internal reliability with mental health professionals ($\alpha = .96$; $n = 110$) and demonstrated adequate construct and discriminant validity with a limited sample size ($n = 34$) (Delgadillo et al., 2014). In the present study three of the RAMSES items were not used in the analysis because of the focus on assessing harm to others, which the present workshop does not cover. These items are: “Identify a person that is presenting risk to others”, “Use specific interventions focusing on risks of harm to (or neglect of) others”, and “Help people to minimize the severity of risk to others”. The scores of the remaining 15 items were used in the present study with satisfactory reliability on the pre-test ($\alpha = .97$) and post-test ($\alpha = .97$).

Validity check for intervention (Appendix J): Items were created to assess the validity of the interventions utilized in both conditions. Participants were asked to rate their agreement on a Likert-type scale from 0 (strongly disagree) to 5 (strongly agree) for 8 items such as “The training was engaging” and “The videos were well done”. The mean score of the items was utilized as a validity check for both the control and treatment conditions. The scale demonstrated satisfactory reliability in the present sample ($\alpha = .87$).

Attention checks (Appendix K) Items were created corresponding to each of the video clips to check that the participants paid attention during the video. Simple questions

were utilized such as, “What is discussed in the last content slide of the video? Social contacts, professional contacts or evidence based treatments?” The questions were placed on the page following the video clip without any ability for the participant to return to the previous page. Participants who did not pass all the attention check items were not included in the analysis.

Training process. Interested participants responded by email to sign up for the online workshop. Participants were randomly assigned to the lecture condition (standard intake assessment training) or lecture plus demonstration condition. Prior to watching the online training, participants consented on the first page of the online survey, filled out demographic information, and provided information regarding previous experience and training in clinical and suicide assessment. Participants in the both conditions received access to all video training clips, however, those in the lecture condition did not view any demonstration clips until after completing the post test. The video clips were embedded in the questionnaire on Psych Surveys Organization to allow for questions to be asked in between video clips for a more interactive training. The online training for the lecture plus demonstration condition consisted of an educational video regarding the main risk factors for suicide (40 minutes), an educational video regarding the five essential components of suicide management (Lee & Bartlett, 2005) along with a demonstration of how to complete a suicide assessment with a client (40 minutes), and a lecture and demonstration regarding how to complete a safety plan with a client (40 minutes). The control group viewed all the lecture components of the training without any of the demonstration components prior to the post test. Following the post-test participants in the control group had the opportunity to view the demonstration videos. The post-test

consisted of alternative equivalent forms of the Risk Assessment Questionnaire and Assessment of Clinical Scenarios, as well as the RAMSES (Delgadillo, et al., 2014). Periodically during the video training, participants were asked simple questions regarding the content covered in the previous minute as an attention check. Participants with incorrect responses to attention check items were removed from data prior to analysis. The RAQ questionnaire assessed the declarative knowledge of suicide risk and protective factors, suicide assessment and safety planning, while the assessments of clinical scenarios was directed at participant ability to apply their declarative knowledge to hypothetical decisions and reactions to clinical scenarios.. Lastly, the RAMSES questionnaire was utilized to assess participants risk assessment self-efficacy. A randomized control group design allowed for the comparison of lecture plus a demonstration to lecture alone. This study was completed online and not in the classroom setting so that each participant viewed exactly the same training videos as those in their assigned condition. Suicide assessment training and experience was also accounted for to analyze if the treatment group differed. Participant emails were stored separately from the data and utilized only for distributing reward incentives and certificates to those who successfully completed the workshop.

Data analysis. 180 participants completed the training and of those, 156 participants passed the attention checks and 24 did not pass all the attention checks and were dropped from the analysis. The participants who failed at least one attention check did not differ in gender, ethnicity, age, prior experience or pre-test scores. Analysis with G Power 3 determined that 70 participants would allow sufficient power at the 0.95 level to detect a medium effect size using a two way repeated measures ANOVA for a within

between subject interaction. SPSS was utilized to run two way repeated measures ANOVAs (Time X Condition) on all three dependent variables, Risk Assessment Questionnaire, Assessment of Clinical Scenarios, and RAMSES.

CHAPTER 4

RESULTS

Prior to analyzing the hypotheses, a validity check was conducted to assure that the control and treatment conditions were equally engaging. A one way ANOVA was conducted to measure differences in mean intervention validity scores between the two conditions (lecture in comparison to lecture and demonstration). Participants did not indicate any differences in their ratings of the quality of the treatment condition ($M = 4.22$, $SD = 0.60$) and the control condition ($M = 4.24$, $SD = 0.63$, $F(1, 133) = .076$, $p = .78$).

Distributions of the dependent variables were analyzed and the distributions of the pre and post tests for the risk assessment questionnaire (RAQ) measuring suicide related knowledge were both negatively skewed (see Figure 1). Distributions pre and post-tests for Assessment of Clinical Vignettes (ACS) were also negatively skewed (see Figure 2). While the Risk Assessment and Management Self-Efficacy pre-test appeared to have a normal distribution, the post-test was negatively skewed (see Figure 3). Due to the lack of normal distribution it appears there was a ceiling affect in the RAQ and ACS measures in the current sample.

Figure 1.

Risk Assessment Questionnaire Pre-test and Post-test Distribution

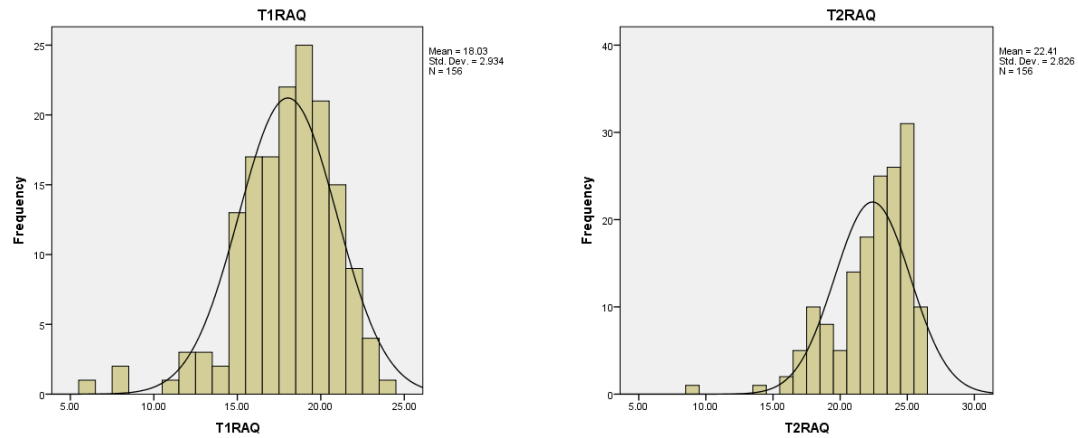


Figure 2.

Assessment of Clinical Scenarios Pre-test and Post-test Distributions

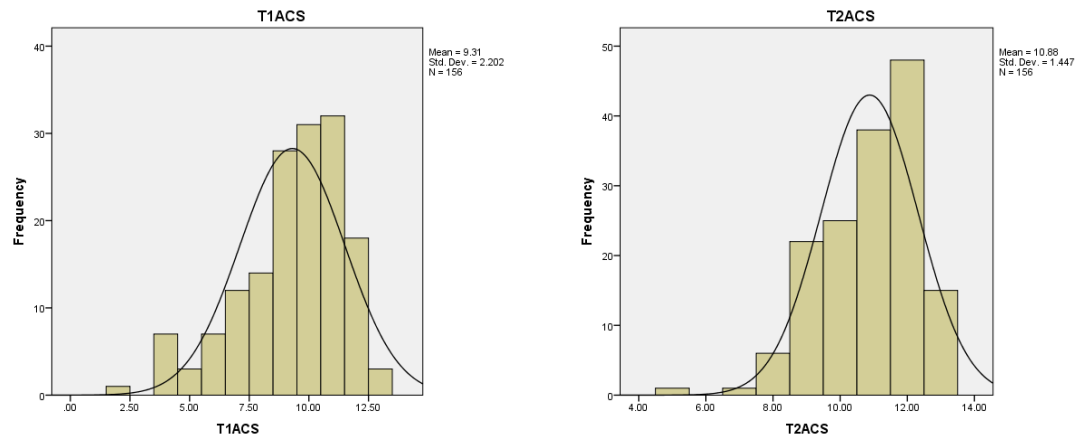
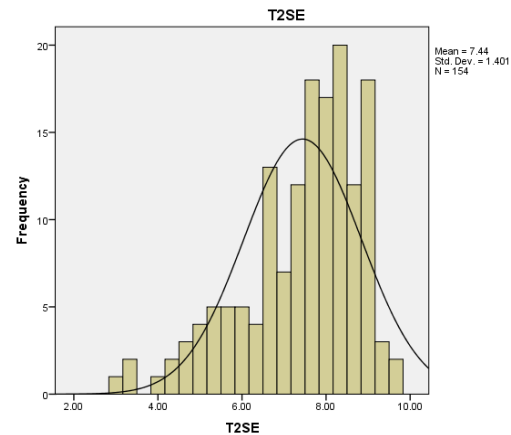
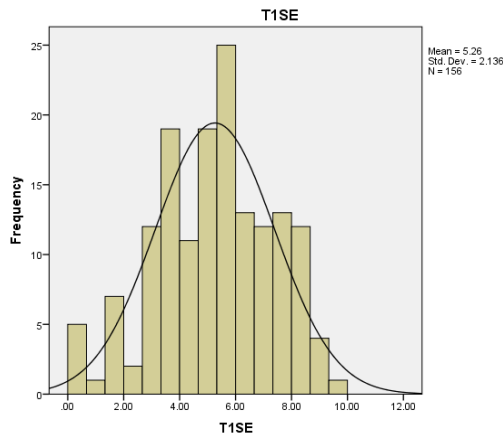


Figure 3.

Risk Assessment and Management Self-Efficacy pre-test and Post-test Distributions



Bivariate correlations between variables of interest are presented in Table 2.

Change scores for the dependent variables were calculated using residual gain scores.

Years in graduate school was moderately correlated with prior training ($r = .32, p < .05$) and prior experience ($r = .41, p < .05$). The longer individuals had been in graduate school the higher amount of suicide related training and experience they reported receiving. Prior training had a small relationship with pre-test Risk Assessment Questionnaire (T1RAQ) scores regarding suicide related knowledge ($r = -.25, p < .05$) and pre-test Assessment of Clinical Vignette (T1ACS) scores ($r = .16, p < .05$), and a large relationship with pre-test Self-Efficacy (T1SE) Scores ($r = .59, p < .05$). Prior suicide related experience was not correlated with the RAQ or ACS pre-tests but was largely correlated with risk-assessment self-efficacy ($r = .57, p < .05$). In summary, while both suicide related prior training and experience were highly positively correlated with initial risk assessment self-efficacy, only prior training was found to have a small positive correlation to participant initial performance on tests of suicide related knowledge and assessment of clinical vignettes.

A small negative relationship was found between age and the participant rating of the relevance of the present suicide risk assessment workshop to their work ($r = -.28, p < .05$). Years in graduate school also had a small negative correlation with relevance of the training ($r = -.20, p < .05$). With age and more years in the program participants tended to find the training slightly less relevant to their work. In addition, younger participants tended to have slightly larger improvements in their suicide related knowledge between pre and post-tests. ($r = -.18, p < .05$).

Training relevance is often a third variable that can influence the efficacy of the training (Taylor, Russ-Eft, & Chan, 2005). In the present study training relevance was measured by an item within the treatment validity measure which asked participants to rate on a 5 point Likert-type scale their agreement with the statement “the training was applicable to my work”. Training relevance had a small positive correlations to the RAQ change between pre and post-tests ($r = .22, p < .05$) and the ACS change between pre and post-tests ($r = .21, p < .05$). Thus participants who found the training more relevant to their work tended to demonstrate greater improvements between pre and post RAQ and ACS tests.

Changes in self-efficacy scores were negatively correlated with pretest RAQ scores ($r = -.19, p < .05$), and positively correlated with changes in RAQ scores ($r = .23, p < .05$) and changes in ACS scores ($r = .23, p < .05$). Having lower initial suicide related knowledge and demonstrating larger changes between pre and post RAQ and ACS scores was associated with larger changes in self efficacy ratings between pre and post-tests. In addition, changes in ACS scores pre and post had a small positive

correlation with changes in RAQ scores ($r = .23, p < .05$). Thus individuals who improved their RAQ scores also tended to improve their ACS scores.

Table 2.

Correlation Matrix of Age, Years in Graduate School, Training Relevance, Prior Training and Experience variables and Dependent Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	27.63	5.35	1													
2. Years in grad school	2.10	1.40	.25*	1												
3. Training Relevance	4.81	0.47	-.28*	-.20*	1											
4. Prior Training	2.12	1.13	-.03	.32*	.10	1										
5. Prior Experience	1.58	1.31	.15	.41*	.01	.72*	1									
6. T1RAQ	18.03	2.93	-.04	.12	.21*	.25*	.12	1								
7. T2RAQ	22.41	2.83	-.17*	.08	.29*	.08	-.03	.56*	1							
8. RAQ Residual	0.00	1.00	-.18*	.02	.22*	-.06	-.12	.00	.83*	1						
9. T1ACS	9.31	2.20	-.07	.18*	.01	.16*	.14	.47*	.50*	.29*	1					
10. T2ACS	10.88	1.45	-.08	-.02	.19*	.09	-.03	.34*	.47*	.33*	.41*	1				
11. ACS Residual	0.00	1.00	-.06	-.10	.21*	.02	-.09	.16*	.29*	.23*	.00	.91*	1			
12. T1SE	5.26	2.14	.06	.22*	.09	.59*	.57*	.11	-.07	-.15	.07	-.01	-.05	1		
13. T2SE	7.44	1.40	.03	.21*	.13	.43	.41*	.20*	.15	.06	.24*	.22*	.13	.75*	1	
14. SE Residual	0.00	1.00	-.02	.06	.10	-.01	-.02	-.19*	.29*	.23*	.30*	.33*	.23*	-.0	.66*	1

* $p < 0.05$ level (2-tailed)

The first hypothesis was that suicide related declarative knowledge acquisition on the Risk Assessment Questionnaire (RAQ) would be greater for the treatment group (lecture + demonstration) in comparison to the control group (lecture). A two way, repeated measures ANOVA (time by treatment) was conducted to assess changes in declarative knowledge about suicide risk and protective factors from pre to post test for the two training conditions (see Table 3). While there was a significant main effect for time, in contrast to our predictions there was no difference found between the two conditions. For all participants knowledge increased from pre to post-test, $F(1,152) = 408.90, p < .05$ and time accounted for 73 % of the variance. However, in contrast to our

hypothesis, Time X condition was not significant $F(1,152) = 1.15, p > .05$, so there was no difference in the change in declarative knowledge across the two treatment conditions. The added component of demonstration did not result in larger suicide related knowledge acquisition.

The second hypotheses was the treatment group would have larger improvements in their performance assessing clinical scenarios over time in comparison to the control group. A two way ANOVA was conducted to assess changes in assessment of clinical scenarios from pre to post test between the two training conditions (see Table 3). There was a significant main effect for time, with increased performance in applying a risk assessment model to written clinical scenarios, $F(1,152) = 88.87, p < .05$. However, in contrast to prediction, the added component of demonstration did not result in greater improvements in assessing clinical scenarios, $F(1,152) = 2.60, p = .08$.

The third hypothesis was that those in the treatment group would have greater improvements in Risk Assessment and Management Self-Efficacy (RAMSES) than those in the control group. A repeated measures ANOVA tested changes in the Risk Assessment and Management Self-Efficacy Scale (RAMSES; Delgadillo, et al., 2014) from pre to post test for the two training conditions (see Table 3). There was a significant main effect over time, with increased self-efficacy from pre to post-test regardless of condition, $F(1,152) = 373.86, p < .05$. In contrast to predictions, lecture with added demonstrations did not result in a greater improvement in self-efficacy scores over lecture alone, $F(1,152) = 0.25, p = .31$.

Table 3.

Declarative knowledge, application, and self-efficacy for training conditions over time

Outcome Variable	Lecture (N=81)		Lecture + demonstration (N=75)		Time difference		Group X time Differences	
	Pre <i>M (SD)</i>	Post <i>M (SD)</i>	Pre <i>M (SD)</i>	Post <i>M (SD)</i>	F (1,152)	η^2	F (1,152)	η^2
Declarative Knowledge (RAQ)	17.77 (2.99)	21.93 (3.10)	18.31 (2.86)	22.93 (2.41)	408.90*	0.73	1.15	0.01
Application (ACS)	9.06 (2.38)	10.89 (1.25)	9.57 (1.97)	10.87 (1.42)	88.87*	0.37	2.60	0.02
Self-efficacy (RAMSES)	5.34 (2.25)	7.48 (1.54)	5.14 (1.95)	7.40 (1.25)	373.86*	0.71	0.25	0.00

* $p < .05$

Prior research pointed out the effectiveness of modeling for counselor and clinical training (Lambert & Arnold, 1987). In order to better understand why demonstration did not produce effects on suicide related knowledge and assessments of clinical vignettes post hoc investigation of possible moderating individual variables were explored. One of the criticisms of training process research is the lack of focus on interactions with trainee characteristics (Alberts & Eldelstein, 1990). Relevance of the training has been found to be a predictor of behavioral modeling training effectiveness; individuals who report the training is more relevant to their work tend to perform better after training (Taylor, Russell, & Chan, 2005; Herschell, Kolko, Baumann, & Davis, 2010). This is because individuals who rate the training as more relevant to their work tend to have greater motivation to complete the training (Mathieu, Tannenbaum & Salas, 1992).

A moderation analysis was conducted to assess if training relevance moderated the relationship between treatment condition and post-test suicide related knowledge (T2RAQ). Treatment condition was dummy coded 0 for the control condition (lecture)

and 1 for the treatment condition (lecture + demonstration). Training relevance scores were centered and an interaction term of centered training relevance X condition was created. A hierarchical regression was conducted to assess the amount of variance in post RAQ scores explained by the interaction term of training relevance X condition above and beyond condition and training variables. In the first step RAQ pre-test was entered to control for the amount of variance in the post test predicted by the pre-test. In the second step the centered training relevance variable and the dummy coded condition variable were entered. In the third step the condition X training relevance interaction variable was added to the model (See Table 4). Results demonstrated that after controlling for the RAQ pre-test, the interaction term of condition X training relevance predicted a small amount of the variance above and beyond the independent and moderator variables alone. Thus, the added component of a demonstration resulted in larger improvements in suicide related knowledge depending on the participant's level of training relevance. Graphing the interaction (See Figure 4) demonstrated that individuals who rated the training as more relevant to their current work improved their suicide related knowledge equally in either condition, while individuals who rated the training as less relevant to their work had a greater improvement in suicide related knowledge in the demonstration condition.

Table 4.

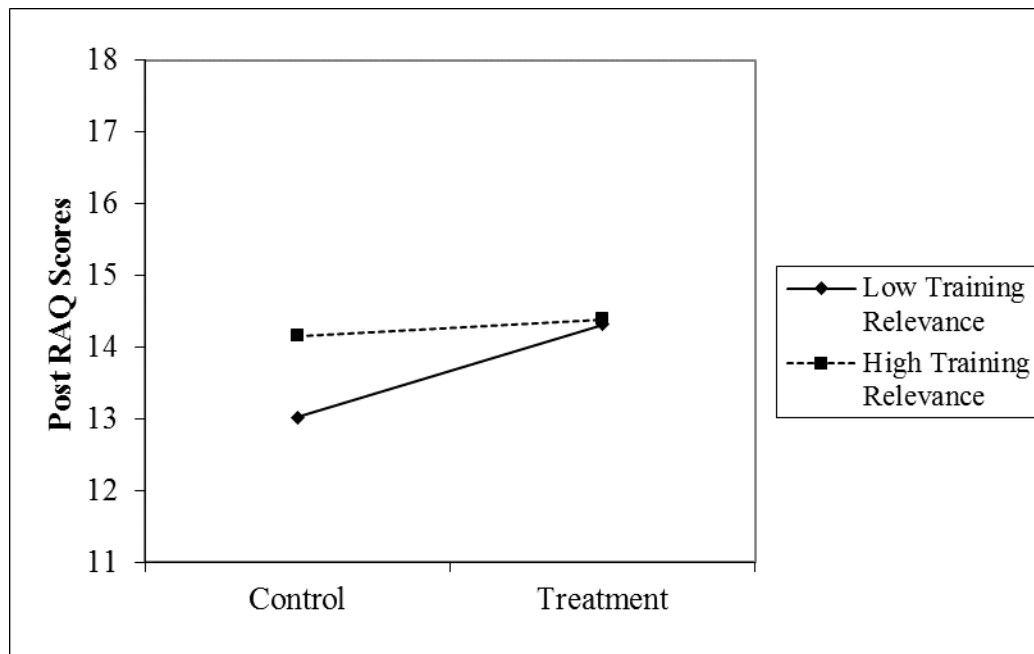
Demonstration Effects of Suicide Related Knowledge (RAQ) Moderated by Training Relevance

	β	R^2	df	F	ΔR^2	ΔF
Step 1		0.31	(1, 154)	69.17*	.31	69.17*
T1RAQ	0.56*					
Step 2		0.36	(2, 152)	28.58*	.05	6.02*
T1RAQ	0.51*					

	Training Relevance	0.19*					
	Condition	0.13*					
Step 3			0.38	(1, 151)	23.32*	.02	5.18*
	T1RAQ	0.49*					
	Training Relevance	0.31*					
	Condition	0.14*					
	Condition X	- 0.19*					
	Training						
	Relevance						

Figure 4.

Training Relevance Moderation of Treatment (Demonstration) effects on Post RAQ Scores



A moderation analysis was also conducted to assess if training relevance moderated the relationship between treatment condition and post-test Assessment of Clinical Scenarios (T2ACS). A hierarchical regression was conducted to assess the amount of variance in post ACS scores explained by the interaction term of training relevance X condition above and beyond condition and training relevance variables. In the first step ACS pre-test was entered to control for the amount of variance in the post

test predicted by the pre-test. In the second step the centered training relevance variable and the dummy coded condition variable were entered. In the third step the condition X training relevance interaction variable was added to the model (See Table 5). Results demonstrated that after controlling for the ACS pre-test, the interaction term of condition X training relevance predicted a small amount of the variance above and beyond the independent and moderator variables alone. Thus, the added component of a demonstration resulted in larger improvements in assessment of clinical scenarios depending on the participant's level of training relevance. Graphing the interaction (See Figure 5) demonstrated that individuals who rated the training as more relevant to their current work actually performed slightly worse on Assessment of Clinical Scenarios in the demonstration condition. In contrast, individuals who rated the training as less relevant to their work had a slightly greater improvement in Assessment of Clinical Scenarios in the demonstration condition than the control condition. It appears that the demonstration was slightly more effective in improving assessment of clinical scenarios for individuals who reported the training was less relevant to them.

Table 5.

Demonstration Effects of Assessment of Clinical Scenarios (ACS) Moderated by

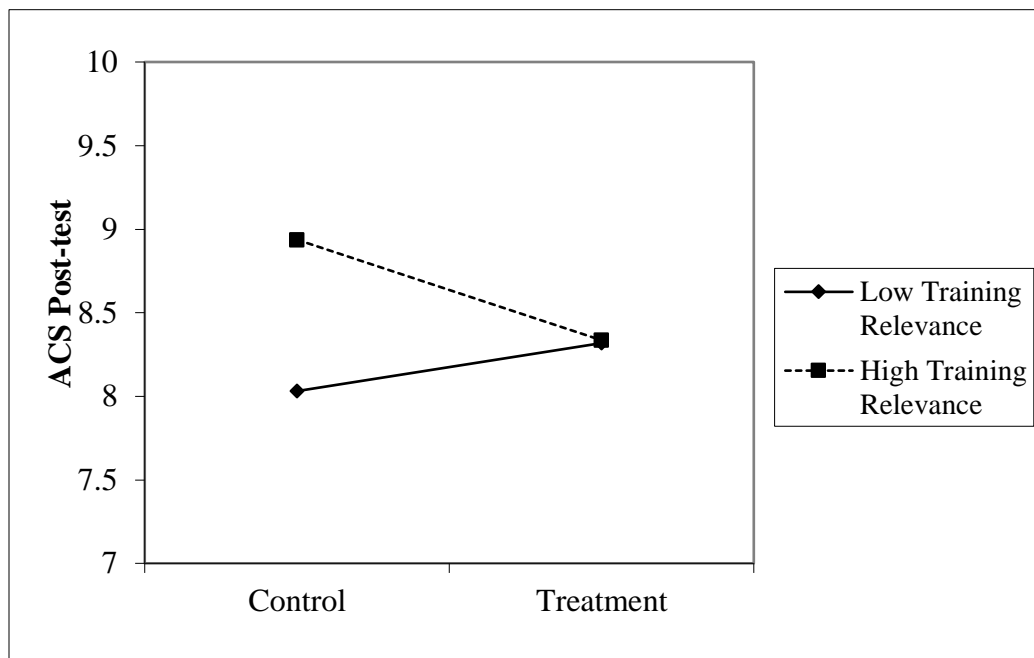
Training Relevance

	β	R^2	df	F	ΔR^2	ΔF
Step 1		0.17	(1, 154)	31.62*	.17	31.62*
TACS	0.41*					
Step 2		0.21	(2, 152)	13.25*	.04	3.54*
T1ACS	0.42*					
Training	0.18*					
Relevance						
Condition	-0.06					
Step 3		0.23	(1, 151)	11.25*	.02	4.37*

T1ACS	0.40*
Training	0.31*
Relevance	
Condition	-0.05
Condition X	-0.19*
Training	
Relevance	

Figure 5.

Training Relevance Moderation of Treatment (Demonstration) Effects on Post ACS



In summary, both the treatment and control conditions had large effects on acquisition of suicide related knowledge, assessment of clinical scenarios and risk assessment and management self-efficacy. However the demonstration component did not enhance these effects as predicted. The distribution of suicide related knowledge and assessment of clinical scenario measures revealed ceiling effects that may have limited the capacity to detect effects between the treatment and control conditions. Post hoc exploratory moderation analyses revealed demonstration enhanced the effects of

knowledge acquisition and assessment of clinical scenarios for individuals who reported the training was less relevant.

CHAPTER 5

DISCUSSION

Little is known about the processes of training counselors and clinicians (Levy, 2006; Herschell et al., 2010), and less is known about suicide risk assessment training specifically (Cramer, Johnson, Rausch, & Conroy, 2013). The scarcity of suicide risk assessment training for graduate students in the mental health field has been documented in several studies for decades (Burstein, Adams, and Giffen, 1973; Berman & Cohen-Sandler, 1982; Kleespies, Penk, & Forsyth, 1993; Ellis & Dickey, 1998; Granello & Juhnke, 2010; Oordt, Jobes, Fonseca, & Schmidt, 2009; Dexter, Mazza & Freeman, 2003). The majority of trainees felt the training they did receive in graduate school was inadequate in this regard (Feldman & Freedenthal, 2006; Melton & Coverdale, 2009). There is a huge gap in research to aid in our understanding of the processes of training that are most effective in what circumstances for what individuals (Levy, 2006). Understanding what processes are effective in producing improved knowledge, skills, and self-efficacy in suicide risk assessments would allow for the implementation of these processes within graduate programs.

The current study is the first of its kind to evaluate the process of training in the domain of risk assessment for graduate students. Within the present study the added effects of demonstration above and beyond lecture were investigated. Outcome variables of suicide related declarative knowledge, assessment of written clinical scenarios, and risk assessment and management self-efficacy were investigated.

Overview of Correlations

Results demonstrated that the longer graduate students had been in their program, the more risk assessment training and experience they received. It appears prior suicide related training, but not suicide related experience, was associated with initial performance on declarative knowledge regarding suicide and ability to assess risk in clinical scenarios. The prior training graduate students received only had a small correlation with their initial suicide related knowledge and ability to assess for risk in clinical scenarios, despite large correlations of prior training with initial risk assessment and management self-efficacy. This questions the quality of the present suicide risk assessment training utilized in graduate programs. In addition, this brings up the concern that graduate students who receive suicide risk assessment training may have a much higher self-efficacy than their knowledge and skill level imply they should. Either the training graduate students are receiving is vague and lacking in evidence based practices as documented in prior research (Melton & Coverdale, 2009) or the performance results may have dwindled over time. This is slightly alarming, considering that 70% of the present sample reported working with suicidal clients. In general individuals tend to overestimate their abilities, giving themselves credit for good intentions even if their actions do not live up to good intentions (Kruger & Dunning, 1999). A study found that individuals tend to rate themselves more favorably than they rate others (Kruger & Dunning, 1999). The results of the present study are consistent with general findings of individual's tendencies to overestimate their abilities. Therefore in suicide risk assessment training, self-efficacy may not be as important in comparison to performance variables, due to the tendency to inflate self-ratings.

Hypothesis 1: Demonstration Effects on Knowledge

In contrast to predictions, demonstration did not enhance declarative knowledge acquisition. Lecture training was just as effective as lecture plus demonstration in improving declarative knowledge. Analysis failed to reveal a significant modeling effect. This finding is inconsistent with the substantial amount of research in social learning (Bandura, 1969). There are several possible explanations. First, there was a ceiling effect present in the post-test Risk Assessment Questionnaire designed for the present study, which may have limited the ability to detect a modeling effect. Second, in certain cases modeling did not enhance knowledge acquisition as expected (Rappaport, Gross, & Lepper, 1973; Stone & Stein, 1978; Uhlemann et al., 1976). In the past, modeling did not enhance lecture when the lecture was highly specific in contrast to more general lecture (Rappaport, Gross, & Lepper, 1973; Stone & Stein, 1978), or when used in a brief fashion with low-skilled trainees (Uhlemann et al., 1976), as was the case in the present study. It has been demonstrated that larger amounts of modeling are needed to produce an effect above and beyond a specific lecture when working with low skilled trainees (Uhlemann et al., 1976). It is possible the modeling exposure time may not have been sufficient to produce vicarious learning for this population.

Present results indicate it may not be the lack of demonstrations that is the culprit of inadequate suicide risk assessment training in graduate programs, but the lack of more specific training lectures. Further research should compare the effects of specific training in comparison to more general training without specifics.

Hypothesis 2: Demonstration Effects on Clinical Scenarios

In contrast to predictions, demonstration did not enhance generalization skills assessing different clinical scenarios. There are many possible reasons why demonstrations did not enhance the assessment of clinical scenarios. First, there were some ceiling effects with the measure, which may have interfered with the ability to detect the enhanced effects produced with demonstration. The sample was positively skewed on the post-test of assessment of clinical scenarios. Thus the Assessment of Clinical Scenarios measure may not have been sensitive enough to detect demonstration effects. Most studies demonstrating the effects of modeling measured effects on ratings of observed role plays or actual behaviors. For example, in a study training undergraduate students ($N = 96$) in empathy skills, demonstrations enhanced skill acquisition over education alone as measured by rating role plays (Payne, Weiss, & Kapp, 1972). In another study participants were evaluated by ratings of progress notes written for a clinical scenario (McNeil, et al., 2008). It may be that these more realistic measures of applying the model to the real world are sensitive to detecting the overall effects of modeling demonstrations, whereas written clinical scenarios with multiple choice responses are not.

Second, one demonstration may not be sufficient to produce modeling effects. Within the present study only one clinical scenario was included in the demonstration, and individuals were tested on generalizing their knowledge to apply the risk assessment model in multiple clinical scenarios that differed from the demonstration. It has been shown that providing multiple demonstration scenarios produces larger effects on generalization abilities (Taylor, Russ-Eft, & Chan, 2005; Bryant & Fox, 1995). It is

possible that providing multiple demonstration cases is necessary to produce demonstration effects.

Third, practice and feedback may be essential to producing modeling effects in skill acquisition. Most studies which reported modeling effects on skill acquisition did not investigate modeling alone, but modeling with components of practice and feedback (Perry, 1975; Romi & Teichman, 1995). Modeling may only demonstrate enhancement over a specific lecture when practice and feedback components are present.

Overall, present results indicate it may not be the lack of demonstrations that is the culprit of inadequate risk assessment training in graduate programs, but the lack of more specific training lectures. Further research should compare the effects of specific training with more general training.

Hypothesis 3: Demonstration Effects on Self-Efficacy

In contrast to predictions, demonstration did not enhance risk assessment and management self-efficacy. This finding was inconsistent with self-efficacy theory (Bandura, 1971). There are many possible reasons why demonstrations did not enhance self-efficacy. First, there were some ceiling effects in the post self-efficacy test. Although the scale was previously validated (Delgadillo, et al., 2014), the measure displayed ceiling effects for the present purposes of demonstration enhancement effects on self-efficacy. According to Bandura (2006) in order to avoid ceiling effects, construction of self-efficacy scales should include preliminary work to identify the forms the challenges or impediments take and build these into the scale. The RAMSES may not have contained sufficient gradations of difficulties to avoid ceiling effects in the present study.

In addition, most studies regarding the effectiveness of modeling involved more practice and feedback than the present training (Romi & Teichman, 1995; Perry, 1975). A combination of didactic instruction, modeling, feedback, and practice (rehearsal) were important for skill acquisition (Herschell et al., 2010). Due to the complexity of performing a suicide risk assessment, practice and feedback may be necessary components in combination with modeling to produce these larger training enhancement effects for graduate students

Main Effects

Overall, for both lecture and lecture plus demonstration conditions produced significant pre-post effects on suicide related knowledge, assessment of clinical scenarios and self-efficacy. There was a main effect of improvement in suicide related knowledge, assessment of clinical scenarios and self-efficacy over time. Post-tests improved immediately after a lecture regarding suicide related risk factors, a risk assessment model and a safety plan intervention and following the same lecture combined with a demonstration of a risk assessment and safety plan intervention with a client. Therefore, it appears graduate students can increase their suicide related knowledge, assessment of clinical scenarios and self-efficacy following a short 1-2 hour online training. While it is plausible participants learned the suicide related knowledge from the training we cannot say definitively that this change was not due to other effects without further studies comparing the training to no treatment.

Exploratory Analysis of Moderating Variable of Training Relevance

The present study failed to produce the well documented modeling effects on knowledge and skill development (Lambert & Arnold, 1987). One of the criticisms of

training process research is the lack of focus on training content interactions with trainee characteristics (Alberts & Eldelstein, 1990). In order to better understand why demonstration did not produce effects on suicide related knowledge and assessments of clinical scenarios, post hoc investigation of possible moderating individual variables were explored. Relevance of the training to present work has been a predictor of behavioral modeling training effectiveness; individuals who report the training is more relevant to their work tend to perform better after training (Taylor, Russ-Eft, & Chan, 2005; Herschell, Kolko, Baumann, & Davis, 2010). The explanation behind this finding is that individuals who rate the training as more relevant to their work tend to have greater motivation to complete the training (Mathieu, Tannenbaum & Salas, 1992). Simply exposing a person to training does not ensure that they will attend closely to it; motivation plays a key role (Bandura, 1971).

Though the majority of mental health graduate student in the present sample rated the suicide risk assessment training as highly relevant to their work, there was some slight variation in the ratings of training relevance between graduate students. There are numerous reasons graduate students may not have rated the suicide risk assessment as highly relevant to their work. Graduate students may not feel suicide risk assessment training is as relevant to their present work if they are not presently seeing any clients or if they believe their client base does not include individuals at high risk for suicide. In addition, students may not see suicide risk assessment training as relevant if they believe they have already received sufficient training. This seemed to be the case in the present study seeing as older students who had been in the training program longer tended to rate the training as less relevant to their work.

Moderation analyses revealed demonstration enhancement of suicide related knowledge was dependent on the individual characteristic of training relevance. The lower the participant rated the relevance of the training to their work, the more demonstration enhanced knowledge acquisition over the effects of risk assessment lecture alone. In terms of knowledge acquisition, individuals who perceive suicide risk assessment training as less relevant benefit most from adding a demonstration component to lecture. Within the lecture only condition individuals who found the training more relevant had larger improvements in knowledge acquisition. However, with the added component of demonstration, there was no difference in participant knowledge acquisition depending on training relevance.

Moderation results also revealed that demonstration enhancement effect on assessment of clinical scenarios was dependent on the individual characteristic of training relevance. The lower the participant rated the relevance of the training to their work, the more demonstration enhanced abilities to assess clinical scenarios over the effects of risk assessment lecture alone. In terms of the ability to assess clinical scenarios, individuals who perceive suicide risk assessment training as less relevant benefit most from adding a demonstration component to lecture. Within the lecture only condition individuals with higher ratings of training relevance to their work had larger growth in their ability to assess clinical scenarios. However, with the addition of demonstration, there was no difference in participant growth in their ability to assess clinical scenarios depending on training relevance.

Individuals who find the training highly relevant to their work are likely more motivated to pay close attention to the training. These individuals performed equally well

on multiple choice tests of suicide related knowledge and assessments of clinical scenarios following a specific lecture on risk assessment and safety planning with or without a demonstration. According to Bandura's social learning theory (1971), observing a model can produce emotional responses that aid in vicarious learning. Individuals who perceived suicide risk assessment training as less relevant benefited most from this additional vicarious learning experience. It may be that the students who have been in the graduate training program longer believe they already have sufficient training when there is still room for growth, and the added component of demonstration is able to engage these students and produce larger effects on knowledge acquisition and assessment of clinical scenarios. Demonstrations enable the training to reach students of all motivation levels whereas lecture only training has a larger benefit for the students who are already motivated.

Limitations and Future Research

While these findings are thought provoking and extend the literature on risk assessment training for graduate students, limitations of this study must be acknowledged. There were ceiling effects in the Risk Assessment Questionnaire and Assessment of Clinical Scenarios designed for the present study. In addition, a written clinical scenario with multiple choice questions would not be able to detect the subtle differences in skill acquisition in regard to transferring this skill set to real clinical work. According to Bandura (1971), with appropriate modeling the process of acquisition can be considerably shortened, however, in the present research design, it is not possible to see differences in skill transfer to actual clinical work. One of the limitations to measuring real world clinical skill transfer is that participants are currently in training and

not all participants are actively seeing clients. However, future studies should investigate a dependent measure that is more sensitive to clinical skill transfer such as open ended written responses or observed role plays.

Another limitation to the present study was the lack of a third condition without suicide specific lecture training. While there was a significant improvement in suicide related knowledge, assessment of clinical scenarios, and self-efficacy in both conditions, a control group was not present for the lecture only condition. A future study should be conducted to compare the present risk assessment and safety planning lecture to a clinical lecture training without suicide related information. It appears that the most beneficial component of the training for graduate students is the suicide risk assessment information itself, not the demonstration, therefore this component should be evaluated further.

The research design was further limited by only having one clinical scenario present in the demonstration. The generalizability to the wide array of clinical scenarios that may present in suicide risk assessment could be enhanced by the presence of additional clinical scenarios (Taylor, Russ-Eft, & Chan, 2005; Bryant & Fox, 1995). Future research should investigate the effects of including additional risk assessment clinical scenarios in the demonstration to create a more solid foundation of rule codes. In addition, the components of practice and feedback were not included in the training. Further research should be conducted to assess the added effects of practice and feedback components in combination with modeling.

Furthermore, the study may not be generalizable to graduate students in the mental health field in general. The sample was largely composed of counseling psychology students. In addition, volunteers for the workshop may differ significantly

from graduate students who chose not to volunteer. Finally, the lack of a follow up assessment does not allow for evaluation of the training's lasting effects. Future studies should be done with a follow up assessment post-training.

Conclusions and Implications

Despite the aforementioned limitations and the need for additional research, this study makes a significant contribution to the literature on risk assessment training for graduate students in the mental health field. The current study builds on the literature regarding the present status of risk assessment training in graduate programs in the mental health field. Results demonstrated that the prior training graduate students received only had a small correlation with their suicide related knowledge and ability to assess for risk in clinical scenarios, despite large correlations of prior training with risk assessment and management self-efficacy. This questions the quality of the present suicide risk assessment training utilized in graduate programs. Additionally, the results of this study indicate that short online training workshops can be utilized to improve graduate student suicide related knowledge, ability to assess clinical scenarios and suicide risk assessment and management self-efficacy. An online training provides a much more accessible and scalable training programs that could be easily implemented into graduate programs.

Prior research has documented the significant lack of risk assessment training for graduate students in the mental health field (Burstein, Adams, and Giffen, 1973; Berman & Cohen-Sandler, 1982; Kleespies, Penk, & Forsyth, 1993; Ellis & Dickey, 1998; Granello & Juhnke, 2010; Oordt, Jobes, Fonseca, & Schmidt, 2009; Dexter, Mazza & Freeman, 2003), however, no studies have been conducted in order to determine which

aspects of training would benefit students. In order to understand how to improve the training for graduate students, research on the best methods of implementing training is needed. The present study results indicate that graduate programs in the mental health field could benefit from implementing online suicide risk assessment trainings in the curriculum which cover the specifics of how to conduct a risk assessment and safety plan. Furthermore, modeling effects differ depending on individual characteristics of the trainee. For individuals who rate suicide risk assessment as less relevant to their present work, modeling can enhance the effectiveness of the training. It is likely that graduate students in the mental health field vary in their perceptions of the relevance of suicide risk assessment training, thus modeling can provide enhanced knowledge acquisition and ability to assess clinical scenarios particularly for those who perceive the training as less relevant. Therefore, it is advisable to include a demonstration component in training protocols. Finally, to produce larger training modeling effects, the demonstration may need to include a practice and feedback component, as modeling alone does not appear to enhance training effects overall.

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APPENDIX A

SUICIDE ASSESSMENT CHECKLIST

1. Does the client express suicidal ideation? Yes No
2. Does the client have a specific thought out plan? Yes No
3. Has the client identified a means? Yes No
4. Does the client have access to the means? Yes No
5. Is the client willing to give up access to the means? Yes No

(if “Yes” to Questions 1 through 4, and 5 is “No” a referral for hospitalization is likely; however, continuing this assessment will provide more information regarding the client’s situation.)

5. Has the client expressed a strong desire to die? Yes No
6. Does the client have no fear of dying? Yes No
7. Does the client use alcohol or drugs? Yes No
8. Is there a family history of suicide? Yes No
9. Has the client made prior attempts? Yes No
10. Does the client have an ineffective support system? Yes No
11. Does the client omit references to the future? Yes No
12. Is the client experiencing disorganized thoughts? Yes No
13. Is the client experiencing hallucinations? Yes No
14. Has the client experienced any recent personal losses? Yes No
15. Has the client recently been diagnosed with physical illness? Yes No
16. Is the client experiencing guilt, blame, or shame for personal behaviors? Yes No
17. Has the client made any preparation for death? (i.e., giving away personal items, making a will, writing a good-bye letter) Yes No

APPENDIX B

SUICIDE ASSESSMENT COMPONENTS

Suicidal desire: Any of the following

- wish to not carry on
- no reason for living
- wish to die
- passive: not caring if death occurred

Suicide capability:

- fearlessness to make attempt
- competence to make attempt
- available means and opportunity
- specificity of plan
- preparations for attempt
- Additionally check for the following (especially with adolescents):
 - Recent impulsivity
 - Current intoxication/substance abuse

Suicidal intent:

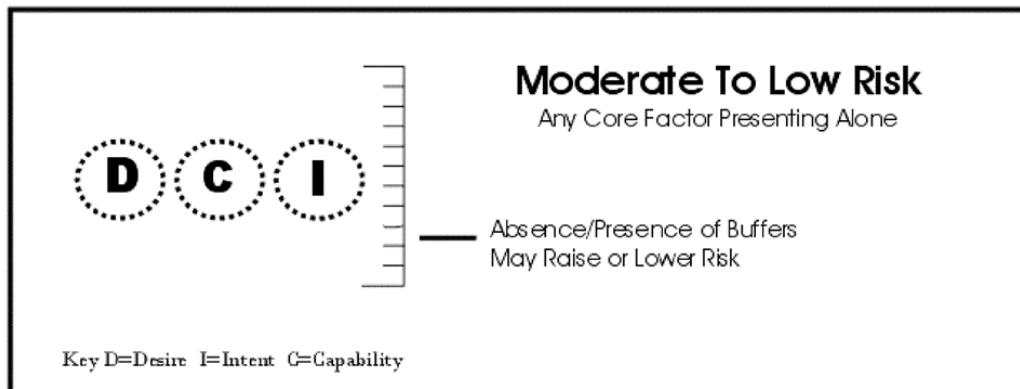
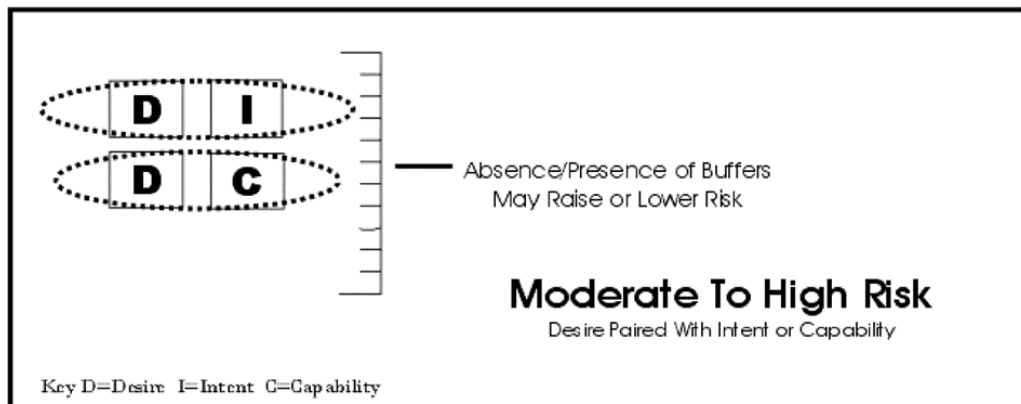
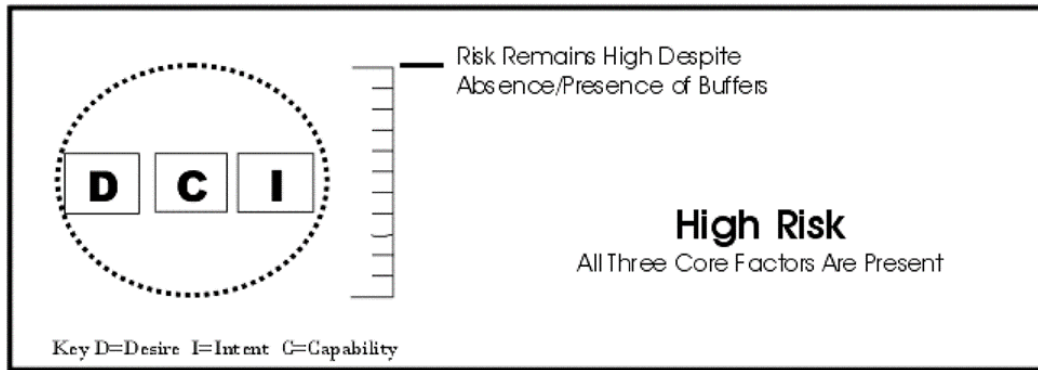
- expressed intent
- preparatory behaviors (leaving possession, saying goodbye, getting estate in order)
- plan or attempt in progress

Protective factors:

- Social support (especially perceived immediate support)
- Planning for the future (short or long term)
- Reasons for living (duty to family, friends, religion)
- Engagement with counselor

APPENDIX C

MODEL OF RISK ASSESSMENT (JOINER ET AL., 2007)



APPENDIX D
SAFETY PLAN

Warning signs:

1. _____
2. _____
3. _____

Internal coping strategies: things I can do that make me feel better or take my mind off my problems without contacting someone:

1. _____
2. _____
3. _____
4. _____

People and social settings that provide distraction/safety:

1. Name: _____ Phone: _____
2. Name: _____ Phone: _____
3. Name: _____ Phone: _____

People who I can ask for help:

1. Name: _____ Phone: _____
2. Name: _____ Phone: _____
3. Name: _____ Phone: _____
4. Name: _____ Phone: _____

Professionals or agencies I can contact during crisis:

Counselor: _____ Phone: _____
Local urgent care ED service: _____ Phone: _____
Address: _____
Local Crisis Services: _____ Phone: _____
Suicide Hotline: _____

Steps to make you will take to make your environment safe:

1. _____
2. _____
3. _____

APPENDIX E
DEMOGRAPHICS

1. What is your age?
2. What is your ethnicity?
3. What type of program are you in?
 - a. Clinical psychology Master's
 - b. Clinical psychology PhD
 - c. Counseling psychology Master's
 - d. Counseling psychology PhD
 - e. School counseling MA
 - f. School Counseling PhD
 - g. PsyD
 - h. Psychiatry
 - i. Social Work Master's
4. What is your school program name?
5. How many years have you been in graduate school?

Prior Suicide Related Training:

6. Please rate the level of training/instruction you have received in suicide risk and protective factors
7. Please rate the level of training you have received in suicide assessment
8. Please rate the level of training you have received in interventions to manage suicide risk

0	1	2	3	4	5
None	Very Low	Low	Moderate	High	Very High
	(pieces of information covered a few times)				(numerous days of work shops or a course devoted to topic)

Prior Suicide Related Experience:

9. Please rate the level of experience you have working with suicidal individuals
10. Please rate the level of experience you have conducting suicide assessments
11. Please rate the level of experience you have in utilizing interventions to manage risk

0	1	2	3	4	5
None	Very Low	Low	Moderate	High	Very High
	(Once or twice)				(On a daily basis for years)

APPENDIX F

RISK ASSESSMENT QUESTIONNAIRE- DECLARATIVE KNOWLEDGE OF

SUICIDE RISK AND PROTECTIVE FACTORS

Item	Pre Test	Post Test
1	<p>According to demographic risk factors which group is at a high risk for suicide?</p> <p>a) Elderly Caucasian men b) Elderly American Indian men</p>	<p>According to demographic risk factors which group is at a high risk for suicide?</p> <p>a) Adolescent Caucasian men b) Adolescent American Indian men</p>
2	<p>Which of the following risk factors contribute to suicidal desire?</p> <p>a) Feeling like a burden b) Hopelessness c) Helplessness d) All of the above</p>	<p>Which of the following risk factors contribute to suicidal desire?</p> <p>a) Feeling like a burden b) Feeling intolerably alone c) psychological pain d) All of the above</p>
3	<p>Which is most predictive of suicide completion?</p> <p>a) Suicidal capability b) Suicidal desire c) Suicide intent d) All of the above are equally predictive</p>	<p>Which is least predictive of suicide completion?</p> <p>a) Suicidal desire b) Suicidal intent c) History of suicide attempts d) All of the above are equally predictive</p>
4	<p>Which of the following defines suicide capability?</p> <p>a) Fearlessness of death b) Helplessness c) Trapped feeling d) All of the above</p>	<p>Which of the following defines suicide capability?</p> <p>a) Hopelessness b) Helplessness c) Available means d) All of the above</p>
5	<p>True or False, Suicide desire and capability implies suicide intent is present?</p> <p>a) True b) False</p>	<p>True or False, Suicide desire and capability do not necessarily imply suicide intent?</p> <p>a) True b) False</p>
6	<p>True or false, suicidal clients most often tell someone about their plans?</p> <p>a) True b) False</p>	<p>True or false, suicidal clients are most often secretive about their plans?</p> <p>a) True b) False</p>
7	<p>Kathy has been saving up all her prescribed pain medications for the past month. This best exemplifies what risk factor?</p> <p>a) Suicidal desire</p>	<p>Billy is a 13 year-old boy who expresses plans to harm himself with his father's gun. His father locks up any guns available to Billy. Which</p>

	b) Situational Cue c) Access to means d) Fearlessness	answer best exemplifies the risk factor taken away from Billy? a) Intent b) Access to means c) Depression symptoms d) Hopelessness
8	Dorothy takes all of her birth control pills 15 minutes before her mother usually arrives home from work. This best exemplifies which one of the following? a) Depression symptoms b) High Lethality c) High Rescue assistance d) Impulsivity	Deana attempts to overdose moments before her husband typically arrives home from work. This best exemplifies which one of the following? a) Helplessness b) High rescue assistance c) Suicide intent d) Depression symptoms
9	Jessica was discharged from an inpatient psychiatric facility for an attempted hanging 2 months ago. This best exemplifies which risk factor? a) Intent b) Impulsivity c) History of suicide attempt d) Suicidal ideation	Joey was discharged from an inpatient psychiatric facility for an attempted overdose 2 months ago. This best exemplifies which risk factor? a) Intent b) Impulsivity c) History of suicide attempt d) Suicidal ideation
10	Alicia states that she plans to kill herself tonight because she sees no other way out. This statement best exemplifies what risk factor? a) Feeling trapped b) Substance abuse c) Isolation d) All of the above	Issac states he feels like there is no way out. This statement best exemplifies what risk factor? a) Feeling trapped b) Substance abuse c) Isolation d) All of the above
11	Which of the following factors are likely to lower suicide risk? a) Duty to family b) Plans for the future c) Quality relationships d) Internal coping skills e) All of the above	Which of the following factors are likely to lower suicide risk? a) Internal coping skills b) Strong therapeutic relationship c) Social support d) Religiosity e) All of the above

12	<p>Wanda expresses suicidal ideations but tells you she is going to a concert with friends next month?</p> <ul style="list-style-type: none"> a) Duty to religion b) Plans for the future c) Social support d) Therapeutic support 	<p>Gary expresses suicidal ideations but mentions he booked tickets to attend his daughter's wedding in a few weeks. This best exemplifies what protective factor?</p> <ul style="list-style-type: none"> a) Duty to religion b) Plans for the future c) Social support d) Therapeutic support
13	<p>Jim stated he would never follow through with his suicidal plans because this would leave his 2 kids without a dad. This best exemplifies what protective factor?</p> <ul style="list-style-type: none"> a) Social support b) reasons to live c) Therapeutic support d) Duty to family 	<p>Chandra states she could never go through with her suicide plan because she is her mother's caretaker. This best exemplifies what protective factor?</p> <ul style="list-style-type: none"> a) Duty to religion b) Social support c) reasons for living d) Duty to family
14	<p>Dana is a 14 year old girl who has been cutting her wrists horizontally with paper and paperclips. This best exemplifies a lack of...</p> <ul style="list-style-type: none"> a) Suicidal desire b) High lethality c) Means d) Low lethality 	<p>Danny plans to cut his wrists vertically with a pocket knife. This best exemplifies...</p> <ul style="list-style-type: none"> a) high lethality b) hopelessness c) low lethality d) helplessness
15	<p>When Gerald is at work he has more suicidal ideations. What is represented best in this situation?</p> <ul style="list-style-type: none"> a) Trigger b) Mood change c) Trapped feelings d) Hopelessness 	<p>Bill lives in a group home where he witnessed one of his roommates die. He frequently feels suicidal when in the group home at night. What is represented best in this situation?</p> <ul style="list-style-type: none"> a) Trigger b) Mood change c) Trapped feelings d) Hopelessness
16	<p>When completing a safety plan with a client you should...</p> <ul style="list-style-type: none"> a) Use your own words in documentation instead of the clients 	<p>When completing a safety plan with a client you should...</p> <ul style="list-style-type: none"> a) Leave family and friends out of the process

	<ul style="list-style-type: none"> b) Show empathy c) Leave family and friends out of the process d) All of the above 	<ul style="list-style-type: none"> b) Use the client's own words in documentation c) Only give a copy of the plan to the client d) All of the above
17	<p>Which is the most common cause of lawsuits against clinicians in cases of suicidal clients?</p> <ul style="list-style-type: none"> a) Failure to complete risk assessment b) Improper documentation c) Failure to consult 	<p>Which is the most common cause of lawsuits against clinicians in cases of suicidal clients?</p> <ul style="list-style-type: none"> a) Failure to complete risk assessment b) Improper documentation c) Lack of proper treatment
18	<p>True or false, assessment of competence (orientation to person, place, and time) needs to be documented within the client record</p> <ul style="list-style-type: none"> a) True b) False 	<p>True or false, It is important to document if the client is competent to understand the treatment</p> <ul style="list-style-type: none"> a) True b) False
19	<p>True or false, the limits of confidentiality need to be discussed with the client but not documented</p> <ul style="list-style-type: none"> a) True b) False 	<p>True or false, the limits of confidentiality discussed with the client needs to be documented within the client record</p> <ul style="list-style-type: none"> a) True b) False
20	<p>Which of the following substances is more lethal with a higher risk for overdosing?</p> <ul style="list-style-type: none"> a) Tylenol b) Alcohol c) Marijuana d) Birth control 	<p>Which of the following substances is more lethal with a higher risk for overdosing?</p> <ul style="list-style-type: none"> a) Alcohol b) Birth control c) Marijuana d) Xanax
21	<p>Which of the following is not part of a safety plan?</p> <ul style="list-style-type: none"> a) Warning signs/triggers b) Risk assessment c) Internal Coping strategies d) Providing suicide hotline numbers e) None of the above 	<p>Which of the following is not part of a safety plan?</p> <ul style="list-style-type: none"> a) Warning signs/triggers b) No harm statement c) Internal Coping strategies d) Providing suicide hotline numbers e) None of the above

22	<p>Which of the following is not part of a safety plan?</p> <ul style="list-style-type: none"> a) Identifying methods to restrict client access to means to make the environment safe b) Documenting the length of time the environmental restrictions will take place. c) Getting the client signature agreeing to limit their access to means d) Assessing client access to firearms 	<p>Which of the following is not part of a safety plan?</p> <ul style="list-style-type: none"> a) Identify methods to restrict client access to means to make the environment safe b) Document the length of time the environmental restrictions will take place. c) Social support signature agreeing to limit client access to means d) Assessing client access to firearms
23	<p>True or false, Clinicians are ethically required to conduct a risk assessment at every intake?</p> <ul style="list-style-type: none"> a) True b) False 	<p>True or false, Clinicians are legally required to conduct a risk assessment at every intake?</p> <ul style="list-style-type: none"> a) True b) False
24	<p>Which of the following should be documented whenever risk of harm to self is discussed?</p> <ul style="list-style-type: none"> a) The specific risks discussed b) Treatment options explored and selected c) Client competence to understand treatment d) All of the above 	<p>Which of the following should be documented whenever risk of harm to self is discussed?</p> <ul style="list-style-type: none"> a) The specific risks discussed b) Treatment options explored and selected c) Client competence to understand treatment d) All of the above
25	<p>Which of the following is not a step to creating a good alliance with a client at risk for suicide?</p> <ul style="list-style-type: none"> a) Curiosity, concern, and calm acceptance of the clients state b) Normalizing feelings of hopelessness c) Expressing personal anxiety d) Identifying a common goal for treatment e) None of the above 	<p>Which of the following is not a step to creating a good alliance with a client at risk for suicide?</p> <ul style="list-style-type: none"> a) Avoid direct discussion of suicidal plan b) Provide a comprehensible simple model for suicidality c) Normalize feelings of hopelessness d) Acknowledge the client's ambivalence about living e) None of the above

26	<p>Which of the following is not part of the third step of a safety plan (socialization strategies for distraction and support)?</p> <ul style="list-style-type: none"> a) Identify family and friends who can distract client from thoughts b) Identify family and friends who the client can talk to about their suicidal crisis c) Identify social settings that can serve as a distraction d) Discourage client from choosing social environments where alcohol or other substances may be present 	<p>Which of the following is not part of the third step of a safety plan (socialization strategies for distraction and support)?</p> <ul style="list-style-type: none"> a) Identify family and friends who can distract client from thoughts b) Assist the client in weighting the pros and cons of disclosing their suicidal thoughts to a social support c) Identify social settings that can serve as distraction d) Discourage client from choosing social environments where alcohol or other substances may be present
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APPENDIX G

ASSESSMENT OF CLINICAL SCENARIOS

ACS Pre-Test

Please answer items 1-3 regarding the following clinical scenario:

Jack, who has been diagnosed with major depression, stock piled his depression medications as a plan to attempt suicide. He does not intend to go through with the plan at this point in time because he promised his friend he would go to their play in a couple weeks. He has a history of suicidal ideations that started with his depression but no history of attempts. Jack has never expressed any plans besides overdosing on medications and does not own a gun. He has a good support system that includes his two sisters and a close friend from high school.

1. What level of risk would you classify Jack?
 - a. Low
 - b. Moderate
 - c. High
2. Please select the **best** format of documentation of Jack's risk
 - a. Jack has a history of suicidal ideations without any present suicidal ideation or intent.
 - b. Jack is not currently a danger to himself
 - c. Jack has current suicidal ideations with a plan to overdose on his depression medications, however, he does not have current intent to follow through with his plan. He has a good social support.
 - d. Jack has current suicidal ideations with a plan to overdose on his depression medications and imminent intent to follow through with his plan. He has a good social support.
3. Which would you suggest first to deal with any imminent risk?
 - a. Complete a safety plan with client
 - b. Restrict client access to means
 - c. Complete a safety plan with client and restrict their access to means
 - d. Attempt voluntary hospitalization, and follow through with involuntary if not successful.
 - e. Call emergency contact

Please answer questions 4 and 5 regarding the following clinical scenario:

Ana is a 42 year old who just moved to phoenix and lives alone. Ana has spent a great deal of time alone since she moved. She bought a gun and plans to attempt suicide tonight after months of dealing with work stress. She states she is not willing to let a friend take her gun for a few days.

4. What level of risk would you classify Ana?
 - a. Low
 - b. Moderate

c. High

5. Which would you suggest first to deal with any imminent risk?
- a. Complete a safety plan with client
 - b. Restrict client access to means
 - c. Complete a safety plan with client and restrict their access to means
 - d. Attempt voluntary hospitalization, and follow through with involuntary if not successful.
 - e. Call emergency contact

Please answer items 6 and 7 regarding the following clinical scenario:

Lisa, a 28 year old who lives with her mother after a recent difficult divorce. Lisa owns a gun and has suicidal ideations of shooting herself. She has 3 children and in the past has thought about committing suicide but never followed through because of her children. She mentions she cannot make session in 2 weeks because of her daughter's ballet recital.

6. What level of risk would you classify Lisa?
- a. Low
 - b. Moderate
 - c. High
7. Which would you suggest first to deal with any imminent risk?
- a. Complete a safety plan with client
 - b. Restrict client access to means
 - c. Complete a safety plan with client and restrict their access to means
 - d. Attempt voluntary hospitalization, and follow through with involuntary if not successful.
 - e. Call emergency contact

Please answer items 8-11 regarding the following clinical scenario:

Juan is a 28 year old Hispanic government employee who was referred to therapy by his primary care physician for anxiety and depression symptoms. He reports a 3 month history of worsening anxiety that is especially bad early in the morning. "I wake up at 3 in the morning and I can't get back to sleep. My thoughts torment me." He also reports decreased energy, inability to concentrate at his job, decreased appetite with a 10 pound weight loss, and suicidal ideation. "I feel so hope-less that suicide seems like an option." He also states, "There is nothing in my life that I enjoy." Juan is tearful during evaluation. He lacks animation and his mood is quite depressed. He denies prior hypomanic or manic episodes. He has been storing up his medications for 2 weeks. He reports he wants to end his suffering because he has nothing to live for. He lives alone but has family nearby that he sees once a week. He has never attempted suicide before. His ideations have been increasing over the past 3 months and especially over the past 2 weeks as he did not take his medications, storing them up for a suicide attempt. The

family history is positive for depression in a paternal grandfather, and in his father, and he reports that a depressed uncle committed suicide about 10 years ago. Juan denies current intent to attempt suicide but states he keeps his medications just in case things do not improve.

8. Which of the following do you notice in Juan?
 - a. Suicidal desire and intent
 - b. Suicide capability and intent
 - c. Suicidal desire and capability
 - d. Suicidal desire
9. What protective factor does Juan have?
 - a. Good therapeutic alliance
 - b. Duty to family
 - c. Social support
 - d. None of the above
10. What level of risk for suicide would you classify Juan?
 - a. Low
 - b. Moderate
 - c. High
11. Which would you try first as Juan's therapist?
 - a. Complete a safety plan with client
 - b. Restrict client access to means
 - c. Complete a safety plan with client and restrict his access to means
 - d. Attempt voluntary hospitalization, and follow through with involuntary if not successful.
 - e. Call emergency contact
12. Juan completes a safety plan in session and states he is willing to restrict his access to medications. What would you do next?
 - a. During session have Juan contact a family member or friend to assist in restricting his access to medication
 - b. Have Juan involuntarily hospitalized due to his high risk
 - c. Call Juan's emergency contact information once he leaves to inform them of his risk
 - d. Send Juan home with a copy of his safety plan

ACS Post-Test

Please answer items 1, 2, 3, and 4 regarding the following scenario:

Janet is a 14 year-old girl who has been actively cutting her wrist horizontally with razors to make surface deep cuts. Her mother brings her into counseling very concerned about her. Janet states in session, "I just don't want to be here anymore". She still has access to razors but expresses that she would be afraid to cut herself deeper because of her fear of blood.

1. Which of the following do you notice in Janet?
 - a. Suicidal desire
 - b. Suicide capability
 - c. Suicide intent
 - d. Suicidal desire and protective factors
2. What level of risk for suicide would you classify Janet?
 - a. Low
 - b. Moderate
 - c. High
3. If Janet was your client which of the following actions would you take based on the information you know?
 - a. Contact her guardians and attempt to get Janet to voluntarily hospitalize herself
 - b. Complete a safety plan with Janet and notify her guardians
 - c. Complete a safety plan with Janet, limit her access to razor blades, and notify her guardians.
 - d. Nothing, Janet is fine
4. Please select the **best** format of documentation of Janet's risk
 - a. Janet has a history of cutting herself on the surface level. She expressed passive suicidal ideation without any present intent to kill herself due to a fear of blood.
 - b. Janet has a history of cutting herself on the surface level. She expressed suicidal ideation with a current plan to cut herself
 - c. Janet has a history of cutting herself on the surface level without any present suicidal ideation or intent.

Please answer items 5, 6, and 7 regarding the following scenario:

A 19-year old client, Lilly, contacts you on the phone and tells you she swallowed a bottle of Tylenol.

5. Which of the following do you notice in Lilly?
 - a. Suicidal ideation
 - b. Suicide capability
 - c. Suicide intent
 - d. All of the above
6. What level of risk for suicide would you classify Lilly?
 - a. Low
 - b. Moderate
 - c. High
7. What would your next steps be?
 - a. Call 911 for emergency hospitalization
 - b. Call her emergency contact
 - c. Complete a safety plan
 - d. Call her emergency contact and complete a safety plan

Use the following case to respond to items 13-17:

Clayton is a 61-year-old Caucasian man who used injection drugs as a young adult and contracted hepatitis C. He quit using injection drugs without treatment and about 10 or 15 years later developed alcohol dependence. He entered treatment 5 years ago and has been sober for 18 months. He has a cirrhotic liver but does not want to consider getting on a transplant list. He attends at least four Alcoholics Anonymous (AA) meetings a week, participates in an ongoing recovery group, and sees a substance abuse counselor individually on an as-needed basis. He has two grown children with whom he has weekly contact, and lives on his retirement pension. He retired 3 years ago from a supervisory position at a local small manufacturing plant where he worked for 30 years. He has become close with his AA group since he interacts with these friends on a daily basis.

Clayton tried to kill himself in his twenties by overdosing on heroin. He was taken to an emergency room and released about 12 hours later. He did not follow up on treatment recommendations. He began having suicidal thoughts again following his last relapse 18 months ago. While drinking, he decided he might shoot himself but did not actually make a suicide attempt.

Since stopping drinking and returning to treatment, he has had occasional thoughts of killing himself, particularly when the pain from his liver disease becomes burdensome and when he feels like he has no future. He took out his gun and examined it last week, an action that concerned his AA sponsor enough to urge Clayton to call his substance abuse counselor for an appointment. He did not go through with his plan because he felt guilty about leaving his children and denies any current intent.

8. Which of the following do you notice in Clayton?
 - a. Suicidal desire and intent
 - b. Suicide capability and intent
 - c. Suicidal desire and capability
 - d. Suicidal desire
9. What protective factor does Clayton have?
 - a. Good therapeutic alliance
 - b. Duty to family
 - c. Social support
 - d. None of the above
10. What level of risk for suicide is Clayton?
 - a. Low
 - b. Moderate
 - c. High
11. Clayton tells you he is not willing to restrict his access to guns. You attempt to persuade him into locking them away with someone but he does not budge. What are your next steps?
 - a. Let him go home, he does not seem serious about suicide
 - b. Fill out a safety plan and hope he follows it
 - c. Ask Clayton if he would be willing to have a gunlock on his gun and give a trusted family member or friend the only gunlock key
 - d. Give him the option of locking his guns away with his family or voluntary/involuntary hospitalization

12. Clayton tells you he **is** willing to have his guns locked away. What is the best next step to assure Clayton is safe?
- a. Have Clayton's family member/ friend who is planning to keep the gun come into session or talk over the phone to remove the gun for him
 - b. Have Clayton take his gun to a friend
 - c. Attempt to get Clayton to voluntarily hospitalize himself to get proper help.
 - d. Let Clayton go home and meet with him in a week to follow up.

APPENDIX H

RISK ASSESSMENT AND MANAGEMENT SELF-EFFICACY SCALE (RAMSES)

Please rate your perceived self-efficacy in the following tasks on a scale of 0 (no confidence in ability to perform task) to 10 (complete confidence in ability to perform task)

1. Use screening instruments to assess risk
2. Interview people to elicit key information about risk factors
3. Identify a person who is presenting risk to self
4. Identify a person that is presenting risk to others
5. Differentiate between people presenting high risk and low risk
6. Synthesize relevant information in a formal or written risk assessment
7. Use specific interventions focusing on risks of self-harm or self-neglect
8. Help people to minimize the severity of risk to self
9. Use specific interventions focusing on risks of harm to (or neglect of) others
10. Help people to minimize the severity of risk to others
11. Develop rapport with people who present significant risk
12. Manage risks in line with organizational confidentiality policies
13. Use strategies to avoid malpractice liability or disciplinary action
14. Develop a formal or written risk management plan
15. Appropriately judge whether or not a person should be referred to an external service or professional on the basis of risk
16. Identify an appropriate service to refer someone on the basis of risk
17. Successfully refer and engage a person with an appropriate service
18. Motivate a person to successfully self-refer to an appropriate service

APPENDIX I

SUICIDE ASSESSMENT AND SAFETY PLAN SCRIPT

Client background: John is a 32 year old teacher. He has a history of depression and is currently actively depressed. He has been experiencing a lot of stress at work. He reported a lot of pressure to perform well on his teacher evaluation and to get his kids test scores up. However, the administrators completing his observation do not get along well with him and they have decided to observe his lower performing class (his class is split into low and high functioning groups). This is John's fourth session with his therapist. During his intake John reported a history of passive suicidal ideations without any history of attempts.

T: How have you been feeling?

C: Pretty low, nothing seems to be going right.

T: That must be really difficult to cope with. How long have you been feeling this low?

C: Yeah, I just don't know what to do anymore (trapped feeling). I

T: Anything to look forward to? (Assessing future orientation)

C: No

T: So what do you think you will feel in a few months' time?

C: Same as now, worse (indication of hopelessness)

T: Is there anything in your life that lifts these feeling or alters it?

C: Not anymore

T: How low is low?

C: Really low

T: Desperate?

C: Yeah I am desperate

T: Have you ever gotten so low that you thought about harming yourself or felt like you did not want to be here anymore? (Assessment of suicidal ideation). People often do when they are feeling really low and don't know how to cope with these feelings (normalizing)

C: Yeah, I don't think anybody would miss me (lack of social support)

T: That must be really difficult to feel that way (empathy)

C: Yeah, I can't stand it anymore, that's why I came here, I don't know what else to do (trapped)

T: Yeah often times the thoughts don't seem rational but they still tend to come to mind. (Normalizing) How long have you been thinking about harming yourself? (Duration)

C: Well probably about 4 months since I have felt a lot of pressure at work

T: Is this usually a fleeting or a persistent thought?

C: on and off. It's more persistent in the evenings

T: Do you have any specific plans that have come to mind? (Assessment of plan)

C: Yeah

T: What were you thinking of doing?

C: I thought about taking some tablets. I don't know how many it would take to work.

T: When were you thinking of acting on this plan? (Imminent risk)

C: I am not sure, I think about it but it's hard to get up the nerve to do it.

T: So these plans frighten you? (Assessment of capability- fear)

C: Yeah, I'm not sure if I could follow through with it

T: What has stopped you from acting on your plan so far? (Assessment of reasons for living)

C: I guess the natural fear of how it will feel. I also wonder if it would actually work or if I would not take enough and wake up having failed. (Lack of perception of competence)

T: Anything else that stops you?

C: Well, I don't think I could do that to my wife and kids.

T: So you have thoughts and sometimes think of taking some tablets, but there is a fear of pain and death that stops you and you are also not sure if you would be successful. What do you think would make you more likely to follow through with your plan? (Assessment of triggers)

C: If I lost my wife or children.

T: Does the family know how you are feeling? (Assessment of social support)

C: Oh no, God no

Summary of risk: At this point the counselor has identified that John has a suicidal desire and a moderate amount of suicidal capability (a specific plan, access to means) however he has a fear of death and pain and a lack of competence that lowers his capability. John's intent to die is low. He has protective factors of a family he loves. The counselor decides to complete the safety plan with the client to further assess protective factors and again assess suicidal intent at the end of the intervention.

Safety plan demonstration:

T: It sounds like you are feeling stuck and on your own in dealing with this right now. I wonder if it might be helpful for us to identify some of the triggers that bring on these thoughts of hurting yourself and come up with some ways to cope together. (Introducing the safety plan intervention)

C: I don't know, but I guess we can give it a try.

T: Are there any signs that you notice, within yourself or your environment that seem to come before you begin to think about suicide? I know earlier you mentioned it happens more at night

C: Yes my wife works the evening shift at the hospital and the kids go to bed at 8pm so usually being alone at night is a trigger

T: Yes being alone in the evenings can often be a trigger especially when our thoughts run wild. What are the type of thoughts do you have when you are alone at night?

C: Well. I start to think about going to work the next day, what I need to do to get ready, the administrators I'll have to deal with, some of the difficult kids, I start to think I will be fired soon and then we will not be able to pay our bills.

T: I see, so it sounds like you commonly think about work stress, which has been very difficult on you lately. I imagine the fear of losing your job causes a great deal of anxiety. Are there any other behaviors, feelings or thoughts you notice?

C: Actually, I get the urge to drink, which is not usual for me. I am not a big drinker.

T: So it sounds like the warning signs or triggers are being alone at night, thinking about work stress and having the urge to drink. Is there any healthy activities you do by yourself to get you mind off things?

C: Sometimes I watch old movies of the kids and that usually helps get my mind off of things.

T: Good, what else has helped?

C: Well, drinking sometimes helps with my anxiety but I don't know that counts as a healthy activity.

T: Right, drinking was something that sounded like it came before you had suicidal thoughts.

C: Yeah, I guess it doesn't really distract me a lot, when I drink I still think about work stress.

T: I am wondering in stressful situations in the past are there any activities that you have done that helped distract you?

C: I used to work out, go for a run or a bike ride and that helped a lot but I guess I have not thought of doing that in a while.

T: Yes, it's easy to forget about these coping skills when feeling really down (normalizing). What else used to help you with stress?

C: Well I used to play guitar a lot, and even try to write funny songs for the kids and that helped

T: Good, now John what about some friends or social situations to help get your mind off things?

C: There's this local coffee shop that does open mic nights. It's a pretty fun place to go to get my mind off things. Gosh, it has been so long since I've been. I forgot all about it.

T: Does anything else come to mind for social distractions?

C: My cousin lives a couple blocks away. She is usually around in the evening. My brother and his wife also live about a half an hour away. I enjoy talking with them.

T: Great, now if you try using coping skills on you own and social distractions and neither work is there anyone you would feel comfortable talking to about your suicidal thoughts and asking for help?

C: Gosh, I really don't want anyone to know, especially my family, because I don't want them to worry.

T: Ok so if you had to pick two people you would be most willing to tell who would it be?

C: Hmm... I guess my friend Josh from work. He teaches science and I feel like he would be trustworthy. Thinking of anyone else is really hard, I guess I would consider telling my cousin but that would be incredibly hard.

T: So if Josh was not available and you were frightened you might hurt yourself do you think you would actually be able to tell your cousin?

C: Well, maybe, it would have to be a pretty desperate situation though.

T: Ok, maybe we can role play how that would look later on. Sometimes it helps to practice.

C: Sure

T: Now, if your coping skills, social distractions and asking others for help does not work let's write down some professional numbers for you in case of an emergency. I will put my number down here, but remember that our office is only open from 8-5 so what is your local emergency or urgent care service?

C: UMC. I have the number but not the address.

T: Okay, we can look up the address and put it on here at the end of session. I also have put a suicide prevention line on here that is open 24 hours a day.

C: Sounds good

T: John, do you have any firearms in your household?

C: Oh no, we don't keep any around because of the kids.

T: So John, I know you mentioned these thoughts about taking pills scared you, and you don't want to act on them but sometimes it is tempting. What do you think might be helpful to change in your environment to prevent you from taking some tablets if you are in a bad place?

C: Well, maybe I can lock away all the pills and only keep a small amount accessible to me.

T: Is there someone you would feel comfortable asking to do this for you?

C: I guess I could ask my wife but she might wonder why and I can't tell her

T: What about telling her it is a precaution to keep the medicine away from the kids?

C: Oh yeah, I could do that, that would make sense.

T: So John I want you to take a look at the safety plan you just came up with. (hands over the safety plan). How likely do you think it is that you will use this plan?

C: Oh, I'm sure I will use it, as long as I remember about it

T: Where can you keep it so that you remember it?

C: I think the fridge would be the best place, but I don't want my family to see it, so maybe my wallet and my tablet

T: Okay that sounds like a great idea. What are the most helpful aspects of the plan?

C: Well, I think it is helpful to have everything in one place. When I am feeling so down I forget about all the coping skills I have used in the past or people to call, so mostly jogging my memory about the skills I do have.

T: Yeah, it sounds like you had a lot more coping skills that used to help. I am wondering if you have any thoughts about hurting yourself right now?

C: Actually, no, I am kind of hopeful that this plan will help. I am still really stressed about work, but I think maybe if I use the plan and keep coming to counseling things might get better.

T: It sounds like you feel some relief John. Why don't we make a copy of your safety plan and schedule an appointment for next week?

APPENDIX J

PARTICIPANT VALIDITY QUESTIONNAIRE

Please rate your agreement with the following statements using the scale below:

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

1. The training was engaging
2. The videos were well done
3. The presenter was excited by the material
4. The presenter wanted me to learn the material well
5. The training was applicable to my work
6. The videos were applicable to my work
7. The presenter was passionate about the topic
8. I found the video training interesting

APPENDIX K
ATTENTION CHECK ITEMS

1. In relation to suicide, what was being discussed on the last content slide of the video?
 - a. Race and ethnicity
 - b. ISPATHWARM
 - c. national statistics
2. What was discussed in the last content slide of the video?
 - a. Race and ethnicity
 - b. Suicide risk factors
 - c. Ethical issues
3. What topic was covered at the end of the last video?
 - a. Risk assessment model diagram
 - b. How to complete a safety plan
 - c. Demographic risk factors
4. What was discussed at the end of the last video?
 - a. Protective risk factors
 - b. Suicidal desire
 - c. Suicidal capability
5. What image is shown on the last slide of the video?
 - a. The risk assessment model (low, moderate, and high risk)
 - b. The suicide risk factors ISPATHWARM handout
 - c. A diagram showing the number of suicide attempts
6. What level of risk was John determined to be according to the video?
 - a. low
 - b. moderate
 - c. High
7. What is discussed in the last content slide of the video?
 - a. Social contacts
 - b. Professional contacts
 - c. Evidence based treatments
8. What did the therapist do at the end of the video?
 - a. Discussed hospitalization
 - b. Brought up involving John's wife
 - c. set up a crisis home check for John

APPENDIX L

IRB APPROVAL

EXEMPTION GRANTED

Terence Tracey
 SLS - Counseling and Counseling Psychology
 480/965-6159
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Dear Terence Tracey:

On 8/15/2014 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Online Suicide Assessment Training Evaluation
Investigator:	Terence Tracey
IRB ID:	STUDY00000276
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • HRP-502a - KriegCONSENT SOCIAL BEHAVIORAL short.pdf, Category: Consent Form; • Krieg_HRP-503a - PROTOCOLSOCIAL BEHAVIORAL (1).docx, Category: IRB Protocol; • Instrument measures, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Script for control group video demo, Category: Other (to reflect anything not captured above); • recruitment letter to professors, Category: Recruitment Materials; • Handouts used in power point lecture, Category: Technical materials/diagrams;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 8/15/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).