The Journal of Counselor Preparation and Supervision

Volume 12 | Number 3 Article 9

2019

Evaluation of a Youth Suicide Prevention Course: Increasing Counseling Students' Knowledge, Skills, and Self-Efficacy

Laura L. Gallo
Boise State University, lauragallo@boisestate.edu

Diana M. Doumas
Boise State University, dianadoumas@boisestate.edu

Regina Moro
Boise State University, reginamoro@boisestate.edu

Aida Midgett
Boise State University, aidamidgett@boisestate.edu

Sherise Porchia
Boise State University, SHERISEPORCHIA@boisestate.edu

Evaluation of a Youth Suicide Prevention Course: Increasing Counseling Students' Knowledge, Skills, and Self-Efficacy

Abstract
Adolescent suicide rates continue to rise within the United States. This study evaluated a Youth Suicide Prevention course in a Master's in Counseling Program. Participants reported increases in knowledge and perceived ability to help suicidal clients post-training and in suicide prevention skills and suicide assessment and intervention self-efficacy at the 3-month follow-up. Implications for counselor education programs, such as using both experiential and didactic teaching methods, as well as timing suicide training before practicum, are discussed.

Keywords
suicide, counselors-in-training, suicide prevention, self-efficacy, suicide assessment, adolescents

National statistics indicate suicide is the second leading cause of death among adolescents and young adults in the United States between the ages of 14-24, with an estimated 5,491 individuals in that age range dying by suicide yearly (Centers for Disease Control [CDC], 2015). Among high school students, 17.7% reported they had seriously considered attempting suicide and 8.6% reported they had attempted suicide one or more times in the past 12 months (Kann et al., 2016). Thus, youth suicide prevention is an important area in counselor preparation as counselors who work with youth either in schools or other settings are well positioned to identify suicidality and provide interventions for this age group.

Counselor educators and supervisors have an ethical obligation to ensure students are prepared to assess and manage their client's welfare (American Counseling Association, 2014). Guidelines from the American Association of Suicidology's (AAS) task force recommend that accrediting organizations should require suicide specific education and skill acquisition, including skill observation through supervision and measurement with a skills-based demonstration such as role-playing (Schmitz et al., 2012). Additionally, coursework in suicide prevention amongst youth should focus on risk factors (Juhnke, Granello, & Granello, 2011; King, Foster, & Rogalski, 2013; Montague, Cassidy, & Lillies, 2016), warning signs (James, 2013), and protective factors (King et al., 2013; Montague et al., 2016).

In 2009, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) modified the CACREP Standards to include procedures for assessing and managing suicide risk for all but the career counseling specialty tracks (CACREP, 2009). Further, current CACREP-Standards include suicide and risk assessment in Section 2.F.7.c and Section 2.F.5.l (CACREP, 2015). Although these additions represent a positive development in ensuring counseling students are exposed to suicide prevention education, there is little direction from the

counseling field regarding how to adequately teach suicide prevention or how to evaluate suicide assessment and management skills (Fiernan, 2012). Additionally, the standards do not provide guidelines regarding age-appropriate developmental considerations for youth.

Although standards for practice suggest that graduate programs need to prepare students to provide effective crisis intervention, including suicide prevention, results from a survey of professional counselors indicated that 26.95% of counselors reported having either "no" or "minimal" training in suicide risk assessment (Wachter Morris & Barrio Minton, 2012). Additionally, results of a recent study assessing suicide prevention among practicing school counselors revealed that only 50% of counselors feel adequately prepared to assess student suicidality and only 59% feel adequately prepared to identify suicidal students (Authors, 2018). These findings indicate a deficit in the area of counselor education related to suicide prevention preparation.

To meet professional standards, counselor educators need to provide coursework to equip counseling students with suicide prevention knowledge and skills so they are prepared to assess and manage suicidality among youth. Although researchers have demonstrated suicide intervention skills training increases counselors' competence in suicide assessments (Neimeyer, Fortner, & Melby, 2001), details of training content and methods of teaching are lacking. Research related to teaching and evaluation of suicide assessment in counselor education programs is also limited (Barrio Minton & Pease-Carter, 2011). Further, the literature contains few publications examining the methods counselor educators use to prepare students for crisis intervention, including suicide prevention and response (Barrio Minton & Pease-Carter, 2011).

Recent research examining suicide training experiences among counseling students suggests that students who report some form of training prior to practicum report less anxiety and

more confidence than students who report no training (Binkley & Leibert, 2015). Similarly, researchers have demonstrated a link between preparedness and training in suicide assessment and practitioner confidence in assessing suicide risk among youth (Schmidt, 2016). Although results from these studies provide information regarding the importance of training in suicide assessment, specifics regarding content, length, and methods of instruction were not evaluated.

CACREP Standards include teaching crisis intervention and suicide models and the assessment and management of suicide (CACREP, 2015). CACREP (2015) does not, however, provide guidelines on how to deliver this type of training, resulting in a lack of consistency and no clear indication of best practices. The AAS report noted that didactic training does not necessarily transfer into adequate skills in conducting suicide risk assessments (Schmitz et al., 2012), suggesting the need for experiential training in addition to didactic coursework. Further, although some researchers have advocated for suicide training as part of individual supervision (McGlothilin, Rainey, & Kindsvatter, 2005), others have found that providing suicide training through a class lesson prior to practicum may be beneficial (Binkley & Leibert, 2015). Thus, counselor educators may need more direction in identifying teaching methods that have been shown to be effective to prepare students to assess and work with clients with suicidal ideation.

Research evaluating methods for teaching suicide assessment in counseling programs is sparse. We found only one study assessing the impact of a suicide risk assessment training with master's level counseling students (Juhnke, 1994). Results of this study indicated that the use of a structured suicide risk assessment, including a video recorded method of conducting clinical interviews was associated with an increase in knowledge and confidence in suicide risk assessment. Although this study supports a specific method of teaching suicide assessment, we

could find no more recent studies evaluating specific course content or methods for training counseling students in suicide prevention.

More recent research examining continuing education training for mental health professionals also provides support for a brief training in suicide assessment and crisis intervention (Mirick, McCauley, Bridger, & Berkowitz, 2016; Oordt, Jobes, Fonseca, & Schmidt, 2009). Findings indicate that brief continuing education workshops that integrate didactic and experiential role-plays are effective in increasing knowledge, confidence (Mirick et al., 2016; Oordt et al., 2009), and changing suicide care practices (Oordt et al., 2009). Because these studies examine the impact of continuing education workshops on mental health professionals with an average of 8-12 years of clinical experience, it is not clear if providing brief trainings for counseling students would produce similar results.

A recent study highlighting teaching practices that may benefit counselors in training when learning about suicide risk assessment suggests forming positive relationships between counselor educators and trainees can lessen trainee anxiety (Miller, McGlothlin & West, 2013). In addition, the authors recommend using teaching strategies that incorporate various learning styles to meet the needs of students and better prepare them to work with suicidal clients. Although these strategies provide some guidance to counselor educators in teaching suicide assessment, the authors did not provide data to support the effectiveness of these strategies in increasing knowledge or skills related to suicide assessment and management.

Counselor Self-Efficacy

In addition to knowledge and skills acquisition, counselor self-efficacy is related to effective suicide prevention (Neimeyer, Fortner, & Melby, 2001). According to Bandura (1977), self-efficacy is concerned with people's beliefs in their capabilities to demonstrate skills and/or

behaviors. The Social Cognitive Model of Counselor Development (Larson, 1998) demonstrates how Social Cognitive Theory can be applied specifically to counselors in training. The model incorporates environmental factors along with cognitions, emotional responses, and the forethought of the counselor with the learning process and eventually, performance of the counselor (Larson, 1998).

Research indicates counseling self-efficacy is associated with positive client outcomes (Reese et al., 2009; Urbani et al., 2002) and influences the use of specific counseling skills (Iarussi, Tyler, Littlebear, & Hinkle, 2013). Practice opportunities that allow for skill mastery (Greason & Cashwell, 2009), including feedback delivered during role-plays (Daniels & Larson, 2001) are related to increases in counseling self-efficacy. Research also suggests that a combined didactic and experiential (i.e., role-plays) approach may be effective in increasing counseling self-efficacy in counseling courses intended to promote counselor implementation of crisis intervention strategies (Sawyers, Peters, & Willis, 2013). While these studies show that incorporating experiential activities that provide counseling students an opportunity to practice skills is an effective approach to increasing counseling self-efficacy, none were specific to suicide prevention, leaving a continued gap for this specific area of training.

The Current Study

Counselor educators are well positioned to train future counselors to assess youth suicidality. There is insufficient research, however, to guide counselor educators on effective pedagogy to prepare counselors to effectively implement suicide prevention and intervention for youth. Thus, the purpose of this study is to examine the effects of a Youth Suicide Prevention course on knowledge, perceived ability to help suicidal clients, suicide prevention skills, and counselor suicide assessment and intervention self-efficacy among students in a master's level

CACREP-accredited counseling program. To achieve this aim, we designed a one credit weekend course in youth suicide prevention that included didactic and experiential components. We examined outcomes at three time points (baseline, immediate follow-up, 3-month follow-up). We hypothesized that participants would report increases in knowledge and perceived ability to help from baseline to the end of the weekend course and an increase in suicide prevention skills and counselor self-efficacy from baseline to the 3-month follow-up.

Research Question 1: Would participation in a one credit youth suicide prevention course increase counseling students' knowledge related to suicide prevention?

Research Question 2: Would participation in a one credit youth suicide prevention course increase counseling students' perceived skills and self-efficacy related to conducting suicide risk assessments?

Method

Research Design

We used a single group, repeated-measures design (N = 32) with three time points (baseline, immediate follow-up, and 3-month follow-up). We assessed general suicide knowledge, suicide prevention knowledge, and perceived ability to help a suicidal client at baseline and the immediate follow-up to assess changes during the weekend course. We assessed use of suicide prevention skills at baseline and 3 months post-course during which time students worked with clients in practicum or internship. Finally, we assessed counselor-in-training suicide assessment and intervention self-efficacy at baseline, the immediate follow-up, and the 3-month follow-up assessments to examine changes in counselor-in-training self-efficacy both immediately after the weekend course, as well as after 3-months of working with clients.

Participants

The sample consisted of 32 (84.4% female, 15.6% male) counselor education Master's students enrolled in a full-time CACREP accredited counselor education program at a public university in an urban area in the Northwest. The program offers two CACREP accredited tracks, School Counseling and Addiction Counseling. Participants were second and third year students enrolled in a one-credit Youth Suicide Prevention course. The majority of participants reported their age in the 25-34 range (50.0%), with 25.0% in the 18-24 range, 15.6% in the 35-49 range, 6.3% in the 50-64 range, and 3.1% in the > 64 range. The majority of the sample was White (84.6%), with 11.5% Latino/a, and 3.8% other. Of the 32 students, 44.4% were in their second year and 55.6% were in the third year of the program. Overall, 75% (n = 24) of the 32 participants completed the 3-month follow-up assessment. We found no differences in any demographics, gender, $\chi^2(1) = 0.08$, $p = .88$, age, $\chi^2(4) = 5.60$, $p = .23$, ethnicity, $\chi^2(2) = 0.43$, $p = .81$, or year of program, $\chi^2(1) = 2.41$, $p = .12$, between participants who completed the follow-up assessment and those who did not.

Procedures

The Institutional Review Board at the University where the study was conducted reviewed and approved the study. Students were assured that participation in the study (i.e., completing the surveys) was voluntary and declining participation would not affect their grade in any way. The consent process was initiated prior to the beginning of the course. A graduate assistant reviewed the informed consent document with students without the instructor present in the room. Because the study required data collection at multiple time points, we asked students to create a unique identification number that could be used to match their surveys across time. All 32 students consented to participate in the study. Students completed baseline surveys before course

instruction began, immediate follow-up surveys at the end of the weekend course, and 3-month follow-up survey at the end of the semester. A graduate assistant collected the baseline and immediate follow-up surveys without the instructor present, and we used an online survey to collect the 3-month follow-up survey data.

Youth Suicide Prevention Course

The first author incorporated research conducted by experts in the field and within the area of teaching suicide assessment (e.g., Joiner, 2005; Juhnke et al., 2011; Juhnke, 1994), recommendations made by AAS (2018) and the core competencies identified by AAS (2004) into the development of the curriculum. Course content included the most current research identifying the unique factors contributing to suicide risk in adolescents, suicide warning signs and myths, and legal and ethical obligations for counselors. Organizations such as the Suicide Prevention Resource Center (SPRC), the American Foundation for Suicide Prevention (AFSP), and the National Institute for Mental Health (NIMH) provided much of the information and resources used to create this course. The course included a didactic component delivered through lecture, power-point, and multimedia video demonstrations, as well as an experiential component including student practice and observation of suicide assessments and management through role-plays, which were recorded and analyzed.

Course structure. The course was offered as a one-credit elective course. Students met for 15 hours over the course of one weekend, with 6 hours of instruction on a Friday afternoon and evening and 9 hours of instruction on a Saturday.

Course objectives. The course objectives included: (a) develop understanding of fundamental concepts, theories, strategies, and counseling skills needed to conduct effective suicide intervention among youth and apply this knowledge when interacting with youth, (b)

effectively assess potentially suicidal clients applying a suicide assessment tool with increased competence, and (c) identify the processes of prevention, intervention, and postvention in the area of suicide and how the role of the counselor fits within these processes.

Didactic component. The instructor covered the following topics (a) introduction to suicide risk assessment and prevention, (b) understanding our own values and assumptions related to suicide, (c) warning signs, risk factors, and protective factors for suicidal youth, (d) understanding adolescent/child development related to suicide, (e) legal and ethical implications, (f) explanation of the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011), (g) prevention based programs and implications for schools, (h) postvention, and (i) a review of resources for youth suicide prevention. In addition to lecture material delivered through power-point slides, the instructor showed a video highlighting child and adolescent suicide risk assessments (King, 2013) and videos from The Columbia Lighthouse Project (2016) demonstrating the C-SSRS training, which can be accessed at http://cssrs.columbia.edu/.

Experiential component. The instructor used role-plays to enhance didactic lecture material. Students practiced using new terms, getting comfortable with asking questions about death and dying, and working through safety plans. Student volunteers had the opportunity to role play in front of the class, allowing other students to ask questions, offer suggestions, and work through different scenarios. Students then had additional time to role-play in pairs (e.g., counselor and client) using a structured worksheet with reminders of the essential components of suicide risk assessment. Students also had the opportunity to use assessment tools discussed in class, such as the C-SSRS tool.

Course assignments. Students had two assignments to complete over the next 6 weeks. The first assignment was to conduct a recorded role-play with a classmate, complete a self-

assessment of the experience, and turn in the items to the instructor for feedback. The second assignment was to complete a case presentation with their practicum or internship instructor after conducting a suicide risk assessment with a client and write a reflection of the experience.

Measures

Demographics. A brief demographic questionnaire included basic participant characteristics. Questions included: age, gender, race/ethnicity, year in program, and cognate (school or addiction counseling).

General knowledge about suicide, knowledge of suicide prevention, and perceived ability to help. The Youth Suicide Prevention Course Survey was adapted from the 15-item Youth Suicide Prevention Program Baseline Survey (Organizational Research Services [ORS], 2002). The survey assesses experiences with suicide, knowledge about suicide and suicide prevention, and the ability to help suicidal youth (i.e., comfort, competence and confidence). The Knowledge of Suicide Scale was comprised of 5 items assessing general knowledge. Participants were asked to rate their level of knowledge (i.e., suicide facts, warning signs, how to help someone who may be suicidal) on a 5-point scale ranging from 1 (*Very Low)* to 5 (*Very High*). The Knowledge of Suicide Prevention Scale was comprised of 4 items assessing knowledge about suicide prevention. Participants were asked to rate their level of agreement with statements regarding how to talk to someone who is thinking of suicide (i.e., get more information about their plan, encourage them to talk about their wish to die) on a 5-point scale ranging from 0 (*Strongly Agree)* to 4 (*Strongly Disagree*). Finally, the Perceived Ability to Help Scale was made up of 3 items assessing perceived comfort, competence, and confidence helping a suicidal person on a 5-point scale ranging from 1 (*Not At All)* to 5 (*Fully*). Although the ORS (2002) paper did not publish psychometric properties for the survey, a more recent study reported coefficient alphas for

knowledge ranging from .83 - .94 and test-retest reliability ranging from .57 - .82 for ability to help (Shannonhouse, Lin, Shaw, & Porter, 2017). Cronbach's alphas for this sample were $\alpha = .83$, .76, and .74 for Knowledge of Suicide, Knowledge of Suicide Prevention, Ability to Help, respectively.

Suicide prevention skills. We used the Youth Suicide Prevention Course Survey to assess changes in suicide prevention skills. Participants were asked how often they had seen at least one young person who showed signs of being suicidal in the past month. They were also asked, "Did you talk to them about your concerns for their well-being?" "Did you ask them if they were thinking about harming themselves or attempting suicide?" and "Did you talk with the young person about where they could get help?" These items were rated on a 5 point scales with anchors *Yes, No, Indirectly, Not Sure,* and *Had No Contact*.

Counselor suicide assessment self-efficacy. We measured counselor suicide assessment self-efficacy with the 25-item Counselor Suicide Assessment Efficacy Survey (CSAES; Douglas & Wachter Morris, 2015). Each item is scored on a 5-point scale ranging from 1 (*Not Confident)* to 5 (*Highly Confident*). Results of a study validating the CSAES revealed strong support for a two-factor model representing suicide assessment and suicide intervention, with good internal consistency reliability for the 20-item Suicide Assessment Scale ($\alpha = .93$) and the 5-item Suicide Intervention Scale ($\alpha = .83$) (Douglas & Wachter Morris, 2015). Cronbach's alphas for the current sample were $\alpha = .97$ for the Suicide Assessment Scale and $\alpha = .89$ for the Suicide Intervention Scale.

Statistical Analysis

We conducted all analyses using SPSS version 24.0. We examined all variables for extreme cases and for normality; we found no outliers and all variables were within the normal

range for skew and kurtosis. We conducted paired *t*-tests to assess baseline to immediate follow-up changes in knowledge of suicide, knowledge of suicide prevention, and perceived ability to help. To assess changes in suicide prevention skills, we computed descriptive statistics to examine frequency of use of each skill at baseline and at the 3-month follow-up assessment. Finally, to assess changes in counselor self-efficacy, we conducted a series of GLM repeated-measures analysis of variance (ANOVA) with fixed effects of Time (baseline; immediate follow-up; 3 month follow-up) and follow-up paired *t*-tests to examine post hoc differences between time points. We used an alpha level of $p < .05$ to determine statistical significance. For effect size we used Cohen's *d* for the paired *t*-tests and partial eta squared (η^2_p) for the GLM ANOVA with magnitude of effects interpreted as follows: small ($d = .20$; $\eta^2_p \geq .01$;), medium ($d = .50$; $\eta^2_p \geq .06$;), large ($d = .80$; $\eta^2_p \geq .14$) (Cohen, 1969; Richardson, 2011). We used the Holm-Bonferroni procedure (Holm, 1979) to control for Type I error as this method retains more statistical power relative to the traditional Bonferroni procedure (Bender & Lange, 2001; Eichstaedt, Kovatch, & Maroof, 2013; Wright, 1992).

Power Analysis

We conducted a priori power analyses using the G*Power 3.1.3 program (Faul, Erdfelder, Lang, & Buchner, 2007). Results indicated for power of ≥ 0.80 to detect a medium effect size with an alpha level of .05, a sample size of 27 is needed for a matched pairs *t*-test and a sample size of 23 is needed for a GLM within-measures repeated-measures analysis of variance (ANOVA) with one group and three time points. Our immediate follow-up sample of 32 and 3-month follow-up sample size of 24 are greater than the required sample size for our analyses.

Results

Knowledge and Perceived Ability to Help

Means, standard deviations, *t*-values, and Cohen's d values for general knowledge about suicide, knowledge of suicide prevention, and perceived ability to help a suicidal client are presented in Table 1. Results indicated an increase in general knowledge about suicide, knowledge of suicide prevention, and perceived ability to help a suicidal client from baseline to the immediate follow-up. Examination of the effect sizes indicate medium to large effects.

Table 1

Means, Standard Deviations, *t* Values and Effect Sizes for Knowledge and Ability to Help

	Baseline	Immediate Follow-Up		
Outcomes	Mean (*SD*)	Mean (*SD*)	*t*(31)	Cohen's *d*
General Suicide Knowledge	17.94 (3.50)	20.65 (2.79)	-6.05***	-1.07
Suicide Prevention Knowledge[a]	2.31 (2.47)	1.53 (1.80)	2.66**	.52
Perceived Ability to Help	10.81 (1.91)	11.91 (2.10)	-3.09**	-.55

[a] Low scores represent greater knowledge.
Note. $N = 33$; ** $p < .01$, *** $p < .001$.

Suicide Prevention Skills

Overall, 40.6% ($n = 13$) and 66.7% ($n = 16$) of students reported they had seen a suicidal client in the past month at the baseline and the 3-month follow-up, respectively. The percentage of students who directly talked about concern for clients' well-being and asked about thoughts of

self-harm increased from 76.9% to 100% from baseline to the 3-month follow-up. For directly talking about where to get help, the percentage increased from 53.8% to 87.5%.

Table 2

Means, Standard Deviations, *WL*s, *F* Values, and Effects Sizes for Counselor Suicide Self-Efficacy

	Baseline	Immediate Follow-Up	3-Month Follow-Up	Main Effect for Time		
Outcomes	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)	*WL*	*F*(2,22)	η^2_p
Suicide Assessment	3.53 [a] (.83)	4.32 [b] (.71)	4.28 [b] (.70)	.24	34.59***	.76
Suicide Intervention	3.08 [a] (.97)	3.99 [b] (.91)	4.08 [b] (.83)	.36	19.99***	.65

Note. $N = 25$; *WL* = Wilks' Lambda; η^2_p = partial eta squared. Means with different subscripts within rows differ significantly at $p < .001$.
*** $p < .001$.

Suicide Assessment and Intervention Self-Efficacy

Means, standard deviations, Wilks' Lamba values, *F*-values, and partial eta squared values for suicide assessment and intervention self-efficacy are presented in Table 2. Results of the GLM repeated-measures ANOVAs indicated a significant main effect for Time for the Suicide Assessment Scale and Suicide Intervention Scale. Examination of effect sizes indicated medium to large effects for increases in suicide assessment and intervention self-efficacy from baseline to the 3-month follow-up. As seen in Table 2, post hoc comparisons indicated significant differences in suicide assessment self-efficacy and suicide intervention self-efficacy between baseline and the immediate follow-up and between baseline and the 3-month follow-up, but not between the immediate follow-up and 3-month follow-up assessments.

Discussion

The purpose of this study was to examine the effects of Youth Suicide Prevention course for master's level counseling students on knowledge, perceived ability to help suicidal clients, suicide prevention skills, and suicide assessment and intervention self-efficacy. Overall, findings indicated participants attending the course demonstrated increases in knowledge and perceived ability to help immediately after the weekend course and a perceived increase in suicide prevention skills from baseline to 3-months after completing the course. Participants also reported an increase in their perceived suicide assessment skills and intervention self-efficacy after the weekend course that was sustained through the 3-month follow-up assessment.

Our results indicated students who participated in a weekend Youth Suicide Prevention course demonstrated increases in general suicide knowledge, suicide prevention knowledge, and self-reported more confidence in their ability to help suicidal youth immediately after the course. Findings also indicated that participants self-reported an increase in their suicide prevention skills at the 3-month follow-up. These findings are consistent with research suggesting that suicide-specific training that utilizes recommendations from organizations such as AAS or the SPRC is effective in increasing suicide knowledge (Juhnke, 1994; Mirick et al., 2016; Oordt, et al., 2009), confidence (Binkley & Leibert, 2015; Juhnke, 1994; Oordt et al., 2009; Mirick et al., 2016), and skills (Oordt et al., 2009). Findings from this study also support recommendations regarding suicide prevention teaching practices for counseling students, including incorporating a variety of teaching strategies (Miller et al., 2013).

Results also indicated that participants self-reported an increase in counselor suicide assessment and intervention self-efficacy. This finding parallels research indicating counselor self-efficacy can be built through role-plays and feedback (Daniels & Larson, 2001). This finding

is particularly important because counselor self-efficacy is associated with both the use of suicide prevention skills (Neimeyer, Fortner, & Melby, 2001), as well as the use of specific counseling skills (Iarussi et al., 2013). Results, however, showed that the initial increase in counselor-in-training suicide prevention self-efficacy that occurred at the end of the weekend course was sustained, but did not increase, from the end of the course to the 3-month follow-up. This finding is somewhat surprising as students were practicing the skills learned in the weekend course over the semester either at their practicum or internship sites. This result suggests that a one weekend course that includes an experiential component (i.e., role-plays) may be sufficient to increase counselor suicide prevention self-efficacy. Alternatively, although suicide prevention self-efficacy did not increase across the 3-months post-course, practicing suicide assessment and management skills with clients during practicum or internship may have contributed to the sustained increase in counselor-in-training suicide prevention self-efficacy at the 3-month follow-up.

Limitations and Future Directions

Although this study contributes to the literature on youth suicide prevention for counseling students, certain limitations should be considered. First, the study was conducted in a single counseling program with a small, predominantly female, White sample, limiting the generalizability of the results. Future research with larger and more diverse samples, including other CACREP specialty areas, is needed. Additionally, information was obtained through self-report questionnaires. It is not clear that reported increases in skills are representative of actual skill acquisition. Future research using observational data would strengthen the findings of this study. Even though this project focused on youth suicide prevention due to the focus of the grant, a focus on both youth and adult clients would be beneficial for future counselors. A final limitation

of this study is the single-group design. Future research utilizing a randomized controlled design would add to the results of this study. It is unclear if offering suicide training as a stand-alone course is superior to integrating it into a crisis or assessment course, but in this study, the format allowed for measurement of specific suicide knowledge and skills.

Implications for Counselor Education Programs

Counselor educators responsible for the didactic education related to suicide assessment and intervention may find it useful to construct classroom experiences similar to those presented in this study. While not all programs will have the capability to offer a stand-alone suicide prevention and intervention course, the present study highlights the organization of material to be presented, and provides structure related to offering a combination of didactic education and experiential activities. Findings also demonstrated that changes in knowledge, skills, and self-efficacy occurred after a one credit course offered in a weekend format, suggesting that a stand-alone suicide course may be sufficient to introduce suicide assessment and intervention to counselors-in-training.

Counselor educators can also explore the timing of this instruction. Although all participants in this study were currently in practicum or internship placements, research suggests that providing training in suicide-response prior to the practicum experience may be beneficial to students (Binkley & Liebert, 2015). Further, although findings from the current study did not demonstrate further increases in self-efficacy after the conclusion of the weekend course, skills are likely to develop with continued practice and supervision (Schmidt, 2016). Thus, providing training in suicide assessment and intervention to counseling students either prior to the practicum experience or early in the practicum experience may be optimal. Skills can then be further developed through ongoing supervision during the practicum and internship experience.

In addition to the organization of a classroom experience, the present study highlights the use of psychometrically sound assessment instruments (e.g., CSAES; Douglas & Wachter Morris, 2015) related to suicide prevention. Counselor educators can consider including these types of instruments in their educational practices, to actively measure outcomes of instruction. Further, programs may consider measuring student knowledge, skills, and/or self-efficacy related to suicide risk assessment and intervention at multiple points in time as part of their assessment and evaluation process.

Funding

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number G02HP30576, Behavioral Health Workforce Education and Training, award amount of $214,270.00. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Declaration of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

American Association of Suicidology. (2004*). Core competencies for the assessment and management of individuals at risk for suicide*. Retrieved from http://www.suicidology.org/Portals/14/docs/Training/RRSR_Core_Competencies.pdf

American Association for Suicidology. (2018). *Recognizing and responding to suicide risk: Essential skills for counselors*. Retrieved from http://www.suicidology.org/training-accreditation/rrsr

American Counseling Association. (2014). The ACA code of ethics. Alexandria, VA: Author.

Barrio Minton, C. B. A. & Pease-Carter, C. (2011). The status of crisis preparation in counselor education: A national study and content analysis. *Journal of Professional Counseling: Practice, Theory, and Research, 38*, 5-17.

Bender, R., & Lange, S. (2001). Adjusting for multiple testing - when and how? *Journal of Clinical Epidemiology*, *54*, 343-349.

Binkley, E. E. & Leibert, T. W. (2015). Prepracticum counseling students' perceived preparedness for suicide response. *Counselor Education and Supervision, 54,* 98-108.

Centers for Disease Control (CDC). (2015). *Suicide prevention: Youth suicide*. Retrieved from http://www.cdc.gov/violenceprevention/pub/youth_suicide.html

Cohen, J. (1969). *Statistical power analysis for the behavioural sciences.* New York, NY: Academic Press.

Columbia Lighthouse Project (2016). *Identify, risk, prevent suicide*. Retrieved from http://cssrs.columbia.edu/

Council for Accreditation of Counseling and Related Educational Programs [CACREP]. (2009). 2009 standards for accreditation. Alexandria, VA: Author.

Council for Accreditation of Counseling and Related Educational Programs [CACREP]. (2015). 2016 standards for accreditation. Alexandria, VA: Author.

Daniels, J. A., & Larson, L. M. (2001). The impact of performance feedback on counseling self-efficacy and counselor anxiety. *Counselor Education and Supervision, 41*, 120–130.

Fiernan, K. R. (2012). Suicide postvention in schools: The role of the school counselor. *Journal of Professional Counseling: Practice, Theory, and Research, 39*, 14-28.

Douglas, K. A. & Wachter Morris, C. A. (2015). Assessing counselor's self-efficacy in suicide assessment and intervention. *Counseling Outcome Research and Evaluation, 6*, 58-69.

Eichstaedt, K. E., Kovatch, K., & Maroof, D. A. (2013). A less conservative method to adjust for familywise error rate in neuropsychological research: The Holm's sequential Bonferroni procedure. *NeuroRehabilitation, 32*, 693-696. doi:10l3233?NRE-130893

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Authors. (2018). The relationship between high school counselors' self-efficacy and conducting suicide risk assessments. *Journal of Child and Adolescent Counseling.*

Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandanavian Journal of Statistics, 6,* 65–70.

Iarussi, M. H., Tyler, J. M., Littlebear, S., & Hinkle, M. S. (2013). Integrating motivational interviewing into a basic counseling skills course to enhance counseling self-efficacy. *The Professional Counselor, 3,* 161-174. doi:10.15241/mhi.3.3.16

James, R. K. (2013). *Crisis intervention strategies* (7th ed.). Belmont, CA: Brooks/Cole.

Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Junhnke, G. A. (1994). Teaching suicide risk assessment to counselor education students. *Counselor Education and Supervision, 34*, 52-58.

Juhnke, G. A., Granello, D. H. & Granello, P. F. (2011). *Suicide Self-Injury and Violence in the Schools*. Hoboken, NJ: Wiley & Sons.

Kann et al (2016). *Youth risk behavior surveillance- United States 2015*. Retrieved from https://www.cdc.gov/mmwr/volumes/65/ss/ss6506a1.htm

King, C. (2013). Suicide risk assessment and formulation in children and adolescents: A workshop for clinicians (DVD). Available from www.routledge.com

King, C. A., Foster, C. E. & Rogalski, K. M. (2013). *Teen suicide risk: A practitioner guide to screening, assessment and management*. New York, NY: Guilford Press.

Larson, L.M. (1998). The social cognitive model of counselor training. *The Counseling Psychologist, 26*, 219-273.

Larson, L. M. & Daniels, J. A. (1998). Review of the counseling self-efficacy literature. *The Counseling Psychologist, 26*, 179-218.

McGlothlin, J. M., Rainey, S., & Kindsvatter, A. (2005). Suicidal clients and supervisees: A model for considering supervisor roles. *Counselor Education and Supervision, 45*, 135-146. doi 10.1002/j.1556-6978.2005.tb00136.x

Miller, L. G., McGlothlin, J. M., & West, J. D. (2013). Taking the fear out of suicide assessment and intervention: A pedagogical and humanistic practice. *Journal of Humanistic Counseling, 52*, 106- 121.

Mirick, R., McCauley, J., Bridger, J., & Berkowitz, L. (2016). Continuing education on suicide assessment and crisis intervention: What can we learn about the needs of mental health professionals in community practice? *Community Mental Health Journal, 52*, 501-510.

Montague, K.T., Cassidy, R. R., & Liles, R. G. (2016). Counselor training in suicide assessment, prevention, and management. Article 65, Vistas.

Neimeyer, R. A., Fortner, B., & Melby, D. (2001). Personal and professional factors and suicide intervention skills. *Suicide and Life-Threatening Behavior, 31*, 71-82.

Oordt, M. S., Jobes, D. A., Fonseca, V. P., & Schmidt, S. M. (2009). Training mental health professionals to assess and manage suicidal behavior: Can provider confidence and practice behaviors be altered? *Suicide and Life-Threatening Behavior, 39*, 21-32.

Organizational Research Services. (2002). *Youth suicide prevention program: Annual evaluation report 2001–2002. Evaluation of program training workshops*. Retrieved from yspp.org/down-loads/aboutyspp/2001-2002Report.pdf

Posner, K., Brown, G. K., Stanley, B., et al. (2011). The Columbia-Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *American Journal of Psychiatry, 168(*12), 1266–1277.

Reese, R. J., Usher, E. L., Bowman, D. C., Norsworthy, L. A., Halstead, J. L., Rowlands, S. R., & Chisholm, R. R. (2009). Using client feedback in psychotherapy training: An analysis of its influence on supervision and counselor self-efficacy. *Training and Education in Professional Psychology, 3*, 157-168. doi:10.1037/a0015673

Richardson, J.T.E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review, 6*, 135-147.

Schmidt, R. C. (2016). Mental health practitioners' perceived level of preparedness, levels of confidence and methods used in the assessment of youth suicide risk. *The Professional Counselor, 6*, 76-88. doi: 10.15241/rs.6.1.76

Schmitz, W. M., Allen, M. H., Feldman, B. N., Gutin, N. J., Jahn, D. R., Kleespies, P. M., Quinnett, P. & Simpson, S. (2012). Preventing suicide through improved training in suicide risk assessment and care: An American association of suicidology task force Report addressing serious gaps in U.S. mental health training. *Suicide and Life-Threatening Behavior, 42*, 292-304. doi: 10.1111/j.1943-278X.2012.00090.x

Shannonhouse, L., Dennis Lin, Y., Shaw, K., & Porter, M. (2017). Suicide intervention training for K-12 schools: A quasi-experimental study on ASIST. *Journal of Counseling and Development, 95*, 3-13. doi: 10.1002/jcad.12112

Urbani, S., Smith, M. R., Maddux, C. D., Smaby, M. H., Torres-Rivera, E., & Crews, J. (2002). Skills-based training and counseling self-efficacy. *Counselor Education and Supervision, 42*, 92-106.

Wachter Morris, C. A., & Barrio Minton, C. A. (2012). Crisis in the curriculum?: New counselors' crisis preparation, experiences, and self-efficacy. *Counselor Education and Supervision, 51*, 256–269. doi:10.1002/j.155 6-6978.2012.00019.x

Wright, S. P. (1992). Adjusted p-values for simultaneous inference. *Biometrics, 48,* 1005–1013.