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Original research

Characteristics of and Barriers to Suicidology Training in Undergraduate and Clinically-Oriented Graduate-Level Psychology Programs

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***Abstract*:** Suicide prevention efforts are focused at many levels, including ensuring competence among mental health professionals and training gatekeepers to recognize warning signs. Yet previous research has found that only approximately half of psychology trainees receive suicidology training and it is not clear how prevalent suicidology courses for undergraduates, potentially important gatekeepers on college campuses, are. The twofold aim of this study was to identify the prevalence of suicidology courses in psychology undergraduate programs, and to update the literature regarding the characteristics of suicidology training in clinically-oriented graduate psychology programs. Psychology faculty members (N = 177) responded to an email request to participate in an online study. At the undergraduate level, approximately 3% of responding institutions offered suicidology courses. At the graduate level, a majority of responding programs offered training in the assessment and treatment of suicidal clients; training was primarily incorporated into existing courses and practica, and few offered suicidology courses or workshops. Approximately 4% of clinically-oriented graduate psychology programs offered no suicidology training. Beliefs about offering suicidology training were generally positive, but a number of barriers were noted, such as lack of resources and knowledge about suicidology. Responses suggest a recent shift toward offering more suicidology training in psychology graduate programs, though additional work is needed to ensure that training is adequate and all psychologists are competent in this area. Efforts are also required to address barriers to offering suicidology training at the graduate and undergraduate levels.
Keywords: Suicide; Courses; Curriculum; Beliefs; Competence

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Introduction

Suicide is a significant problem in the United States. It is the 10th leading cause of death among Americans, resulting in over 40,000 deaths in 2013 (Centers for Disease Control and Prevention, 2015), and the second leading cause of death among college students (Schwartz, 2006). As the suicide rate has continued to rise over the past decade (Centers for Disease Control and Prevention, 2015), multiple avenues for suicide prevention have been recommended, including training gatekeepers to identify suicide warning signs among peers and ensuring that mental health professionals are competent to assess and treat suicide risk (U.S. Department of Health and Human Services, 2012).

On college campuses, undergraduate students may be particularly important gatekeepers, as students are more likely to disclose suicide-related ideation to their peers than to professors or other authority figures (Drum, Brownson, Denmark, & Smith, 2009). However, for undergraduate students to act as gatekeepers, they must be trained in the identification of warning signs and risk factors commonly associated with suicide, and how to refer at-risk students to qualified mental health professionals. Research has shown that undergraduates who received gatekeeper suicide prevention training used the knowledge they gained to assist others at-risk for suicide in the months following the training (Indelicato, Mirsu-Paun, & Griffin, 2011), suggesting that even a brief training that includes information on suicide warning signs and evidence-based methods for referring at-risk individuals can have a significant impact on undergraduate students' behavior.

Another way to provide this type of information to undergraduate students is through offering a suicidology course at a college or university, which can increase undergraduates' knowledge and awareness of suicide risk factors and warning signs, and reduce beliefs in suicide myths (McIntosh, Hubbard, & Santos, 1985). This finding is consistent with research showing that students exposed to suicidology curriculum through self-study, lectures, or both demonstrated better performance on measures testing knowledge of suicide myths, warning signs, and prevention and intervention strategies than those without such exposure (Abbey, Madsen, & Polland, 1989). Together, these studies provide evidence for the argument that exposing undergraduates to suicidology curriculum can dispel myths, improve knowledge regarding suicide warning signs, and increase the likelihood of identifying suicide risk and referring at-risk individuals to mental health professionals for treatment, consistent with the *National Strategy for Suicide Prevention* update's objective to increase the number of gatekeepers (U.S. Department of Health and Human Services, 2012). Suicidology curriculum can also potentially benefit campus suicide prevention efforts, in addition to the students taking suicidology courses.

Unfortunately, many mental health providers receiving these referrals may not have been adequately trained during graduate school to assess and treat persons at risk for suicide and may not be competent in this area of professional practice. A lack of suicidology training among psychologists has been documented for decades (e.g., Bongar & Harmatz, 1991; Debski, Dubord Spadafore, Jacob, Poole, & Hixson, 2007; Dexter-Mazza & Freeman, 2003; Ellis & Dickey, 1998; Kleespies, Penk, & Forsyth, 1993), though recent evidence suggests that more training is occurring within graduate psychology programs (e.g., Liebling-Boccio & Jennings, 2013). One objective of the *National Strategy for Suicide Prevention* (U.S. Department of Health and Human Services, 2001) was to increase the proportion of programs offering suicidology training, and this objective was reiterated in the recent *National Strategy for Suicide Prevention* update (U.S. Department of Health and Human Services, 2012), as well as a recent call for increased training among all mental health disciplines (Schmitz et al., 2012). Therefore, it is important to examine progress made toward this objective and the potential barriers to achieving this goal, and to potentially provide converging evidence for recent findings regarding a higher prevalence of suicidology training in clinically-oriented graduate psychology programs.

Training in the assessment and treatment of suicidal behavior is vital for psychologists, yet, in a study that surveyed clinical psychology graduate program directors, Bongar and Harmatz (1991) found that only 40% of the programs had formal training in suicide intervention (e.g., courses, mandatory colloquia specific to the topic of suicide intervention). Other studies have reported that only 40% to 55% of psychology trainees and practicing psychologists had received formal training in suicide risk assessment or management (Debski et al., 2007; Dexter-Mazza & Freeman, 2003; Kleespies et al., 1993). However, other studies have found that the prevalence of graduate-level suicidology training is higher. For example, Ellis and Dickey (1998) found that 75% of

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surveyed American Psychological Association (APA)-accredited psychology internships offered didactic training on this topic; 94% offered training through psychotherapy supervision. Peruzzi and Bongar (1999) also reported that approximately 70% of psychology trainees or psychologists had received formal training in suicidology. Additionally, Liebling-Boccio and Jennings (2013) surveyed directors of accredited school psychology graduate programs and found that 97.6% of respondents reported that they offered suicide risk assessment training through information integrated into existing coursework and 78.8% indicated that this training was also included in clinical training (e.g., practica, externships, internships). These findings may suggest that there has been a recent increase in the prevalence of suicidology training in clinically-oriented graduate psychology programs.

Given the recommendations to enhance suicide prevention through gatekeeper training and increase the competence of mental health providers to assess and treat suicidal behavior (U.S. Department of Health and Human Services, 2012), alongside the evidence that undergraduate suicidology courses can improve knowledge and change behaviors (i.e., leading to possible gatekeepers; Indelicato et al., 2011; McIntosh et al., 1985), and the shortcomings of graduate-level training in suicidology (e.g., Dexter-Mazza & Freeman, 2003; Liebling-Boccio & Jennings, 2013), this study had two aims. The first aim was to examine the availability of formal suicidology courses among undergraduate psychology programs, including barriers to and beliefs about such courses. The second aim was to update the literature regarding the characteristics (e.g., the types of training offered, barriers to offering such training, and beliefs about the risks and benefits of offering such training) of training in the assessment and treatment of suicide risk in clinically-oriented graduate-level psychology courses.

Method

Participants and Procedures

A total of 183 participants responded to an email request for participation. All recruiting and research procedures were consistent with the approved Institutional Review Board protocol. Participants were recruited via emails that explained the purpose and procedures of the study. The email also provided the web address where the study questions were hosted. The questions were created and distributed via Qualtrics, an online survey software program.

A list of department chairs and program directors in the United States was compiled through an extensive online search. We used four lists (i.e., APA, 2010; Association of Heads of Departments of Psychology, 2010; University Source, 2010; U.S. College Search, 2010) to find universities, colleges, and professional schools that offered bachelors-level degrees in psychology, graduate degrees in psychology, or both. Subsequently, we found a contact name and email address for each institution. Participants were then emailed an invitation to participate in the study, which consisted of online questions that could be completed at a time convenient to the participant. A total of 1,186 department chairs and program directors were invited to participate, indicating a response rate of 14.9%. Additionally, nine emails were returned as undeliverable, four potential participants responded to say they were not interested in participating, and two potential participants declined to participate unless their respective institutions' Institutional Review Boards approved the procedures. Participants were not compensated for their participation in the study.

Measures

Participants were asked 42 questions relevant to suicidology training at their institutions. Question content focused on the availability of undergraduate and graduate suicidology training, beliefs about suicidology training, barriers to offering suicidology training, descriptive information about the institutions, and likelihood of offering suicidology courses and training in the future. Participants were able to answer only questions relevant to their institution. Participants answered open-ended and multiple-choice questions, which were used for qualitative and quantitative descriptive analyses respectively. The questions used for this study are available from the authors.

Data Analysis

Descriptive statistics were used to examine the availability of suicidology training (including types of training at the graduate level), beliefs about suicidology training, and barriers to suicidology training. Additionally, we used a qualitative analysis (i.e., grounded theory) to identify themes and develop a theory regarding suicidology course offerings from participants' free responses. In grounded theory analysis, considered a bottom-up approach to theory development (Luca, 2009), responses are examined and coded for the key points (Glaser & Strauss, 1967). Codes are not created a priori; instead, they are developed during the process of reviewing responses. These

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codes are then collected into concepts, which are grouped into categories that generate a theory to explain the observed responses. In the current study, each free response was considered a unit and could be assigned multiple codes if applicable, as has been done in previous studies (Calloway & Knapp, 1995). Two authors independently coded responses and created concepts. The codes and concepts were then compared, and any discrepancies found were resolved through discussion.
Categories and a theory were collaboratively developed between the two authors.

Results

Participants
See Table 1 for characteristics of participants. For the undergraduate-level analyses, participants were 177 faculty members in psychology or social science departments nationwide that offered undergraduate degrees in psychology. At the graduate-level, participants were 48 faculty members from psychology and departments at colleges and universities nationwide who were associated with institutions that offered clinically-oriented graduate degrees in psychology.

Table 1 Characteristics of Participants

Characteristic	N
Respondents from Undergraduate Programs	177
Position	
Department chair	100
Other faculty	33
Missing data	44
Type of Institution	
Four-year college/university	132
Professional school of psychology	2
Missing data	43
Respondents from Graduate Programs	48
Position	
Department chair	34
Other faculty	8
Missing data	6
Type of Institution	
Four-year college/university	39
Professional school of psychology	4
Missing data	5
Type of Degree	
Ph.D. in clinical psychology	15
Master’s degree in clinical psychology	14
Master’s degree in counseling psychology	11
Master’s/Doctoral degree(s) in school psychology	7
Master’s/Doctoral degree(s) in clinical health/medical psychology	4
Psy.D. in counseling psychology	2
Ph.D. in counseling psychology	1
Master’s/Doctoral degree(s) in counseling	1
Master’s/Doctoral degree(s) in marriage and family therapy	1
Accreditation-Eligible Programs	
APA-accredited	13
Not APA-accredited	2
Missing data	3

Note: Many respondents overlapped between samples (i.e., were associated with both undergraduate and graduate programs).

Undergraduate Suicidology Courses
In the present sample, only 5 undergraduate programs out of 152 (3.3%; 25 programs did not respond) offered a suicidology course. Despite the low number of courses currently being offered, directors of many programs expressed interest in including an undergraduate suicidology course (20.4%). In addition, 37.3% reported that their

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department would be inclined to offer a course if a curriculum were developed. See Table 2 for details about respondents' beliefs about offering undergraduate suicidology courses.

Table 2
Beliefs about Offering Undergraduate Suicidology Courses

Belief	Percentage Endorsed
Course would increase the diversity of course offerings	80.3
Course would help with community suicide prevention efforts	77.0
Course would be of interest to students	61.8

Although a majority of respondents endorsed a positive view about offering an undergraduate suicidology course, few of the respondents endorsed currently offering one. This may be due to several barriers that prevent the offering of such a course. See Table 3 for details regarding barriers endorsed by undergraduate programs.

Table 3
Barriers Endorsed by Undergraduate Programs

Barrier	Percentage Endorsed
Lack of classroom space or flexibility in course schedules	47.5
Lack of instructor availability	44.0
Lack of funding	30.5
Lack of curriculum available to work from	16.3
A suicidology class was against university's beliefs	4.3

Graduate Suicidology Training

Only two (4.2%) of the responding graduate programs reported that they did not provide suicidology training to their graduate students (see Table 4); both were doctoral-level programs.

Table 4
Types of Suicidology Training Offered in Graduate Programs

Type of Training	Percentage Endorsing Training
Integrated into other clinically-related courses	77.1
Direct clinical experience (practicum/internship)	52.1
Not aware of available training, but it may exist	16.7
Optional workshops (e.g., seminars, colloquia)	12.5
Mandatory workshops (e.g., seminars, colloquia)	10.4
No training is available or provided	4.2
A specific course on suicide	2.1
Other	2.1

An additional 16.7% of respondents indicated that they were not aware of the types of suicidology training their graduate programs may offer. A majority of programs offered suicidology training, and most did so through integration of this information into other clinically-oriented classes and/or direct clinical experiences. Other forms of training less frequently endorsed included mandatory workshops, optional workshops, and specific courses in suicidology. One respondent noted that his/her program had not previously offered a suicidology course, but was planning to do so in the future. Graduate programs reported a variety of barriers to offering a suicidology course, similar to those endorsed by undergraduate programs; see Table 5.

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Table 5
Barriers Endorsed by Graduate Programs

Barrier	Percentage Endorsed
Lack of space in classroom or curriculum	58.5
Lack of instructor availability	17.1
Lack of curriculum available to work from	17.1
Lack of funding	14.6
Lack of student interest	12.2

The topics covered in training offered by graduate psychology programs included: assessment of suicide risk (81.1%), crisis response (78.4%), treatment of suicide risk (70.3%), suicide prevention (56.8%), and postvention (21.6%). Three participants (6.3%) indicated that they did not know what topics were covered in suicidology training for their graduate students. Additionally, graduate programs appear to have community resources available to train their graduate students, as 26.1% of respondents reported that there are regularly occurring trainings or workshops regarding clinical suicide intervention skills in their communities that their graduate students could or must attend.

Overall, graduate programs seemed to value training in suicidology. A majority of graduate programs (65.2%) reported that they were interested in incorporating more suicidology training into their respective programs, and 53.3% stated that they would be more likely to include training if guidelines were readily available. Most programs (77.8%) reported interest in incorporating suicidology training through integrating information into other courses, and 11.1% were interested in offering a suicidology course to their graduate students. See Table 6 for respondents' beliefs about graduate suicidology training.

Table 6
Beliefs about Offering Graduate Suicidology Training

Belief	Percentage Endorsed
Suicidology training would improve student attitudes toward suicide risk assessment and treatment	97.8
Suicidology training would improve student comfort with treatment of suicidal behavior	95.7
Suicidology training would be of interest to students	87.0
Suicidology training would increase the diversity of training	77.7
Suicidology training would benefit instructors and students	68.9
Suicidology training would help reduce suicide-related stigma	66.7
Suicidology training would negative affect students/campus (e.g., increase suicide ideation or suicidal behaviors)	2.3

Qualitative Examination of Free Response Data

The grounded theory analysis provided a number of codes and concepts, which resulted in three broad categories that inform a general theory regarding the prevalence of graduate- and undergraduate-level suicidology courses. This theory suggests that a lack of resources and knowledge prevents such courses from being offered, with implications that addressing these two broad issues may allow suicidology courses to be offered more widely. The categories that were developed from the grounded theory analysis included: resources available to offer such a course, institutional issues, and knowledge about suicidology.

These categories were derived from six concepts, which were generated from 21 separate codes. The first concept focused on the availability of institutional resources and included these codes: faculty availability to teach courses, financial resources available, constraints on the number of courses departments were allowed to offer, and an administrative focus on reducing course offerings. Participants noted things such as, "We are unable to offer such specific courses due to staffing issues..." and, "[There] is such a press for getting regular [psychology] stuff into the undergraduate program there is not much room left over for suicide material." Similarly, a respondent associated with a graduate program noted that there is "No room in [an] already tight curriculum" for a suicidology course. Finally, a common theme was budget constraints, and responses such as, "[At] our school our [department] is small… and our budget is smaller (which curtails our ability to use adjuncts with any frequency)…" were frequent.

Another concept that arose from the analysis was program-related variables. Topics that were discussed within this concept as barriers included: the incorporation of suicidology into other courses, other entities on campus already offering suicide education and prevention, religious issues that

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may negatively affect the offering of suicidology courses, and programs not having a clinical focus. Participants regularly noted that they offered suicide-focused content in other courses, stating for example, "This issue is discussed in courses such as Abnormal, Clinical-Counseling, and Death and Dying." In terms of a lack of clinical focus, participants indicated, "[The] department has changed and is very experimental and less and less clinical," and respondents associated with graduate programs also noted that the topic "Does not fit our research emphasis." Additionally, one participant indicated that religious issues may arise, stating, "[The course] [w]ould have to be very carefully constructed to fit into Catholic college context, would help to have it co-taught with a theologian." Finally, some participants provided comments such as, "Suicide prevention and education is the purview of the counseling center," indicating that this content is offered by other entities on campus.

More specific course- or curriculum-related issues was also a concept found in many responses, with codes including the topic being too narrow for a full course and the content being better served by a short course as opposed to a traditional course. At the undergraduate level, codes also included the content being inappropriate for undergraduate students and the topic being too applied/skill-based for undergraduate students. Many respondents noted things like, "It doesn't seem compelling to offer an entire course in this area… it doesn't need a whole course." We also noted responses that suggested issues like, "Too specialized to provide undergrad level content," and, "It is a very important topic, but seems more appropriate at a graduate level." Among graduate programs, responses indicated that it "Works better to integrate it with other clinical assessment and treatment material," and, "An entire course is neither needed [nor] practical." Less frequently, respondents indicated, "Shorter extra-curricular programs or a 1 credit course might be interesting."

An additional concept that arose was interest in the subject matter, coded both by faculty and student interest. Participants indicated that their faculty may not want to teach such a course, explaining, "Lack of an interested faculty member to teach it." They also indicated that students may not be interested in taking such a course, noting, "Not enough interest," and, "A course dedicated to suicide would probably be too specialized [for] our… student body."

We also derived a concept that we termed "faculty knowledge" from the data, which included codes of: never having considered offering such a course, lack of awareness of suicidology, and not knowing why a course was not being offered. Responses included statements such as, "No idea [why a course is not offered]," and "Have never considered it." Additionally, one respondent noted a "Lack of knowledge about suicidology" as a barrier. One concerning response from a department chair was "Not familiar with the topic... advocating suicide?" suggesting a significant lack of knowledge regarding of suicidology. Additionally, though research has not shown iatrogenic effects of talking about suicide (Gould et al., 2005), one participant noted, "Fear of negative outcomes, e.g., increased suicide attempts" as a barrier.

The last concept that arose was one we titled "agreeability." This concept included codes that reflected that a suicidology course was a good idea, was already offered, or was in development, or that suicidology content could be incorporated into other courses. Responses included statements such as, "Sounds like a wonderful idea," "I am quite interested in offering a class on suicidology," "We are now developing such a course," "I teach [a course] every other year," and, "[We] could… support the teaching of a module on suicide within another course." Collectively, these responses suggest that a lack of resources and lack of knowledge prevent graduate- and undergraduate-level suicidology courses from being offered.

Discussion

Results from the current study indicated that 2% to 3% of the responding graduate and undergraduate programs offered suicidology courses, respectively. However, a majority of responding clinically-oriented graduate psychology programs (N = 48) offered suicidology training (79.1%), mostly through integration into clinically-oriented courses and clinical practicum experiences. On both the undergraduate and graduate levels, a majority of the respondents endorsed positive beliefs about offering suicidology training or courses, but also endorsed a number of barriers. Broadly, it seems that a lack of resources and lack of knowledge contribute to the low prevalence of suicidology training at both the undergraduate and graduate levels. Some respondents also noted that offering such a course would conflict with their university's belief systems (e.g., faith-based universities) or had concerns that a course could potentially lead to an increase in suicide attempts on their respective campuses, and some respondents did not know what suicidology was.

It is especially concerning that there are doctoral-level programs in clinical and counseling psychology that do not offer any training (4.2%) or

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in which faculty were not aware of any training (16.7%), given the frequency with which psychologists treat suicidal clients (Dexter-Mazza & Freeman, 2003; Kleespies et al., 1993), and that psychologists are ethically and legally responsible for providing competent treatment for their patients, which may include suicide risk. However, such programs are a minority, and it appears that the large majority of clinically-oriented psychology graduate programs report offering some suicidology training to their graduate students, consistent with Liebling-Boccio and Jennings' (2013) findings. This shift in the field of psychology is notable, particularly because training has been demonstrated to improve trainees' self-rated competence and risk documentation when working with suicidal clients (McNiel et al., 2008). Yet, it is not clear whether this training creates competence among mental health professionals, as most of it is incorporated into clinically-focused courses or is part of direct clinical experience and may not include the depth and breadth of didactic instruction and skill practice required to attain competence (as recommended by Cramer, Johnson, McLaughlin, Rausch, & Conroy, 2013 and Rudd, Cukrowicz, & Bryan, 2008).

Additionally, undergraduate-level suicidology courses, though rare, can also improve knowledge (McIntosh et al., 1985) and change behavior (Indelicato et al., 2011), thus contributing to progress on the *National Strategy for Suicide Prevention* update's (U.S. Department of Health and Human Services, 2012) goals to increase the number of gatekeepers and thus reduce suicide rates. On a larger scale, suicidology courses have the potential to reduce stigma on campuses around the country and may lead to the development of prevention efforts, as well as contributing to campus suicide prevention efforts. In addition, students may continue to use these skills throughout their lives to recognize and refer individuals at risk for suicide.

While this study provides valuable information regarding characteristics of suicidology training and courses, some limitations exist. First, in terms of graduate-level training, we did not assess the quality (e.g., if the training provides recent information based on the science in the field) or quantity (e.g., how many hours are devoted to this topic) of this training, nor whether graduate students attained competency in this area, as discussed previously. Similarly, we did not survey graduate students in these programs, who may have viewed the availability of training differently than the faculty members who responded. Across undergraduate- and graduate-level respondents, we were limited in our sampling, as we only collected information about programs online and had a low response rate. Therefore, we may not have identified programs that were not listed online, or may not have made contact with faculty members for whom we could not contact via email. Additionally, we may have created sampling bias or demand characteristics due to the face valid nature of the request for participation and questions (e.g., programs that offer suicidology training may have been more likely to respond, respondents may have reported favorable views of suicidology training due to the focus of the study). Finally, this study was limited to psychology programs, though students and professionals from a variety of other fields (e.g., social work, psychiatry, nursing) interact with suicidal individuals and also should be trained in the appropriate assessment and treatment of clients at risk for suicide.

This study lays the foundation for a number of future endeavors. First, the limitations of this study should be addressed through further research. Attempting to obtain a higher response rate and ensuring that all programs are contacted would ensure that our results are generalizable. Including other professions that also work with suicidal clients would give more data to assess the overall progress of the *National Strategy for Suicide Prevention* update's (U.S. Department of Health and Human Services, 2012) objectives to increase training. Future research is needed to explore whether the grounded theory presented herein can be substantiated. If research supports our grounded theory, suicidologists and others should work to address the barriers and examine the efficacy of suicidology courses in campus suicide prevention efforts and the preparation of mental health professionals in assessing, managing, and treating suicide risk.

Suicidology training at the graduate level has academic merit and important implications for professional competence; at the undergraduate level, it also has the potential to reduce stigma within university campuses and assist with suicide prevention efforts. Additionally, suicidology training is an important part of national goals to reduce suicide rates (U.S. Department of Health and Human Services, 2012). Although many faculty members acknowledged the benefits of suicidology courses and training, not all offer it and many endorse barriers to it, some of which suicidologists may be instrumental in addressing. We hope that the current findings create momentum to address these barriers and thereby move the field of psychology forward in providing suicidology training at the graduate and undergraduate levels.

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