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## Suicide-Related Knowledge and Confidence Among Behavioral Health Care Staff in Seven States

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### Abstract

**Objective:** Death by suicide is a serious and growing public health concern in the United States. This noncontrolled, naturalistic study examined professionals' knowledge about suicide and confidence in working with suicidal individuals, comparing those who had received either of two gatekeeper trainings—Question, Persuade, and Refer (QPR) or Applied Suicide Intervention Skills Training (ASIST)—or other suicide-relevant training or no training.

**Methods:** Participants (N=16,693) were individuals in various professional roles in the field of behavioral health care in Indiana, Kentucky, New York, Pennsylvania, Tennessee, Texas, and Utah. Participants completed a survey assessing suicide knowledge and skills confidence.

**Results:** Most participants (52.9%) reported no previous suicide prevention or assessment training. Individuals with suicide-relevant training demonstrated greater suicide knowledge and confidence than those with no such training. Among those who had received any training, no differences were found in suicide knowledge; however, individuals who had received ASIST reported greater confidence in working with suicidal individuals, compared with those who had received other training. Professional role and prior experience with a client who had died by suicide had significant positive relationships with suicide knowledge and confidence. Regional differences emerged between states and are examined within the context of statewide suicide prevention initiatives.

**Conclusions:** Increasing access to and incentives for participating in suicide-relevant training among behavioral health care staff may foster a more knowledgeable and confident group of

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gatekeepers. Future research should examine whether increases in knowledge and confidence among staff translate into actual changes in practice that help protect and serve at-risk individuals.

Death by suicide is a serious and prevalent public health concern. In the United States, the overall suicide rate has increased by 18.6% over the past five decades (1,2), and suicide was the tenth leading cause of death in 2013 (1). Yet training in the assessment and management of suicide has been inadequate for health and mental health professionals (3,4), and several recent calls to arms have been issued recommending increased training for suicide prevention (4,5). To address this problem, gatekeeper training seeks to educate individuals who are likely to have contact with those at risk of suicide (for example, school professionals, health care professionals, and some community members, such as clergy and police) about suicide—particularly risk assessment and prevention (6). Relatively little is known, however, about the effectiveness of such prevention programs. Therefore, the overarching aim of this noncontrolled, naturalistic study was to examine suicide knowledge and confidence among behavioral health care staff across seven states who had received one of two widely used types of gatekeeper training.

Gatekeeper training aims to improve gatekeepers' general suicide knowledge, suicide risk assessment accuracy, and appropriate responses for suicide prevention. There are several types of gatekeeper training, including brief trainings, such as Question, Persuade, and Refer training (QPR) (7), and longer types, such as Applied Suicide Intervention Skills Training (ASIST) (8). Both teach participants how to recognize suicide risk and intervene in a way that maximizes the safety of suicidal individuals and connects them with appropriate resources. QPR training can be received either online or via in-person workshops, whereas ASIST training can be received only in person. QPR consists of a minimum one-hour training, and ASIST training lasts two days at minimum. Furthermore, ASIST training demands a greater level of trainee participation than QPR. For instance, role-playing is a main component of ASIST training, whereas role-playing is not required for QPR.

Both ASIST and QPR are considered promising interventions (9,10). Two randomized controlled trials provided modest initial support for their effectiveness (11,12), although a third found that compared with training received by a control group, ASIST training did not improve any study outcomes (13). These conflicting results point to the need for more research. This naturalistic study addressed this need by comparing suicide knowledge and skills confidence of health care workers who received ASIST, QPR, or other suicide-relevant training.

Given the potential of these interventions, many statewide prevention efforts have begun emphasizing gatekeeper training as a major component of suicide prevention plans. However, for the states in the study reported here (Indiana, Kentucky, New York, Pennsylvania, Tennessee, Texas, and Utah), state suicide prevention legislation has primarily focused on school-based prevention (14,15). Table 1 summarizes suicide rates (16) and prevention efforts in these states. Suicide prevention efforts based on a gatekeeper system of health care (that is, mandated training for health care providers) have only recently been considered. For example, of the states in this study, only Kentucky has passed legislation establishing minimum levels of training for mental health care workers (17). Given statewide

differences in prevention efforts, this study also sought to compare suicide knowledge and confidence across states.

In line with previous findings (18), we expected that gatekeeper training would be associated with increased knowledge about suicide and confidence in responding to suicidal individuals. We further predicted that because physicians and counselors and therapists have more training and are more likely than other professional groups (for example, nurses, social workers, administrators, and support staff) to work with suicidal individuals (19), they would score higher on suicide-related knowledge and confidence.

In addition, because ASIST training is considerably longer than QPR training and requires more trainee participation, we expected that it would be associated with greater suicide knowledge and confidence compared with QPR. Finally, we examined responses across states to explore a hypothesized relation between suicide knowledge and confidence and statewide efforts (that is, legislation and programming) to reduce suicide.

## METHODS

### Procedure

Procedures were similar to those of Smith and colleagues (18). As part of a Zero Suicide health care initiative needs assessment, the chief executive officers (CEOs) of the largest community behavioral health care providers across eight states who had expressed interest in Zero Suicide (Indiana, Kentucky, Missouri, New York, Pennsylvania, Tennessee, Texas, and Utah) were contacted. CEOs were asked to share survey information with their employees via e-mail. Missouri declined because of liability concerns. Study data were collected between 2012 and 2013. [Further details about Zero Suicide, the survey distribution method, and the data analytic strategy are included in an online supplement to this article.]

Participants were told that the survey was meant to inform improvement in suicide prevention training and support for providers. Participation was voluntary and confidential. Participants who provided their e-mail addresses were entered into a \$100 gift card drawing in each state. Participants completed the survey online via a secure Web site. The Florida State University Institutional Review Board approved all procedures.

### Participants

Participants were 16,693 skilled workers from Indiana (3.3%), Kentucky (13.0%), New York (30.6%), Pennsylvania (5.5%), Tennessee (4.0%), Texas (20.8%), and Utah (22.8%). The smaller samples from Indiana, Pennsylvania, and Tennessee are consistent with their differing method of survey distribution (that is, via a single service provider or agency versus a state's Department of Behavioral Health and Developmental Disabilities). Professional roles were as follows: social workers and case managers, 27.8%; counselors and therapists, 17.1%; administrators, 15.3%; support staff, 15.0%; nurses, 11.2%; paraprofessionals, 8.5%; and physicians and other prescribers, 5.2%.

Participants reported any previous suicide-relevant training that they had received in their lifetime, but they did not indicate how or when they received the training. In the overall

sample, most participants (52.9%) reported no training, 6.3% reported QPR only, 3.7% reported ASIST only, and 19.5% reported relevant other training that did not include QPR or ASIST. Of note, 5.7% of the participants received some combination of QPR, ASIST, and other training. Many participants (11.8%) had missing data on this variable. For analyses that involved training as a predictor, however, only four training types were compared: ASIST only, QPR only, other only, and no training (see Table 2 for professional group and training type frequencies limited to these four training types).

Respondents with any suicide prevention training were more likely than those with no training to have worked with a suicide decedent (34.8% versus 22.6%;  $\chi^2=262.84$ ,  $df=3$ ,  $p<.001$ ). Physicians and other prescribers were significantly more likely than all other professions to have worked with a suicide decedent (48.7%;  $\chi^2=476.96$ ,  $df=6$ ,  $p<.001$ ). [These and other results are presented in the online supplement.] Given these differences, having worked with a client who died by suicide was used as a covariate in main analyses.

Training differences also existed across states and professions. Participants who indicated having received no training were significantly more likely to work in Pennsylvania (91.8%;  $\chi^2=2,299.51$ ,  $df=6$ ,  $p<.001$ ). Counselors and therapists were significantly more likely than all other professions to have received some training (ASIST, QPR, or other; 54.2%) ( $\chi^2=675.73$ ,  $df=6$ ,  $p<.001$ ) (Table 2) [online supplement]. State and profession were used as covariates in subsequent analyses.

## Measures

**Demographic characteristics.**—Participants reported their professional role and the populations with which they work. To protect participant anonymity, the race-ethnicity, gender, and age of respondents were not collected.

**Suicide knowledge and skills questionnaire.**—A 13-item questionnaire, comprising two subscales, was used to assess knowledge about suicide facts and level of comfort dealing with suicidal clients (18). The suicide knowledge subscale, which was based on the Suicide Opinions Questionnaire (20), includes nine true-false items about suicide, with responses scored as correct or incorrect. Possible scores range from 0 to 9, with higher scores indicating greater knowledge. The mean $\pm$ SD score for the overall sample was 5.64 $\pm$ 1.53 [online supplement]. The Kuder-Richardson equation 20 was used to calculate reliability given the binary nature and varying difficulty of the items (Cronbach's  $\alpha=.40$ ). The low alpha was consistent with previous research (18); items are not necessarily expected to hang together well because of their miscellaneous nature. The suicide skills confidence subscale ( $\alpha=.84$ ) comprises four items rated on a 5-point Likert scale (1, completely agree, to 5, completely disagree) and assesses respondents' confidence in working with suicidal clients in regard to training, skills, comfort, and supervision. Possible scores range from 4 to 20, with higher scores indicating greater confidence. The mean score for the overall sample was 14.10 $\pm$ 3.60 [online supplement].

## RESULTS

### Suicide Knowledge

**States.**—An analysis of covariance (ANCOVA) that controlled for profession, training, and previous client death by suicide indicated that participants from certain states outperformed participants from other states on suicide knowledge total scores ( $F=27.75$ ,  $df=6$  and  $14,672$ ,  $p<.001$ ;  $\eta^2=.01$ ) (Table 3) [online supplement]. Specifically, post hoc Bonferroni-corrected tests showed that participants from Pennsylvania had the highest knowledge scores and those from Texas had the lowest. Specifically, respondents from Pennsylvania scored significantly higher on knowledge than respondents from every state ( $p<.05$ ) except Kentucky and Tennessee. Participants from Kentucky and New York performed better than those from Indiana and Utah ( $p<.01$ ). Those from Kentucky, New York, and Tennessee did not differ from each other, and participants from Indiana did not differ from those in Tennessee, Texas, or Utah. Participants from Texas had the lowest scores of all states ( $p<.001$ ) except Indiana.

**Training type.**—An ANCOVA that controlled for state, profession, and previous client death by suicide indicated significant differences between types of training in suicide knowledge scores ( $F=48.73$ ,  $df=3$  and  $13,724$ ,  $p<.001$ ;  $\eta^2=.01$ ) (Table 3) [online supplement]. Post hoc Bonferroni-corrected tests showed that participants with no training had significantly lower scores than those with any type of training ( $p<.001$ ). Participants with QPR only, ASIST only, or other only training did not differ from each other in suicide knowledge scores.

**Professional group.**—An ANCOVA that controlled for state, training, and previous client death by suicide indicated significant differences between the professional groups in suicide knowledge scores ( $F=111.12$ ,  $df=6$  and  $14,672$ ,  $p<.001$ ;  $\eta^2=.04$ ) (Table 3) [online supplement]. Post hoc Bonferroni-corrected tests showed that counselors and therapists and physicians and other prescribers had higher scores than all other professions ( $p<.01$ ) except each other. Social workers and case managers did not differ from nurses. Social workers and case managers, however, had significantly higher scores than administrators ( $p<.001$ ), whereas nurses and administrators did not differ significantly. Paraprofessionals and support staff had significantly lower scores than every profession ( $p<.001$ ), but they did not differ from each other [online supplement].

### Suicide Skills Confidence

**States.**—An ANCOVA that controlled for profession, training, and previous client death by suicide indicated significant differences between states in participants' total scores on suicide skills confidence ( $F=112.07$ ,  $df=6$  and  $14,672$ ,  $p<.001$ ;  $\eta^2=.04$ ) (Table 3) [online supplement]. Post hoc Bonferroni-corrected tests showed that participants from Pennsylvania had significantly greater confidence scores than those in other states ( $p<.001$ ). Participants from Kentucky, New York, and Texas had higher scores than those from Indiana ( $p<.05$ ), but they did not differ from each other. Participants from New York also had higher scores than those from Tennessee. Participants from Indiana, Tennessee, and Texas and did not differ from each other. Participants from Utah had lower scores than those in every other state ( $p<.001$ ).

**Training type.**—An ANCOVA that controlled for state, profession, and previous client death by suicide indicated significant differences between training types in suicide skills confidence scores ( $F=586.26$ ,  $df=3$  and  $13,724$ ,  $p<.001$ ;  $\eta^2=.11$ ) (Table 3) [online supplement]. Post hoc Bonferroni-corrected tests showed that participants with only ASIST training had significantly higher confidence scores than those with only other training ( $p<.05$ ). Those with only QPR training did not differ from those with only ASIST or only other training. Participants with no training had lower scores than those with all training types ( $p<.001$ ).

**Professional group.**—An ANCOVA that controlled for state, training, and previous client death by suicide indicated significant differences between professional groups in suicide skill scores ( $F=332.92$ ,  $df=6$  and  $14,672$ ,  $p<.001$ ;  $\eta^2=.12$ ) (Table 3) [online supplement]. Post hoc Bonferroni-corrected tests showed that counselors and therapists had significantly higher confidence scores than every profession ( $p<.05$ ). Physicians and other prescribers had significantly higher scores than social workers and case managers, nurses, paraprofessionals, and administrators ( $p<.01$ ). Social workers and case managers had higher scores than nurses, paraprofessionals, and administrators ( $p<.001$ ). Nurses had higher scores than paraprofessionals ( $p<.05$ ) and administrators ( $p<.001$ ). Paraprofessionals had higher scores than administrators ( $p<.001$ ). Finally, support staff had lower confidence scores than every other profession ( $p<.001$ ) [online supplement].

### Overall Survey Results

Suicide knowledge scores were significantly correlated with suicide skills confidence scores, such that more knowledge was associated with greater confidence ( $r=.27$ ,  $p<.001$ ). Finally, respondents who had worked with a suicide decedent performed significantly better on suicide knowledge than those who had not worked with a suicide decedent or did not know whether they had done so ( $5.92\pm 1.46$  versus  $5.54\pm 1.54$ ;  $t=-14.61$ ,  $df=8,638$ ,  $p<.001$ ) and also reported greater confidence in their skills than those who had not or did not know ( $15.40\pm 3.20$  versus  $13.61\pm 3.62$ ,  $t=-30.92$ ,  $df=9,208$ ,  $p<.001$ ).

## DISCUSSION AND CONCLUSIONS

In line with previous findings (18), health care staff with suicide-relevant training (QPR, ASIST, or other) demonstrated more suicide knowledge and confidence than those with no training, when the analyses controlled for profession, state, and previous client death by suicide. Comparisons between types of training indicated that staff with any suicide-relevant training did not differ from each other on suicide knowledge scores. However, staff who previously received only ASIST training had greater confidence in their skills than those with other relevant training. It is possible that the learning method (that is, degree of participant engagement and use of role-playing) may have contributed to differences in confidence. Alternatively, training recency may account for these differences and should be assessed in future studies. As expected, two groups—counselors and therapists and physicians and other prescribers—tended to outperform all professions in suicide knowledge and skills confidence. Mental health organizations may consider capitalizing on medical and clinical leadership to design and implement suicide-relevant training for all employees.

Health care staff who endorsed having worked with a suicide decedent had higher knowledge and confidence scores and were more likely to have received suicide-relevant training. Experiencing a client death by suicide may spur staff to seek out further training, or training may increase a person's willingness to treat suicidal clients and thus also the likelihood of a client death by suicide. Similarly, staff with more clinical client contact (for example, physicians and other prescribers, nurses, and counselors and therapists) were more likely to experience a client death by suicide. Workplaces may benefit from implementing postvention for health care workers—especially for those most likely to experience the death of a client by suicide—for coping with the loss of a client by suicide. However, toward the ultimate goal of preventing death by suicide, staff training may benefit from further discussion and assessment of phenomenological education about suicide, such as the role of psychological pain and understanding motivations for suicide (21).

Strikingly, most behavioral health care staff across the overall sample reported having received no training in suicide prevention or risk assessment. [A comparison with previous studies is presented in the online supplement.] This lack of training is particularly concerning among staff with greater clinical contact, especially in primary care contexts. Research has shown that nearly half of suicide decedents visited a health care provider (most often primary care or specialty care for a general medical condition) within a month of their death, whereas only a quarter had a mental health-related visit within a month of their death (22). Thus the staff most in need of training (such as primary care behavioral health care staff, physicians and other prescribers, and nurses) may not be receiving adequate (if any) training.

These results also highlight regional differences in suicide knowledge and skills confidence. Specifically, Indiana, Texas, and Utah had lower scores than the other states in knowledge; Indiana and Utah also had the lowest confidence scores. We were unable to examine why some states outperformed others; however, a review of recent suicide initiatives (Table 1) suggested that states with the highest scores on suicide knowledge and confidence (Kentucky, New York, and Pennsylvania) all had suicide initiatives in place at least several years before data were collected for this study [see online supplement for a discussion].

Although additional research would be needed to confirm this trend, it is likely that state differences in the types of and time since suicide prevention initiatives were implemented, as well as associated budget decisions to fund such programs, contribute to differences between states in suicide knowledge and confidence. Current recommendations stress the important role that health care and mental health care providers can play in suicide prevention (4,5). As state legislators consider how to lower suicide rates, requiring suicide prevention gatekeeper training for health care and mental health care workers may offer an accessible, effective solution. Future research should examine suicide training among behavioral health care staff in states where suicide prevention legislation is not limited to school-based prevention.

Because of the noncontrolled nature of the study, causal conclusions are limited regarding the association between knowledge and confidence and gatekeeper training (for example, knowledge and skills were not assessed prior to receipt of any training). Results could also be affected by a self-selection bias. Because sociodemographic data were not collected, we

could not examine sociodemographic differences in terms of training, knowledge, or confidence. Furthermore, data on training type were missing for almost 12% of participants. It is important to note that support staff and respondents from Kentucky accounted for the largest proportion of this missing data, which could have influenced the results. We were also unable to assess whether increased knowledge and confidence were associated with improved outcomes for clients. Specifically, it is unclear whether knowledge and confidence alone may change practice or improve the availability of effective interventions and reduce risk. Although effect sizes were small (and sample sizes were large), small improvements in suicide knowledge and skills confidence across thousands of health care workers may have large, positive public health impacts, including greater willingness to treat suicidal clients, more accurate risk assessments, and subsequently meaningful improvements in the prevention of death by suicide.

Despite these limitations, this study adds to our knowledge about the preparation of health care workers to assess and treat suicidal individuals, which is highly consistent with the research priorities of the National Strategy for Suicide Prevention (5). The large sample and inclusion of various covariates improve the generalizability of our results. Second, the study expands the literature on gatekeeper training among health care workers across the United States—an understudied group likely to interact with treatment-seeking suicidal clients. Behavioral health care organizations should regularly assess staff suicide knowledge and skills and provide resources, support, and training if gaps exist. Several recent national and statewide calls for suicide prevention are heartening. However, initiatives appear to be highly variable at the state level, and more than half our sample reported having received no suicide training. Given that training was associated with greater knowledge and skills confidence, states that have not implemented gatekeeper training as part of their suicide prevention initiatives may find it worthwhile to consider doing so. Increasing access to and incentives for training will help create a stronger and more cohesive group of gatekeepers, which in turn will help protect and serve at-risk individuals.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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**TABLE 1.**

Suicide rates and suicide prevention efforts in seven states

State	Rate per 100,000 in 2013 <sup>a</sup>	Entity in charge of prevention efforts <sup>b</sup>	State law on training for school personnel <sup>c</sup>	State law on prevention education for students <sup>c</sup>
Indiana	14.26	Public-private partnership led by 1 staff person paid by the state	Nonannual training required; as of 2013 an unspecified duration of training is required for initial teaching license at any grade level	No student education law
Kentucky	15.52	Nonprofit with state support	Annual training required; for high school and middle school principals, guidance counselors, and teachers, 2 hours of self-study review of suicide prevention materials required each year	Requires student education
New York	8.07	Dedicated office or state-funded center of suicide prevention	Training encouraged but not required	Encourages student education
Pennsylvania	13.25	Public-private coalition	Required nonannual training beginning with the 2015–2016 school year; 4 hours of training required every 5 years for professional educators in school buildings serving students in grades 6–12	Encourages student education
Tennessee	15.31	Public-private coalition	Annual training required; under the Jason Flatt Act, 2 hours of in-service training required annually for teachers and principals	No student education law
Texas	11.66	Public-private coalition	Nonannual training required; minimum academic qualifications for certified educators require instruction in detecting students with mental or emotional disorders; school districts required to provide at least a one-time training for teachers, counselors, principals, and other personnel to recognize students at risk of suicide or in need of early mental health intervention	Encourages student education
Utah	21.39	Public-private coalition	Nonannual training required; 2 hours of training required per licensure period	No student education law

<sup>a</sup>Rates are age adjusted. Source: American Foundation for Suicide Prevention (AFSP) (16)

<sup>b</sup>As of November 2014. Source: AFSP (14)

<sup>c</sup>As of June 2014. Source: AFSP (15)

**TABLE 2.**  
Types of suicide training received by health care workers in seven states, by professional group

Professional group	Total in sample		ASIST only <sup>a</sup>		QPR only <sup>b</sup>		Other only		No training	
	N	%	N	%	N	%	N	%	N	%
Social worker or case manager	3,805	7.2	274	7.2	302	7.9	945	24.8	2,284	60.0
Counselor or therapist	2,240	11.7	117	5.2	248	11.1	848	37.9	1,027	45.8
Physician or other prescriber	766	12	12	1.6	31	4.0	224	29.2	499	65.1
Nurse	1,607	43	43	2.7	151	9.4	365	22.7	1,048	65.2
Administrator	2,133	83	83	3.9	156	7.3	441	20.7	1,453	68.1
Support staff	2,018	40	40	2.0	100	5.0	229	11.3	1,649	81.7
Paraprofessional	1,201	56	56	4.7	69	5.7	207	17.2	869	72.4
Total <sup>c</sup>	13,770	625	625	4.5	1,057	7.7	3,259	23.7	8,829	64.1

<sup>a</sup> ASIST, Applied Suicide Intervention Skills Training

<sup>b</sup> QPR, Question, Persuade, and Refer

<sup>c</sup> In the overall sample (N=16,693), 11.8% (N=1,968) were missing data on training type, resulting in 14,725 valid cases for training type. Of the valid cases, 955 completed more than one training and were not included in training type analyses or this table. Thus cases used in analysis totaled 13,770.

**TABLE 3.**

Suicide knowledge and skills confidence scores among health care workers in seven states, by state, training, and profession

Variable	N	Suicide knowledge <sup>a</sup>				Suicide skills <sup>b</sup>			
		M	EMM <sup>c</sup>	SD	SE <sup>c</sup>	M	EMM <sup>c</sup>	SD	SE <sup>c</sup>
State									
Texas	3,276	5.23	5.69	1.62	.04	13.57	16.27	3.89	.08
Pennsylvania	902	5.85	6.20	1.40	.06	14.86	17.48	3.18	.12
Kentucky	1,091	6.19	6.12	1.36	.05	16.22	16.18	2.70	.11
New York	4724	5.74	6.03	1.54	.04	14.49	16.45	3.39	.07
Tennessee	629	5.75	6.00	1.54	.06	14.46	16.00	3.67	.13
Indiana	526	5.32	5.77	1.49	.07	13.52	15.66	3.28	.14
Utah	3,545	5.75	5.91	1.42	.04	13.52	15.05	3.68	.07
Training									
ASIST only <sup>d</sup>	624	5.96	5.92	1.50	.06	16.32	16.22	2.55	.13
QPR only <sup>e</sup>	1,051	6.02	5.96	1.39	.05	15.71	15.89	2.81	.10
Other only	3,256	5.96	5.87	1.39	.03	15.83	15.82	2.72	.06
No training	8,810	5.43	5.55	1.56	.02	12.92	13.40	3.60	.05
Profession									
Social worker or case manager	4,051	5.80	6.11	1.44	.04	15.05	16.81	3.11	.08
Counselor or therapist	2,483	6.14	6.35	1.34	.04	16.05	17.67	2.76	.08
Physician or other prescriber	799	6.04	6.34	1.39	.06	14.92	17.25	3.44	.12
Nurse	1,695	5.78	6.08	1.41	.05	13.96	16.19	3.42	.10
Administrator	2,282	5.62	5.95	1.55	.04	13.11	15.21	3.82	.09
Support staff	2,065	4.92	5.40	1.60	.05	11.51	14.13	3.48	.09
Paraprofessional	1,318	5.09	5.48	1.62	.05	13.69	15.83	3.46	.10

<sup>a</sup> Possible scores range from 0 to 9, with higher scores indicating greater knowledge about suicide facts.

<sup>b</sup> Possible scores range from 4 to 20, with higher scores indicating greater confidence in working with suicidal clients.

<sup>c</sup> Estimated marginal means (EMM) and standard errors (SE) include covariates.

<sup>d</sup> ASIST, Applied Suicide Intervention Skills Training

