Validation of the Suicide Counseling Skills Inventory

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Abstract. *Background:* The self-report measures used in evaluations of the Applied Suicide Intervention Skills Training (ASIST) program have tended not to detect an improvement in a broad range of suicide counseling skills from pre- to posttraining or among trainees with better skills at pretraining. *Aims:* The purpose of this study was to develop and validate the Suicide Counseling Skills Inventory (SCSI), which included ten brief counselor–client scenarios and three counselor responses to each scenario. *Method:* Data were collected from several samples to develop and evaluate the SCSI. Trainee scores were subtracted from criterion expert scores to create discrepancy scores. *Results:* The SCSI detected an improvement in skills from pre- to posttraining across samples, including among trainees with better skills at pretraining. Internal consistency and test–retest reliability were good. *Limitations:* The results may not generalize across different training models. *Conclusion:* Trainee scores were more like expert scores at posttraining. The SCSI may be useful in evaluating suicide counseling competency.

Keywords: counseling, inventory, scale, training, validation

Many adults who think about suicide seek out paraprofessional or professional mental health support. For instance, in a sample of 7,348 individuals with suicide ideation in the United States, 50% of adults had sought mental health services (Choi et al., 2015). Despite the large number of people seeking help for mental health challenges and the increasing demand for crisis services (National Suicide Prevention Lifeline, 2018), degree programs infrequently teach suicide-specific counseling skills. For instance, clinical social workers make up the largest proportion of mental health professionals in the United States (Substance Abuse and Mental Health Services Administration, 2013). However, social work students receive little training in suicide skill development (Levitt et al., 2011). To prevent suicide, counselors must receive high-quality, evidence-based skills training. Many studies have shown gatekeeper suicide training can positively affect trainees' self-report attitudes, knowledge, and self-efficacy/confidence in skills (Burnette et al., 2015). We know comparatively little, however, about whether these training programs increase trainees' suicide-specific counseling skills.

Evaluation of Suicide Counseling Skills

Many training models have emerged during the past few decades to prepare counselors to intervene with people thinking about suicide (Burnette et al., 2015; Isaac et al., 2009). These training programs vary widely in length and focus; however, they all share the goal of preparing trainees to respond appropriately to people struggling with thoughts of suicide.

The Applied Suicide Intervention Skills Training (ASIST) program has been the subject of several evaluations. It is a 2-day training recognized by the Centers for Disease Control that has been completed by over 2 million helpers worldwide (LivingWorks, 2021). The evaluation data for ASIST are mixed. Several studies have not detected an increase in suicide-specific skills from pre- to posttraining (Bolton, 2016; Sareen et al., 2013; Tierney, 1994). These studies used the Suicide Intervention Response Inventory (SIRI-1 or SIRI-2; Neimeyer & Bonnelle, 1997) to evaluate trainees' skills.

Shannonhouse et al. also used the SIRI-2 to evaluate ASIST and did not detect an intervention effect initially (Shannonhouse, Lin, Shaw et al., 2017; Shannonhouse, Lin, Shaw, Wanna et al., 2017). However, they noticed that trainees "with better initial SIRI-2 scores before ASIST overestimated the helpfulness or harmfulness of responses at post-test" (p. 11). After adjusting for underestimation and overestimation statistically, they found a training effect for college staff and K-12 personnel.

Gould et al. (2013) conducted a randomized control trial to evaluate ASIST. Observers rated crisis counselors who completed an ASIST training better than trainees who did not complete an ASIST training on four of 18 skills (linked invitation to suicidal thoughts, asked about reasons for

living, asked about ambivalence about dying, explored informal contacts). These findings are helpful because the researchers measured skills taught in ASIST and included helpers with prior suicide prevention training, thus, providing evidence on which items to include in a new inventory and, possibly, items that would reduce the likelihood of a ceiling effect.

Other popular suicide intervention skills models include Peer Gatekeeper Training (8 h), Campus Connect (3 h), and Question, Persuade, Refer (QPR; 1 h). In most of the studies evaluating these models, researchers have developed items to measure the skills taught in that training model, and they detected a training effect (hospital employees: Cross et al., 2007; college students: Cross et al., 2010; adolescents: Stuart et al., 2003; resident assistants: Pascoe et al., 2012).

Criteria for Developing a Suicide Counseling Skills Inventory

Most studies using the SIRI did not detect a training effect for ASIST initially or at all. Evaluators reported issues related to a ceiling effect or an under-/overestimation effect. In their observational study, Gould et al. (2013) detected a change in four skills; however, this approach requires a high level of expertise, is time-consuming, and is expensive. To address these design challenges, a new self-report inventory to measure skill development should meet four criteria.

1. *Maximize the training effect*. To detect a training effect, the inventory should measure the skills taught in that training model. The SIRI-2 includes items that measure general counseling skills, such as reflective listening. While counselors need these skills to facilitate a therapeutic conversation, to detect an effect in more advanced suicide intervention training models, the inventory should include more advanced counseling skills.
2. *Minimize a ceiling effect*. If some trainees possess general counseling skills at pretraining, then only or primarily measuring those skills will result in no improvement from pre- to posttraining (ceiling effect). Several studies have shown that trainees with more education or with previous professional experience score higher on counseling skills at pretraining (Cotton & Range, 1992; Neimeyer & Bonnelle, 1997; Neimeyer & Diamond, 1983; Neimeyer & MacInnes, 1981). For an inventory to be valid and useful, it must discriminate across groups that are known to differ at pretraining but still detect a training effect.
3. *Minimize an overestimation effect*. If trainees with better scores at pretraining overestimate the appropriateness of responses, then scores need to be adjusted to detect a training effect. To minimize this effect, the inventory should include items that experts agree are highly appropriate and, therefore, cannot be overestimated.
4. *Maximize ease of use*. Programs often prefer an inventory that will not substantially increase the length of their training and does not require a considerable investment in time or money. Accordingly, trainees should be able to complete the inventory in less than 10 min.

Development of the Suicide Counseling Skills Inventory

Content validity is the extent to which a measure represents a theoretical construct. The construct in this study is suicide counseling competence. The Suicide Counseling Skills Inventory (SCSI) was designed to measure counseling competency, a unidimensional construct, where a trainee's responses to client statements are compared with expert responses to the same statements. The design team included three people with expertise in measurement, curriculum design, and crisis counseling services. They used Neimeyer and Bonnelle's (1997) inventory as a starting point. The final SCSI included ten brief hypothetical client statements, four of which were adapted from Neimeyer and Bonnelle's client statements. For example, in one scenario, the client said, "I don't want to be around anyone anymore. I just keep to myself." Each scenario had three counselor responses. The initial pool of counselor responses was generated from research on counselor skills conducted by Gould et al. (2013), Jaycox et al. (2015), Kitchingman et al. (2015), Mishara et al. (2007), and Neimeyer and Bonnelle (1997). These responses were revised and piloted tested with ASIST trainees (described in the next section; see Table A1 in the Appendix for the SCSI).

One of the three responses to the client statement measured a counseling skill taught in ASIST (LivingWorks, 2013; see Table A2 in the Appendix). All ASIST skill items were worded positively on the SCSI. Experts should agree ($SD < 1.0$) the item is a core ASIST skill ($M > 5.25$ on a 6-point scale). In addition to core ASIST skills, the SCSI included 20 general counseling skill items. Seven general items were likely to move the suicide conversation forward (positively worded), and 13 items were likely to interfere with moving the suicide conversation forward (negatively worded). Experts should agree ($SD < 1.0$) on whether the skill would or would not facilitate the suicide conversation. Negatively worded items included responses that attempt to persuade, make demands, superficially reassure, make assumptions, give premature or unwarranted advice, and prematurely end the conversation without assessing safety.

Pilot Studies

Phase 1

To evaluate whether the counselor responses met criteria, the design team convened an expert group. It consisted of five people with expertise in training crisis counselors and intervening with people thinking of suicide. Experts independently rated each item on a 6-point scale from *highly inappropriate* to *highly appropriate*. The design team calculated the mean and *SD* for each item. Experts agreed on the core ASIST skill items ($SD < 1.0$, $M > 5.25$) and most of the general skill items ($SD < 1.0$). The experts disagreed on several items ($SD > 1.00$ to $SD < 1.45$). For instance, experts disagreed ($SD = 1.45$) on whether it was appropriate to ask clients *indirectly* whether they are thinking of suicide: "Have you thought about *hurting* yourself?" (emphasis not in original). In ASIST, a more appropriate response would be to ask the person directly, "Are you having thoughts of suicide?"

The design team decided to retain items that experts slightly disagreed on but not include those items in the SCSI total discrepancy score. By including a response that experts do not strongly agree on, the inventory should introduce more uncertainty and make the item more difficult. The third item, therefore, functions as a distractor item (Miller & Lovler, 2020). Next, the SCSI was administered to 28 crisis counseling trainees who had completed 10 h of training in general crisis counseling skills before completing an ASIST training. On the basis of the results, the design team replaced or revised items that showed no significant change from pre- to posttraining and were not more like expert scores at posttraining.

Phase 2

The design team repeated the same process as in Phase 1 with a second expert group and 15 different crisis counseling trainees. The trainees read the human subjects information letter and completed the SCSI in less than 10 min.

Phase 3

The team invited 14 national experts to complete the SCSI: ten experts responded, and nine experts completed all items anonymously online. Their scores were used as the criterion to calculate each trainee discrepancy score. Criterion experts had led at least ten suicide counseling skills trainings, had at least 10 years of human services experience, and had completed at least 50 suicide interventions. Most of the items (28 of 30 items) met the criteria for a core ASIST skill item ($SD < 1.0$, $M > 5.00$), general skill item ($SD < 1.0$), or distractor skill item ($SD > 1.0$; see Table A3 in the Appendix).

Hypotheses

The SCSI was designed to evaluate suicide counseling competency. The team hypothesized that (a) the SCSI would discriminate between known groups at pretraining (e.g., trainees with higher education or more experience will score higher on the SCSI pretraining); (b) however, all trainees will benefit from the training regardless of their level of education or experience before the training. Moreover, the team hypothesized trainees would benefit from the training regardless of their demographic characteristics (gender, age, race/ethnicity), the SCSI would be unidimensional and have acceptable internal consistency reliability, and the SCSI would have acceptable test–retest reliability.

Method

Following Neimeyer and Bonnelle's (1997) approach, two major methods were used to evaluate the construct validity of the inventory: experimental manipulation and known-groups comparison. A quasi-experiment was used to evaluate whether there was a training effect. The known-groups comparison method (Hattie & Cooksey, 1984) was used to evaluate whether the SCSI discriminated among groups known to have higher and lower scores at pretraining. Data were collected from four additional samples who completed the SCSI immediately before and after an ASIST training. Open-ended items were included for gender, race/ethnicity, age, educational attainment, years of human services-related experience, and how many people they helped who were thinking of suicide.

Samples

Sample 1

A non-equivalent pretest–posttest control-group design was used to evaluate a training effect. The sample included 20 trainees who completed ASIST and 17 trainees who completed another training program that did not include content on suicide (power: medium effect size: 0.50; one-tail, α error probability = .05; power [$1 - \beta$ error probability]: .80; sample size = 36). The two training programs were held at the same location during the same timeframe, had the same format (mini-lecture, discussion, role-play), and were the same length (two consecutive 7 h days). The training programs included social work graduate students and social workers. There were no significant differences between the two groups on demographic characteristics ($p < .05$). Most of the trainees identified as White-only (66.7%) and the majority were women (83.3%) who were

at least 30 years old (54.1%). All participants had some graduate-level social work training, and most trainees had some human services experience (66.7%).

Sample 2

A one-group pretest–posttest design was used to evaluate known groups and a training effect. A total of 150 additional trainees from diverse settings (e.g., volunteers at a crisis center, employees of social service agencies, community members) completed the pre- and posttraining surveys. There were ten two-day ASIST trainings – each led by two trainers. Trainees were mostly White (75.3%) women (77%). About 45% of trainees were 30 years old or older (M = 30.9; SD = 11.3). More than half of the participants had some graduate-level training (56.1%; college degree or higher = 70.2%; graduate degree = 32.4%) and human services experience (60%; more than 5 years of experience = 32.1%). Slightly more than 60% of the trainees had helped more than one person who was thinking about suicide.

Sample 3

A second one-group pretest–posttest design was used to evaluate the training effect using the SCSI without the ten distractor items. The sample included four two-day ASIST trainings with 53 additional trainees from diverse settings who were comparable to trainees in Sample 2 on all but one characteristic: They were older (62.3% vs. 45% were 30 years old or older, $p < .05$).

Sample 4

A pretest–posttest waitlist design with randomization was used to evaluate test–retest reliability among 29 additional trainees on a waitlist for an ASIST training. They completed the SCSI twice over a 2-week interval. Trainees were mostly White (65.5%), women (89.3%) with graduate-level training (55.2%) and human services experience (55.2%). Trainees in Sample 4 were younger than trainees in Sample 3 (75.9% vs. 37.7% were less than 30 years old; $p < .05$).

Measure

Trainees in Samples 1, 2, and 4 completed the 30-item SCSI; however, only the 20 responses that experts agreed on were scored (ten core ASIST and ten general items). Trainees in Sample 3 completed only the 20 items on the SCSI that the experts agreed on. A trainee's absolute score was subtracted from the experts' mean score to create a discrepancy score for each item: 0–5. *Smaller discrepancy scores are better because they show the trainees' skills are more like the experts' skills.* A pretraining score and a posttraining score were calculated by adding the 20 discrepancy scores, where a score of 0 meant no discrepancy with experts' scores (theoretical range = 0–100). The indices were normally distributed. Cronbach's α values were acceptable for pre- and posttraining scores (Sample 1 = .87, .85; Sample 2 = .72, .84; Sample 3 = .57, .68; Sample 4 = .88, .88; respectively). Test–retest reliability was very good (Sample 4, r = .87). There was no evidence of an overestimation effect (where trainees overshot expert scores). Except for one item, trainee posttraining scores moved toward and not past expert mean scores.

Exploratory factor analysis (EFA) was used to evaluate whether the SCSI was unidimensional – measured the underlying construct suicide counseling competence – using posttraining scores from Sample 2. The extent to which each item is correlated with each factor is represented as a loading. The Kaiser–Meyer–Olkin (0.70) measure of sampling adequacy and the Bartlett test of sphericity (χ^2 = 1,186.5, df = 435, $p < .001$) suggested EFA was appropriate. The maximum likelihood method with varimax rotation was used to analyze the items. Ten non-interpretable factors were extracted. Seven of ten factors had fewer than three items, and, of the factors with three or more items, most of the loadings were less than .60. Therefore, the results suggest the SCSI is a unidimensional measure of suicide counseling competency.

Results

Training Effect

Sample 1

Repeated-measure generalized linear model (GLM; 2 × 2 mixed-design MANOVA) was used to test the interaction between the effect of time (pre- to posttraining change) and the study group, and to calculate the effect size (partial η_p^2: small effect = .01; medium effect = .06; large effect = 14). Figure 1a shows ASIST and non-ASIST trainees did not differ at pretraining on the SCSI (M = 21.9, SD = 4.54; M = 23.4, SD = 7.30, respectively). ASIST trainees had better SCSI scores at posttraining than non-ASIST trainees (M = 15.6, SD = 3.99; M = 22.2, SD = 7.65, respectively; interaction effect: F = 9.80; p = .004). The training effect was very large (η_p^2 = .22).

Sample 2

Paired t tests were used to test change from pre- to posttraining. Cohen's d was used to evaluate the effect size (small effect = .20 and below; medium effect = .30–.70; large effect = .80 and above). Figure 1b shows that ASIST trainee scores were better at posttraining (M = 16.5, SD = 4.74) than at pretraining (M = 22.1, SD = 5.91; t = −11.49; r = .38; p = .001). The slope for Sample 2 in Figure 1b is similar to the slope in Figure 1a. The training effect was very large (Cohen's d = 0.93).

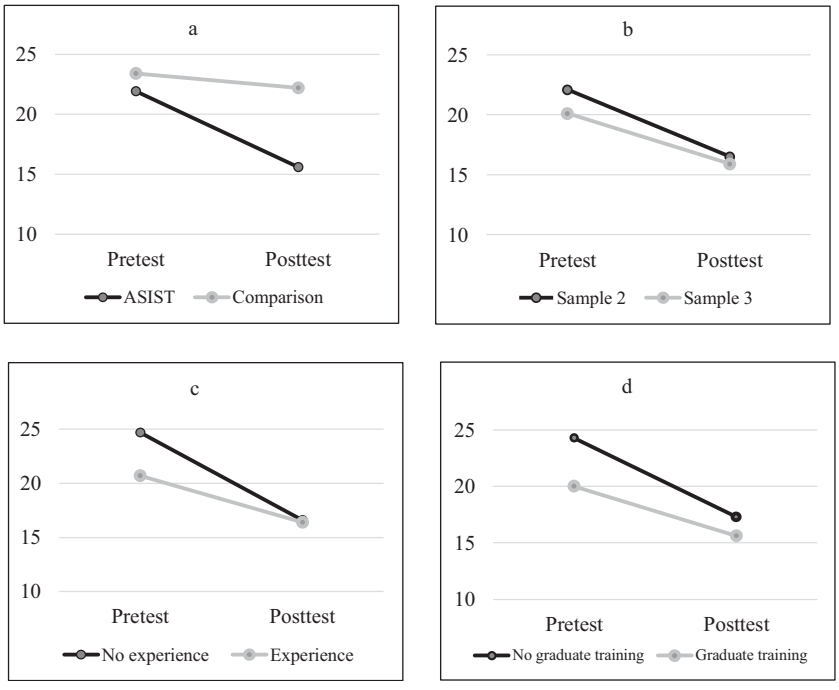

Figure 1. Change in skills discrepancy score from pretest to posttest. Smaller discrepancy scores are better because they show the trainees' skills are more like the experts' skills. ASIST = Applied Suicide Intervention Skills Training.

Sample 3

Figure 1b shows that ASIST trainee scores were better at posttraining (M = 15.9, SD = 3.83) than at pretraining (M = 20.1, SD = 5.70; t = −5.62; r = .41; p = .001). The slopes in Figure 1b are similar; however, the training effect for Sample 3 (Cohen's d = 0.78) was smaller than for Sample 2 (d = 0.93). A GLM was used to test whether there was an interaction between the training effect and age for Sample 3; the interaction was not significant (p < .05).

Known-Groups Validity and Training Effect for Groups

Independent samples t test and repeated measure GLM were used to test whether known groups differed at pretraining but benefited from the training, using Sample 2. As expected, trainees with more education or with more experience had higher SCSI scores at pretraining (see Table 1 for means; t test: p < .05: college degree: t = 3.35; graduate degree: t = 3.71; graduate training: t = 4.44; any human services experience: t = 3.89; more than 5 years of human services experience: t = 2.00; helped someone thinking of suicide: t = 3.90; helped more than five people thinking of suicide: t = 2.18). No difference was found among trainees on gender (p = .08), race/ethnicity (p = .08), or age (p = .19) on SCSI scores at pretraining.

All subgroups (regardless of educational level, experience at pretraining) benefitted from the training (paired t test: p < .001). For example, Figure 1c shows that although trainees with human services experience had higher scores at pretraining, the slopes in Figure 1c show trainees with and without human services experience had better SCSI scores at posttraining than pretraining (Figure 1d).

Table 1 shows subgroups with less education at pretraining benefitted more from the training than did subgroups with more education. For example, trainees without a college degree benefitted more than trainees with a college degree. Trainees who had no human services experience benefitted more than trainees with any human services experiences. Trainees who had not helped anyone who was thinking of suicide also benefited more than trainees who had helped someone who was thinking of suicide. However, trainees with more than 5 years of human services experience or who had helped more than five people thinking about suicide did not benefit less than their reference groups.

Post Hoc Analysis

In addition to the a priori hypotheses, we checked whether some subgroups had better SCSI scores at posttraining. For eight of ten subgroup comparisons in Table 1, there were no differences between subgroups at posttraining. Trainees with graduate training (p < .05) and trainees who identified as White-only had better scores at posttraining (p < .001) than their reference groups.

Table 1. SCSI discrepancy scores by subgroup

		Pretest		Posttest		GLM interaction effect		
Subgroup	*n*	*M*	*SD*	*M*	*SD*	*F*	*p*	η_p^2
Education								
College degree								
No	44	24.68	6.79	17.16	4.65	6.02	.15	.04
Yes	104	20.88	4.96	15.96	4.50			
Graduate degree								
No	100	23.19	5.89	16.59	4.47	7.40	.007	.05
Yes	48	19.56	4.85	15.76	4.74			
Graduate training								
No	65	24.3	6.14	17.26	4.78	5.74	.018	.04
Yes	83	20.0	4.88	15.58	4.27			
Experience								
Any human services experience								
No	56	24.71	6.67	16.60	4.84	14.9	.001	.10
Yes	84	20.70	4.76	16.45	4.80			
More than 5 years of human services experience								
No	95	22.9	6.35	16.8	4.93	1.0	.33	—
Yes	45	21.0	4.70	15.9	4.51			
Helped someone who was suicidal								
No	39	25.12	6.34	17.62	5.05	6.43	.01	.04
Yes	104	21.00	5.36	16.62	4.59			
Helped more than five people who were suicidal								
No	95	22.81	6.37	16.67	4.46	3.49	.06	—
Yes	48	20.77	4.65	16.56	5.28			
Demographic characteristics								
Binary gender								
Man	34	23.63	7.86	17.22	5.84	0.8	.37	—
Woman	114	21.60	5.17	16.24	4.40			
Age								
≤30 years	82	22.67	6.07	16.57	4.86	1.10	.30	—
>30 years	68	21.39	5.66	16.32	4.62			
Race/ethnicity								
Did not identify as white only	36	23.62	5.79	18.48	5.88	0.6	.46	—
Identified as white only	110	21.64	5.99	15.64	4.04			

Note. GLM = generalized linear model; SCSI = Suicide Counseling Skills Inventory.

The 20 items included in the discrepancy score were also evaluated to determine which items showed a change from pre- to posttraining ($p < .05$), using data from Sample 2. Trainees improved on all ten of the core ASIST skills and five of the general skills (1b, 4b, 5a, 8c, 10b). The most change occurred for the core ASIST skills, with Item 3a having the largest change (empathizes and asks directly whether suicidal, followed by 6a – reflects ambivalence and asks to safety plan, 2b – empathizes with negative feelings about self, 10c – reflects safety plan and asks whether safe, and 4c – asks to elaborate on suicidal thoughts).

Discussion

The purpose of this study was to develop a self-report inventory that training programs can use to evaluate whether trainees' suicide counseling skills improved from pre- to

posttraining. Experts agreed on the appropriateness of 20 responses that were used to create discrepancy scores (content validity). The trainee skills were more like expert skills at posttraining. The effect sizes were large across samples. Trainees showed improvement on all ten core ASIST skills. Our results were consistent with those of Gould et al. (2013), which showed improvement in linking an invitation to suicidal thoughts and exploring informal contacts. Gould et al. (2013) also found trainees improved on whether they asked about ambivalence about dying. In our study, trainees improved on their ability to reflect on ambivalence and link to safety planning. Both studies suggest it was crucial to include items to measure skills taught in ASIST.

As predicted, groups with more education or experience had better skills at pretraining. Nevertheless, all trainees benefitted from the training regardless of skill level at pretraining. More educated, less educated, experienced, inexperienced, men, women, older, younger, White-only, and non-White-only trainees all benefited from the training. Unexpectedly, trainees who did not identify as White-only had good but poorer skills than trainees that identified as White-only at posttraining. Although information on trainees' country of origin was not included in the pretraining survey, one third of the non-White trainees in Sample 2 identified as Asian college students. The training program reported that most or all of these trainees spoke English as a second language. Accordingly, an English version of the SCSI may be inappropriate for trainees who speak English as a second language.

The results provide preliminary evidence that the SCSI has content validity, construct validity, and reliability. These results, however, must be reviewed in the context of limitations that may affect the generalizability of the findings. As noted earlier, the SCSI may not be appropriate for evaluating skill development among trainees who speak English as a second language. Our samples also had a substantial proportion of trainees with a high level of education and human services experience who completed the SCSI in person. Thus, it is not clear whether the SCSI would perform similarly with, for example, adolescents or using other formats, such as online training.

Future research is also needed to support the use of the 30-item versus the 20-item SCSI. The effect size for the 20-item SCSI was smaller, and its internal consistency reliability was poorer than the 30-item SCSI. Accordingly, we cannot recommend using the SCSI without the distractor items. A larger sample and a more rigorous design are needed to evaluate the function of distractor items and whether they can be dropped from the SCSI.

Moreover, the SCSI was designed to measure skills taught in ASIST because it is the most popular intensive suicide skills training program worldwide and appropriate for preparing counselors. Many of the skills in the SCSI are taught in other training models, such as asking about suicidal thoughts and general counseling skills, and thus it seems likely the SCSI could detect an effect. Two ASIST skills are infrequently taught in gatekeeper trainings, however, that may influence the effect size: supports turning (two items), which is a motivational interviewing technique, and disabling a suicide plan (one item). Consequently, research is needed to evaluate whether the SCSI could detect a training effect in other evidence-based models that include different or fewer skills.

It is also important to point out that the value of any training is whether counselors with better scores at posttraining are more effective counselors and whether more effective counseling is related to client outcomes, such as a reduction in the intensity of their suicidal thoughts or their suicidal behavior. There is a lack of research in this area. In addition, we know very little about whether counselors trained in one gatekeeper model have a greater impact on client outcomes than counselors trained in another gatekeeper model or no suicide-specific training at all. The study by Gould et al. (2013) is an important exception because they included both counselor skill development and client outcomes. They found that callers who talked to an ASIST-trained counselor felt less depressed, less suicidal, less overwhelmed, and more hopeful after the session than callers who talked to a non-ASIST counselor. The outcomes were evaluated by silent monitors who listened to the calls. Future research could build on Gould et al. (2013) work and use the SCSI.

The SCSI could be used to evaluate counselor skill development in a study assessing the impact of ASIST or other models on client outcomes – using either an in-person or online-only format. For instance, clients could be asked to report how certain they will attempt suicide at the beginning of the session, at the end of the session, and over time. Counselors' skill development, using the SCSI, could also be evaluated over time, by monitoring both their suicide- and non-suicide-specific training/education and experience working with suicidal and other clients. Because the SCSI incorporates discrepancy scores, researchers could evaluate when counselors' skills become more like experts' skills.

Finally, because ASIST is substantially longer than most models and requires more resources to implement, it would be useful to know whether ASIST has a greater impact on learning and suicide rates among geographical areas than shorter models, such as QPR and Connect. A geographical-focused experiment would be challenging for numerous reasons, including finding, for example, counties or educational institutions with untrained helpers. Walrath et al. (2015) overcame some of these barriers and conducted an experiment comparing counties with and without funded gatekeeper training, thus providing a roadmap for researchers who want to

compare models and provide more compelling evidence for the benefits of gatekeeper training. The SCSI could be used, along with other measures, to evaluate learning outcomes. If ASIST has a greater effect on learning and suicide rates than other models, then programs could make a stronger argument for training employees in it.

To support people who are having thoughts of suicide, it is crucial that nonprofessional gatekeepers, paraprofessionals, and professionals, alike, receive high-quality, evidence-based skills training. The SCSI appears sensitive enough to evaluate skill development with trainees who have more human services experience and education and may be especially appropriate for ASIST trainings. The ability to measure skill development in trainees could help ensure the likelihood that people in crisis are receiving effective suicide counseling services.

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Appendix

Table A1. Suicide counseling skills inventory

The following items include excerpts from conversations. Each excerpt begins with a statement by a client, followed by helper responses. Rate the appropriateness of *all* helper responses (Helper A, Helper B *and* Helper C):	Helper response is . . .					
	Highly inappropriate	Inappropriate	Marginally inappropriate	Marginally appropriate	Appropriate	Highly appropriate
1. Client: {Toward beginning of conversation} I don't want to be around anyone anymore. I just keep to myself.						
Helper A: Why don't you want to be around anyone anymore?	−3	−2	−1	+1	+2	+3
Helper B: If you try to socialize more, you might feel better.	−3	−2	−1	+1	+2	+3
Helper C: Tell me more about what is going on.	−3	−2	−1	+1	+2	+3
2. Client: {Toward beginning of conversation} I'm glad I was able to connect with someone tonight . . . I feel like I'm a burden to everyone.						
Helper A: You might feel that way now, but if other people knew you felt this way, they would probably want to help.	−3	−2	−1	+1	+2	+3
Helper B: You feel badly, like you're weighing other people down.	−3	−2	−1	+1	+2	+3
Helper C: So, you feel like a burden?	−3	−2	−1	+1	+2	+3
3. Client: I feel so alone {sobbing} . . . I'm tired of trying. I can't go on anymore.						
Helper A: You seem so lonely and so down. Have you been thinking about suicide?	−3	−2	−1	+1	+2	+3
Helper B: Have you thought about hurting yourself?	−3	−2	−1	+1	+2	+3
Helper C: Promise me you won't do anything to hurt yourself.	−3	−2	−1	+1	+2	+3

(Continued on next page)

Table A1. (Continued)

The following items include excerpts from conversations. Each excerpt begins with a statement by a client, followed by helper responses. Rate the appropriateness of *all* helper responses (Helper A, Helper B *and* Helper C):	Helper response is . . .					
	Highly inappropriate	Inappropriate	Marginally inappropriate	Marginally appropriate	Appropriate	Highly appropriate
4. Client: Hi, I'm calling because I really think I might do something. I feel like killing myself.						
Helper A: Is there anyone you can contact, a parent or a friend, who you can talk to? I can also help you get emergency help?	−3	−2	−1	+1	+2	+3
Helper B: Do you know how you'd do it?	−3	−2	−1	+1	+2	+3
Helper C: Can you tell me more about your thoughts of suicide?	−3	−2	−1	+1	+2	+3
5. Client: Since Alex died, my life is meaningless. Our kids are grown. I've been retired for several years . . . I think I'd be better off dead.						
Helper A: What would Alex want for you? Alex'd want you to go on, right?	−3	−2	−1	+1	+2	+3
Helper B: What has happened recently to make you think that dying is the only way out?	−3	−2	−1	+1	+2	+3
Helper C: Let's work on a plan to keep you safe.	−3	−2	−1	+1	+2	+3
6. Client: The more I think about it, the more I think I don't want to kill myself.						
Helper A: You sound uncertain. How would you feel about working on a plan to keep you safe then?	−3	−2	−1	+1	+2	+3
Helper B: I'm relieved to hear that. You have so much to live for.	−3	−2	−1	+1	+2	+3
Helper C: I'm glad you said you're not feeling suicidal anymore. I was worried.	−3	−2	−1	+1	+2	+3
7. Client: I had planned to overdose on opioids and make it look like an accident. I have the pills in my medicine cabinet from when I had knee surgery.						
Helper A: I'm glad you no longer have a plan to take those pills. When was your surgery?	−3	−2	−1	+1	+2	+3
Helper B: What can you do to make it so that you don't have access to those pills?	−3	−2	−1	+1	+2	+3
Helper C: It sounds like you don't want to take them. Is there a way to distract yourself so that you don't think about them?	−3	−2	−1	+1	+2	+3
8. Client: After talking it out with you, my problems seem less confusing and not so frightening. I really do want to live.						
Helper A: That makes me feel better. If you feel confused or scared again, contact us. We're here to help.	−3	−2	−1	+1	+2	+3
Helper B: That's good to hear. Would you be willing to work on a plan to keep you safe?	−3	−2	−1	+1	+2	+3
Helper C: Typically, I'd ask about a plan to stay safe, but it sounds like you are doing okay now?	−3	−2	−1	+1	+2	+3

(Continued on next page)

Table A1. (Continued)

The following items include excerpts from conversations. Each excerpt begins with a statement by a client, followed by helper responses. Rate the appropriateness of *all* helper responses (Helper A, Helper B *and* Helper C):	Helper response is . . .					
	Highly inappropriate	Inappropriate	Marginally inappropriate	Marginally appropriate	Appropriate	Highly appropriate
9. Client: I tried going to a therapist once before, but it didn't help. Nothing I do now will change anything.						
Helper A: Have you tried medication?	−3	−2	−1	+1	+2	+3
Helper B: Maybe you haven't found the right therapist. With the right person, things can change for the better.	−3	−2	−1	+1	+2	+3
Helper C: Has anyone else been helpful before – maybe a friend, relative, teacher?	−3	−2	−1	+1	+2	+3
10. Client: {Toward the end of the conversation} Okay. We've talked about a lot of stuff. I'm tired and want to get to bed. Thanks.						
Helper A: Great. I hope you have a good night.	−3	−2	−1	+1	+2	+3
Helper B: Yes, I understand. You've got a lot of things to think about. Please contact us, if you are feeling uncertain about how to move forward.	−3	−2	−1	+1	+2	+3
Helper C: So, you've told me you are going to journal tonight and avoid listening to sad music. Will this plan keep you safe for now?	−3	−2	−1	+1	+2	+3

Table A2. Core ASIST skills and SCSI items

Item no.	General label	ASIST label	Content	SCSI item
Asks about suicide				
1c	Asks to elaborate on distress	Explores invitation	Counselor asks the client about thoughts that hint at suicide.	Tell me more about what is going on.
3a	Empathizes and asks whether suicidal	Asks suicide	Counselor reflects and asks the client directly whether they have suicidal thoughts.	You seem so alone, so miserable. Have you been thinking about suicide?
4c	Asks to elaborate on suicidal thoughts	Asks suicide	Counselor asks the client to elaborate on suicidal thoughts.	Can you tell me more about your thoughts of suicide?
Hears story				
2b	Empathizes with negative feelings	Hears story	Counselor reflects the client's negative feelings related to suicidal thoughts.	You feel badly, like you're weighing other people down.
5b	Asks about reasons for suicidal thoughts	Hears story	Counselor asks the client directly about reasons for suicide.	What has happened recently to make you think that dying is the only way out?
9c	Asks about possible supports	Assesses support	Counselor asks the client about available support.	Has anyone else been helpful before – maybe a friend, relative, teacher?
Develops plan				
6a	Reflects ambivalence and asks to plan	Support turning	Counselor reflects the client's ambivalence about suicide and links ambivalence to safety planning.	You sound uncertain. How would you feel about working on a plan to keep you safe then?
8b	Reflects and asks to safety plan	Support turning	Counselor reflects the client's thoughts about living and links thoughts to safety planning.	That's good to hear. Would you be willing to work on a plan to keep you safe?
7b	Asks how could disable suicide plan	Develops plan: Disable	Counselor asks the client about how they could disable the suicide plan.	What can you do to make it so that you don't have access to those pills?
10c	Reflects plan and asks whether safe	Confirms actions	Counselor reflects actions in the safety plan and assesses the client's safety.	So, you've told me you are going to journal tonight and avoid listening to sad music. Will this plan keep you safe for now?

Note. ASIST = Applied Suicide Intervention Skills Training; SCSI = Suicide Counseling Skills Inventory.

Table A3. Criterion expert scores

Item number and content	Min.	Max.	*M*	*SD*
1a – Asks about reasons for distress (+)	3	6	4.00	1.12
1b – Prematurely give advice (–)	1	3	1.67	0.71
1c – Asks to elaborate on distress (+)	5	6	5.56	0.53
2a – Persuades to live and assumes has support (–)	1	5	2.78	1.20
2b – Empathizes with negative feelings (+)	3	6	5.22	0.97
2c – Reflects negative feelings (+)	4	6	5.11	0.78
3a – Empathizes and asks directly whether suicidal (+)	4	6	5.56	0.73
3b – Ask about suicide indirectly (–)	1	5	3.11	1.45
3c – Demands safety assurances (–)	1	3	1.67	0.87
4a – Prematurely gives advice (–)	1	4	2.67	1.23
4b – Asks about means to suicide (+)	2	5	3.67	0.87
4c – Asks to elaborate on suicidal thoughts (+)	5	6	5.78	0.44
5a – Persuades to live and assumes beliefs (–)	1	4	1.89	1.17
5b – Asks about reasons for suicidal thoughts (+)	4	6	5.22	0.67
5c – Prematurely asks to safety plan (+)	2	6	3.78	1.30
6a – Reflects ambivalence and asks to plan (+)	5	6	5.89	0.33
6b – Provides superficial reassurance/avoids (–)	2	4	2.67	0.87
6c – Assumes risk decreased (–)	1	4	2.00	1.12
7a – Assumes risk decreased (–)	1	3	1.67	0.71
7b – Asks how could disable suicide plan (+)	4	6	5.33	0.71
7c – Reflects and suggests distraction (+)	2	5	3.56	1.33
8a – Prematurely begins closing session (–)	1	5	2.67	1.66
8b – Reflects and asks to safety plan (+)	6	6	6.00	0.000
8c – Assumes risk decreased and no planning (–)	1	3	1.89	0.60
9a – Gives unwarranted advice (–)	2	4	3.11	0.78
9b – Persuades to try (+)	2	5	3.89	1.05
9c – Asks about possible supports (+)	5	6	5.44	0.53
10a – Prematurely closes session (–)	1	4	2.56	0.88
10b – Reflects and encourages to try (+)	3	5	4.22	0.67
10c – Reflects plan and asks whether safe (+)	5	6	5.89	0.33

Note. ASIST = Applied Suicide Intervention Skills Training. Experts agreed core ASIST skill (*SD* < 1.0, *M* > 5.00): 1c, 2b, 3a, 4c, 5b, 6a, 7b, 8b, 9c, 10c; experts agreed general skill (*SD* < 1.0): 1b, 2c, 3c, 4b, 5a, 6b, 7a, 8c, 9a, 10b; experts disagreed about skill (*SD* > 1.0): 1a, 2a, 3b, 4a, 5c, 6c, 7c, 8a, 9b, 10a.

