



Assessing Crisis Chat Visitors' Capacity to Regulate Thoughts Related to Suicide

A Brief Scale

Carol Coohy¹ and Keri Neblett²

¹School of Social Work, University of Iowa, Iowa City, IA, USA

²Iowa Department of Public Health, Des Moines, IA, USA

Abstract. *Background:* Regulation of suicidal thoughts may be defined as a person's beliefs about their capacity to control affective and cognitive processes related to suicide. The inability to regulate suicidal thoughts is related to persistent suicidal thoughts, intentions, attempts, and suicide. *Aims:* The purpose of this study was to validate a scale that counselors could use to assess chat visitors' capacity to regulate suicidal thoughts. *Method:* The validity and reliability of the Regulation of Suicidal Thoughts Scale (RSTS) was evaluated using two different samples ($n = 1,162$, $n = 241$). *Results:* All items correlated with the theoretical construct regulation of suicidal thoughts, and the structural model showed the RSTS predicted perceived certainty to attempt suicide. Construct and criterion validity were inferred from an increase in visitors' ability to control their thoughts of suicide from pre-chat to post-chat (Cohen's $d = .91$). Greater regulation in thoughts was also related to less certainty to attempt suicide. *Limitations:* Additional evidence is needed to validate the RSTS, especially among diverse populations. *Conclusion:* Counselors could use RSTS pre-chat scores to match counseling skills with specific affective and cognitive processes related to visitors' suicidal thoughts.

Keywords: suicidal thoughts, scale, validation, crisis chat, counseling

Crisis chat services are a valuable resource for people who are depressed, despairing, or thinking about suicide and can be found in all parts of the world. From Australia to Zimbabwe, chat has a strong potential to reach people who are suicidal and help them cope with their thoughts of suicide (Gould et al., 2013). Chat services are an essential part of the safety net for adolescents and young adults, in particular, who seem to prefer chat over talking to a person on the telephone or in-person (King et al., 2003).

Crisis centers in the United States began offering online chat services in 2010. Now there are more than 50 chat services in the United States (Sinwelski, 2016), with demand continuing to outstrip available counselors (Federal Communications Commission, 2019). Despite the fast growth and immense popularity of crisis chat, little is known about what happens during the crisis chat conversation or whether visitors benefit from it.

The study by Mokkenstorm et al. (2017) is a valuable addition to the scant literature on chat effectiveness. They evaluated changes in visitors' emotional states by coding 526 chat logs from The Netherlands' 113Online Crisis Chat Service. About one half of the visitors were less apprehensive, sad, hopeless, confused, or desperate toward the

end of the chat. However, coders could not reliably code the visitors' ambivalence about suicide in 64.1% of the chats.

Visitors who cannot control their thoughts of suicide or are uncertain about whether they want to live may require the counselor to use different skills, contact their supervisor for support, or request emergency assistance. It can be challenging for counselors to assess visitors' intentions because chats do not provide valuable speech clues. The brief nature of chats also makes it challenging to obtain enough information to assess visitors' intentions (Murphy, 2013). Because chats tend to be relatively short, it would be helpful to have more information about visitors at the beginning and the end of the chat, especially if visitors are ambivalent about living.

A brief scale is essential because many visitors are unlikely to complete a lengthy survey when they feel upset. There are emotional regulation measures, but they do not measure the regulation of emotions or thoughts in the context of suicide, and they are not brief (18-item Difficulties in Emotion Regulation Scale Short Form [DERS-SF]: Kaufman et al., 2016). Brief risk assessment scales do not measure regulation of thoughts specifically and often include items that measure thoughts in the past (e.g., Van Spijker et al., 2014: Suicidal Ideation Attributes Scale: previous month).

This study aimed to develop and validate a scale that measured chat visitors' capacity to regulate thoughts related to suicide. In tandem with other information, counselors could use this scale to move the conversation forward and make the risk stratification decision. While this scale was developed specifically for online counseling applications, the scale should also be useful for in-person applications in a broad array of counseling contexts. The next section describes the development of the Regulation of Suicidal Thoughts Scale (RSTS). While there is no literature on the "regulation of suicidal thoughts," we describe literature on two dimensions of regulation – affective and cognitive processes related to suicidal thoughts – and their correlation with suicidal ideation and attempts.

Scale Development

To develop the scale, a team of subject matter experts reviewed the literature and identified items to measure thoughts related to suicide. The experts included four people with experience in measurement, curriculum design, and crisis intervention (CI) services. *Regulation of suicidal thoughts* was defined as the person's beliefs about their capacity to control affective and cognitive processes related to suicide. This definition of regulation is closely aligned with Bandura's (1994) theory of self-efficacy. *Self-efficaciousness* involves believing one has the capacity to produce an effect. In this context, the person's beliefs about their capacity affect their behavior, including how certain they will attempt suicide.

Several self-efficacious beliefs are related to the capacity to self-regulate affective and cognitive processes related to suicidal thoughts. *Affective processes* may include the overall capacity to regulate negative emotions related to suicidal thoughts (Wintersteen, 2014). Affective processes may also include more specific feelings, such as hopelessness. *Self-efficacious hope* is the belief that one can change things for the better. It may range from having high hopes that things can change for the better to having no hope. Hope is often a critical emotional component in theories explaining suicide, with a substantial body of research demonstrating it is a robust predictor of persistent suicidal thoughts, intentions, attempts, and suicide (Czyz & King, 2015; Steeg et al., 2016).

Cognitive processes include the capacity to control one's thoughts about suicide (*self-efficacious controllability*). Kerkhof and van Spijker (2016) write that the inability to control suicidal thoughts can become tormenting – especially when they feel their thoughts are beyond their control. Several studies highlight the relationship between controllability and suicide plans and attempts (e.g., Nock et al., 2018; Van Spijker et al., 2014).

Another critically important cognitive process is the capacity to work through problems or cope with thoughts related to suicide. Problem-focused coping is a type of coping capacity used to resolve a stressful situation or event or to alter the source of the stress (Carroll, 2013). *Self-efficacious problem-focused coping* or *problem-solving* is the belief one can work through this, where "this" is the problem or source of their pain related to suicidal thoughts. It is the "why" for feeling suicidal and may include, for example, believing that one is worthless (Shneidman, 1985), trapped, intolerably alone, or burdensome to others (Joiner, 2005). Poorer problem-focused coping or problem-solving is positively related to intention, attempts, and persistent attempts (Guerreiro et al., 2013).

While self-efficacious problem-solving emphasizes the belief one can do something to address the problem or problems preoccupying suicidal thoughts in the future, *self-efficacious safety-planning* emphasizes the belief one can do something to stay safe for *now*, in the present moment. It is the belief that one can stay safe during or shortly after the chat despite thoughts of suicide. Although the relationship between believing one can safety-plan and suicidal behavior has not been investigated, knowing whether the chat visitor believes they can stay safe is central to the crisis counselor's role and is hypothesized to contribute to the construct, regulation of suicidal thoughts.

Hypotheses

Construct validity demonstrates the extent to which a scale measures what it was designed to measure. Accordingly, the hypothesized structure of the items in the RSTS should reflect the unidimensional latent construct, regulation of thoughts related to suicide. *Criterion-related validity* demonstrates whether a construct predicts another construct that it should theoretically predict. As an indication of criterion-related validity in the present context, more regulation of suicidal thoughts should be related to less perceived certainty to attempt suicide. Additionally, construct and criterion validity can be inferred by examining changes in the visitors' RSTS scores from pre- to post-chat. If the RSTS accurately measures the construct, it should be sensitive to changes due to the intervention, that is, chatting with a counselor.

Method

Samples

The validity and reliability of the RSTS were evaluated using two *different* samples (Sample 1: $n = 1,162$; Sample 2:

$n = 241$). The samples included people who visited a chat service in the United States. Visitors were not recruited but, instead, learned about the service by surfing the web or from someone they knew. The service subscribed to a secure web-based platform that provided an interface between visitors and counselors. The platform informed visitors of the terms and conditions of using the chat service and informed them that their information may be used to understand its user base better. The institutional review board approved a waiver of documentation of consent under the “Common Rule.”

Visitors completed demographic questions and then were asked whether they were having thoughts of suicide. The responses included *No*, *Yes-Recent* (within the last few days), and *Yes-Current* (within the last day). If the visitor checked *Yes*, they were invited to complete the RSTS items and their perceived certainty that they would attempt suicide item. After completing the pre-chat survey, visitors entered a chat queue and then waited until a counselor was available. Counselors, who were aware of the study, did not prioritize suicidal visitors over non-suicide visitors. The visitors’ responses to the items on the scale were available to the counselor before they started the chat; however, it is unknown whether they reviewed the visitors’ responses.

Sample 1: Structural Model

Among visitors who checked *Yes* to recent or current suicidal thoughts, 70% of visitors agreed to complete the pre-chat survey. Most (98%) of the visitors who agreed to complete the survey completed all RSTS items and the criterion, perceived certainty to attempt suicide item. If a visitor completed a pre-chat survey more than once during the study period (65% of visitors), one pre-chat survey was randomly selected. To identify duplicate cases (visitors), we triangulated I.P. address, username, city, zip code, age, and gender. The sample included 1,162 visitors to the chat service. In Sample 1, visitors may not have chatted with a counselor.

Most visitors were girls or women (69.7%; boys or men: 19.9%; questioning: 5.0%; transgender: 5.4%) and White or Caucasian (78.1%; two or more races: 8.5%; Asian or Asian American: 5.8%; Black or African American: 5.8%; another response: 1.9%). Most visitors were under 20 years old (adolescents: 53.8%; under 30 years old: 85.2%; $M = 21.7$ years old, $SD = 9.05$). This sample was comparable to other chat samples on gender and age (Mokkenstorm et al., 2017; Murphy, 2013; Sinwelski, 2016).

Sample 2: Intervention Effect

About two thirds (66.5%) of the visitors in Sample 2 checked *Yes* to recent or current suicidal thoughts. About one half (51.3%) of visitors with thoughts of suicide

chatted with a counselor for at least 20 min. Of those visitors who did not chat for at least 20 min, 75.3% did not chat because the visitor abandoned the chat queue before a counselor answered the chat. Visitors who chatted between 1 and 20 min included visitors who wanted to chat with a specific counselor who was unavailable, who had a brief question only, who decided they did not want to continue to chat, or whose chat was dropped for an unknown reason. If a chatter completed a pre-chat survey more than once during the study period (69.4% of visitors), one pre-chat survey was randomly selected. (Duplicate cases were identified using the same procedure as in Sample 1.) About one quarter (25.1%) of the chatters agreed to complete the RSTS and the criterion, perceived certainty to attempt suicide item at pre- and post-chat, resulting in a final sample of 241 study participants (nonparticipants: 720).

Selection bias was examined by comparing participants with nonparticipants. They did not differ on their gender, age, race/ethnicity, geographic region, main concern, or whether this was their first visit to chat. They did differ in the length of the chat. Study participants chatted for 64.6 min ($SD = 24.8$), whereas nonparticipants chatted for 51.0 min ($SD = 22.4$; Mokkenstorm et al., 2017: 61 min, $SD = 39$ min).

Most study participants were girls or women (70.8%), White (60.9%), and under the age of 30 (84.7%; less than 20: 51.5%). About one quarter of the participants lived in the state where the chat service was physically located. The participants’ main concerns were depression (41.9%, followed by nonsuicidal self-injury: 22.8%; anxiety: 6.6%; family issues: 5.5%; and victimization: 5.4%).

The 76 counselors, who met with the visitors, received over 30 hr of CI skills training and an additional 16 hr of Applied Suicide Skills Intervention Training (ASIST; LivingWorks, 2013). The CI training focused on rapport building and general counseling skill development. The ASIST training teaches six core suicide counseling skills, including reflecting the visitors’ ambivalence about suicide and linking their ambivalence to safety-planning.

Measures

Regulation of Suicidal Thoughts Scale

The process of developing and piloting the RSTS involved several rounds of revisions to increase content validity. The RSTS was piloted with a sample of 209 visitors to a chat service in 2017 using confirmatory factor analysis (CFA). The overall measurement model was significant ($\chi^2 = 23.1$, $df = 7$, $p < .001$), as were the items in the model, and internal consistency was very good (composite reliability = 0.90).

The visitors rated the five items (control overall emotions or emotionality, hopefulness, control overall thoughts or controllability, problem-solving, and safety-planning) on a Likert-like scale. They were asked to select a statement that best described their thoughts, with each sentence stem beginning with the phrase, “I am having thoughts about suicide,”... followed by four responses. For instance, hopelessness ranged from “I am having thoughts about suicide, but I have” (a) *high hope that things will change for the better* to (d) *no hope things will change for the better*; emotionality ranged from (a) *I am a little upset* to (d) *I am extremely upset*; controllability ranged from “I have these thoughts” (a) *completely under control* to (d) *completely out of control*; problem-solving ranged from I am (a) *very sure I can work through this* to (d) *very unsure I can work through this*; safety-planning ranged from I am (a) *very sure that I can stay safe for now* to (d) *very unsure I can stay safe for now*.

To create a total RSTS pre-chat and post-chat score, items were added (theoretical range = 5–20). Lower scores indicate *more* regulation of suicidal thoughts. Using data from Sample 1, emotionality was deleted from the scale because it had a smaller item-total correlation (.40). However, deleting it from the scale did not substantially improve Cronbach’s α (from .83 to .85), and, therefore, it was retained. An RSTS change score was calculated by subtracting the RSTS post-chat score from RSTS pre-chat score.

Perceived Certainty to Attempt Suicide

For perceived certainty to attempt suicide, visitors were asked to select one response: “I am having thoughts about suicide, but I am. . .” (a) *very unsure I will attempt suicide*, (b) *somewhat unsure I will attempt suicide*, (c) *somewhat sure I will attempt suicide*, (d) *very sure I will attempt suicide* (theoretical range = 1–4). A change score was calculated by subtracting the certainty to attempt post-chat score from the certainty to attempt pre-chat score. This item is a subjective measure: Certainty to attempt suicide is not a proxy for whether or not the person will attempt suicide.

Data Analysis

The construct and criterion validity of the RSTS were evaluated using Sample 1 and CFA (AMOS v.26). The items in the RSTS comprised the measurement part of the model (construct), and the certainty to attempt suicide item was added to the model to evaluate criterion validity. In addition to the structural model to assess validity, we investigated whether and how the crisis chat intervention affected visitors’ RSTS scores using Sample 2 and a paired-samples *t* test. Cohen’s *d* was used to evaluate the ES. Linear regression assessed whether a change in regulation of suicidal thoughts was related to a change in how certain the visitor would attempt suicide from pre- to post-chat.

Results

Sample 1: Structural Model

The hypothesized structure of the RSTS should reflect the unidimensional latent construct, regulation of suicidal thoughts. An important assumption of CFA is whether data are multivariate normal. Items were normally distributed (skewness < 0.50, kurtosis < 1.00), and the overall multivariate kurtosis values were good (kurtosis = 1.98; critical ratio = 3.44). The assumption of multivariate normality was met.

Next, the hypothesized model was estimated. A value of 1 was assigned to the first path, and the parameters of the model were estimated using maximum likelihood estimation. The fixed parameters should be and were less than 1.0 (Kline, 2011). Because the covariance error between hopelessness and problem-solving was large, they were covaried in the model (Hu & Bentler, 1999). Figure 1 presents the standardized factor loadings for the measurement model and its relation to the criterion, certainty

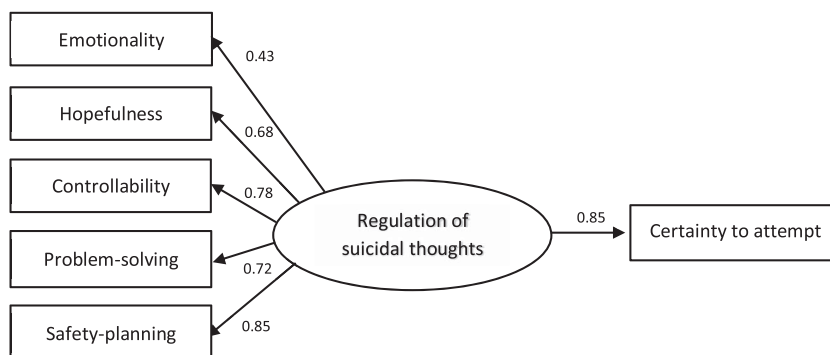


Figure 1. Structural equation model ($n = 1,162$).

to attempt suicide. The overall model was significant ($\chi^2 = 46.10$, $df = 8$, $p < .001$), as were the model items.

To evaluate the goodness of fit, the comparative fit index (CFI), the RMSEA, and the standardized root mean square were calculated. Hu and Bentler (1999) suggest values equal to or greater than .93 indicate a good fit for the CFI. MacCallum et al. (1996) report values equal to or lower than .08 for the RMSEA are acceptable (.01 = excellent; .05 = good; .08 = mediocre). SRMR values are important when using Likert scaling and should be equal to or less than .06 (Hu & Bentler, 1999; Kline, 2011); the relative χ^2 should be less than 5.0. The fit statistics were good: CFI = .99; SRMR = .02; RMSEA = .06, 90% CI [.05, .08]. The relative χ^2 was 5.7 ($df = 8$). The composite reliability value was 0.90, suggesting very good internal consistency reliability.

Sample 2: Intervention Effect

The RSTS should be sensitive to changes due to chatting with a counselor. The visitors' capacity to regulate their thoughts increased from pre-chat to post-chat (pre-chat $M = 14.41$, $SD = 3.14$; post-chat $M = 10.97$, $SD = 4.09$; $t = -13.85$; $r = .46$; $p = .001$). The intervention effect was large (Cohen's $d = 0.91$). Moreover, change in RSTS items predicted change in certainty to attempt suicide from pre- to post-chat, controlling for the chat's length ($F = 73.25$, $df = 2$, $p < .001$). The RSTS items explained 38% of the variance in change in certainty to attempt suicide ($\beta = .62$, $t = 12.1$, $p < .001$; length of chat: $\beta = .02$, $t = -0.31$, $p = .76$).

Discussion

The RSTS was developed to measure a person's beliefs about their capacity to self-regulate affective and cognitive processes related to suicide. CFA showed all RSTS items correlated with the theoretical construct, and the structural model showed the RSTS predicted certainty to attempt suicide. The increase in the regulation of thoughts due to the intervention and the relationship between the RSTS change score and certainty to attempt suicide change score provide additional evidence for the scale's validity. In short, the analyses provide preliminary evidence for the added value of a new scale that counselors could use to assess how well visitors are regulating their suicidal thoughts.

Limitations and Future Research

While the results provide preliminary evidence, additional research is needed to overcome study limitations and build evidence for the generalizability, validity, and usefulness of the RSTS. Direct replication of this study could be accomplished by sampling visitors from Lifeline USA or other chat services. Many US services subscribe to the same web-based platform that provides the interface between visitors and counselors: The RSTS could be added to their pre- and post-chat surveys.

Conceptual replication of this study could include new contexts, such as different age groups, populations, and

Table 1. How counselors could respond to what visitors reported in the pre-chat survey to increase visitor safety

Concept	What the visitor reported:	Counselor responses (examples)
Thoughts related to suicide		
Emotionality (control emotions)	I am extremely upset.	"I see how upset you are right now. What has helped you in the past when you have felt this way?"
Control hopefulness	Things won't change for the better.	"You have no hope things will change, but, by reaching out for help, it seems like part of you wants to keep trying."
Controllability (control thoughts)	I can't control my thoughts.	"It sounds like if you could control your thoughts, you might feel better about the situation. What would you think about exploring some options that might help you feel more in control?"
Problem-solve	I can't work through this.	"In the pre-chat survey, you reported that you don't feel you can work through things. If it is okay with you, we can talk through how to get you some support, so you don't have to go through this alone."
Safety-plan	I can't stay safe.	"You mentioned in the pre-chat survey that you can't stay safe, but after talking with you it sounds like there is a small part of you that still wants to live. I am wondering if we could work on a plan to keep you safe for now so that we can explore what is in that part of you that wants to live?"
Certainty to attempt		
Attempt	I am <i>somewhat</i> sure I will attempt.	"You wrote you are somewhat sure you will attempt on the pre-chat survey. What prevented you from selecting very sure?"

settings. For instance, replicating the study with visitors to chat in other countries or with different languages would provide evidence of generalizability. Other relevant contexts include in-person or telephone counseling sessions. Although crisis chat services have access to the visitors' IP addresses, visitors will likely perceive the chat as anonymous. Chat visitors may be more likely to indicate, for example, whether they think they can stay safe. Therefore, the RSTS may not generalize to face-to-face encounters.

Evidence for *convergent validity* could be obtained by comparing the RSTS with other scales that measure *emotional regulation*, defined by Gratz and Roemer (2008) as the ability to modulate, understand, and accept emotions, as well as to act in desired ways despite emotional arousal. For instance, the DERS has a 3-item subscale that measures difficulty engaging in goal-directed behavior when experiencing stress. Adding these three items to a pre-chat survey is unlikely to burden visitors.

Another important research topic is whether and how counselors should use the RSTS. For instance, visitors' scores on the RSTS may suggest counselors use a skill or combination of skills to help visitors stay safe. See Table 1 for examples. Counselors might focus on teaching visitors problem-solving strategies if visitors score lower on the emotional processes items (e.g., more control of emotions) but higher on the cognitive processes items (e.g., less control of thoughts). Researchers could investigate whether counselor skill matching with RSTS items predicts better client outcomes (e.g., optimal model matching).

Conclusion

Counselors could use the RSTS as part of a full suicide risk assessment. Counselors chatting with visitors who score high on the RSTS or the certainty to attempt suicide item may also suggest counselors rely more heavily on de-escalation techniques or seek assistance from a supervisor. Chat services could also triage visitors with high scores at pre-chat and assign higher-risk visitors to counselors with more experience or competency.

To evaluate the regulation of suicidal thoughts, we developed and validated a brief, self-report scale that visitors could complete in less than 1 min. While the RSTS requires further research to support its generalizability, validity, and usefulness, the results provide preliminary evidence for the reliability and validity of the RSTS. The RSTS has the potential to improve the quality of chat services and, consequently, reduce suicide attempts.

References

- Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). Academic Press. <https://www.uky.edu/~eushe2/Bandura/BanEncy.html>
- Carroll, L. (2013). Problem-focused coping. In M. D. Gellman & J. R. Turner (Eds.), *Encyclopedia of behavioral medicine*. Springer. https://doi.org/10.1007/978-1-4419-1005-9_1171
- Czyz, E. K., & King, C. A. (2015). Longitudinal trajectories of suicidal ideation and subsequent suicide attempts among adolescent inpatients. *Journal of Clinical Child and Adolescent Psychology*, 44(1), 181–193. <https://doi.org/10.1080/15374416.2013.836454>
- Federal Communications Commission. (2019). *Report on the National Suicide Hotline Improvement Act of 2018*. <https://docs.fcc.gov/public/attachments/DOC-359095A1.pdf>
- Gould, M. S., Cross, W., Pisani, A. R., Munfakh, J. L., & Kleinman, M. (2013). Impact of applied suicide intervention skills training on the national suicide prevention Lifeline. *Suicide and Life-Threatening Behavior*, 43(6), 676–691. <https://doi.org/10.1111/sltb.12049>
- Gratz, K. L., & Roemer, L. (2008). The relationship between emotion dysregulation and deliberate self-harm among female undergraduate students at an urban commuter university. *Cognitive Behaviour Therapy*, 37(1), 14–25. <https://doi.org/10.1080/16506070701819524>
- Guerreiro, D. F., Cruz, D., Frasilho, D., Santos, J. C., Figueira, M. L., & Sampaio, D. (2013). Association between deliberate self-harm and coping in adolescents: A critical review of the last 10 years' literature. *Archives of Suicide Research*, 17(2), 91–105. <https://doi.org/10.1080/13811118.2013.776439>
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Joiner, T. E. (2005). *Why people die by suicide*. Harvard University Press.
- Kaufman, E. A., Xia, M., Fosco, G., Yaptangco, M., Skidmore, C. R., & Crowell, S. E. (2016). The Difficulties in Emotion Regulation Scale Short Form (DERS-SF): Validation and replication in adolescent and adult samples. *Journal of Psychopathology and Behavioral Assessment*, 38(3), 443–455. <https://doi.org/https://doi.org/10.1007/s10862-015-9529-3>
- Kerkhof, A., & van Spijker, B. (2016). Delivering online cognitive behavioral therapy interventions to reduce suicide risk. In R. C. O'Connor & J. Pirkis (Eds.), *The international handbook of suicide prevention* (pp. 480–489). Wiley. <https://doi.org/10.1002/9781118903223.ch27>
- King, R., Nurcombe, B., Bickman, L., Hides, L., & Reid, W. (2003). Telephone counselling for adolescent suicide prevention: Changes in suicidality and mental state from beginning to end of a counselling session. *Suicide and Life-Threatening Behavior*, 33(4), 400–411. <https://doi.org/10.1521/suli.33.4.400.25235>
- Kline, R. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.
- LivingWorks. (2013). *Evidence in support of the ASIST program*. <http://www.livingworks.com.au/dmsdocument/337>
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130–149. <https://doi.org/10.1037/1082-989X.1.2.130>
- Mokkenstorm, J. K., Eikelenboom, M., Huisman, A., Wiebenga, J., Gilissen, R., Kerkhof, A. J. F. M., & Smit, J. H. (2017). Evaluation of the 113Online Suicide Prevention Crisis Chat Service: Outcomes, helper behaviors and comparison to telephone hotlines. *Suicide & Life-Threatening Behavior*, 47(3), 282–296. <https://doi.org/10.1111/sltb.12286>

- Murphy, G. (2013). The National Suicide Prevention Lifeline and new technologies in suicide prevention: Crisis chat and social media initiatives. In B. L. Mishara & A. J. Kerkhof (Eds.), *Suicide prevention and new technologies: Evidence-based practice* (pp. 111–122). Palgrave MacMillan. https://doi.org/10.1057/9781137351692_9
- Nock, M. K., Millner, A. J., Joiner, T. E., Gutierrez, P. M., Han, G., Hwang, I., King, A., Naifeh, J. A., Sampson, N. A., Zaslavsky, A. M., Stein, M. B., Ursano, R. J., & Kessler, R. C. (2018). Risk factors for the transition from suicide ideation to suicide attempt: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS). *Journal of Abnormal Psychology, 127*(2), 139–149. <https://doi.org/10.1037/abn0000317>
- Shneidman, E. S. (1985). *Definition of suicide*. John Wiley & Sons.
- Sinwelski, S. (May, 2016). *Lifeline crisis chat* [PowerPoint slides]. National Suicide Prevention Lifeline, SAMHSA. <http://www.sprc.org/system/files/private/event-training/Monday%20BH%20Tech%20plenary%20-%20Sinwelski%20presentation.pdf>
- Steeg, S., Haigh, M., Webb, R. T., Kapur, N., Awenat, Y., Gooding, P., Pratt, D., Cooper, J., & Cooper, J. (2016). The exacerbating influence of hopelessness on other known risk factors for repeat self-harm and suicide. *Journal of Affective Disorders, 190*, 522–528. <https://doi.org/10.1016/j.jad.2015.09.050>
- Van Spijker, B. A. J., Batterham, P. J., Calear, A. L., Farrer, L., Christensen, H., Reynolds, J., & Kerkhof, A. J. F. M. (2014). The Suicidal Ideation Attributes Scale (SIDAS): Community-based validation study of a new scale for the measurement of suicidal ideation. *Suicide and Life-Threatening Behavior, 44*(4), 408–419. <https://doi.org/10.1111/sltb.12084>
- Wintersteen, M. B. (2014, November). *A retrospective account of youth suicide warning signs and its impact on prevention efforts*. Paper presented at the Annual Meeting of the Association of Cognitive and Behavioral Therapy. Philadelphia, PA.

History

Received November 10, 2020

Revision received March 8, 2021

Accepted March 18, 2021

Published online August 18, 2021

ORCID

Carol Coohy

 <https://orcid.org/0000-0002-8265-2373>

Carol Coohy

School of Social Work

University of Iowa

308 North Hall

Iowa City, IA 53342

USA

carol-coohy@uiowa.edu

Carol Coohy, PhD, is a professor and director of graduate studies at the University of Iowa School of Social Work, Iowa City, IA, USA. Her research and teaching focus on developing and evaluating assessment tools and the etiology and consequences of childhood trauma on child, adolescent, and adult mental health.

Keri Neblett, LMSW, formerly clinical assistant professor at the University of Iowa School of Social Work, is currently the suicide prevention director at Iowa Department of Public Health, Des Moines, IA, USA. She has over 15 years of experience in suicide prevention including previous work at Community Crisis Services and Foodbank.