Associations of Suicide Prevention Trainings with Practices and Confidence among Clinicians at Community Mental Health Centers

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Objective: This study examined whether (1) behavioral health providers were more likely to implement best practices when they were more confident in their abilities, (2) number of suicide prevention trainings was positively associated with perceived confidence in abilities and implementation of evidence-based practices, and (3) specific trainings were more impactful than others on increasing providers' level of confidence and/or practices.

Method: Providers ($N = 137$) at three rural community behavioral health centers who had opportunities to attend multiple suicide prevention trainings completed the Zero Suicide Workforce Survey, a measure to evaluate staff knowledge, practices, and confidence in caring for patients at risk of suicide.

Results: There was a moderate association between provider's practice and confidence. The number of attended trainings had a significant correlation with both practice and confidence. Particular trainings demonstrated differential effects on provider's practice and confidence.

Conclusion: These results suggest that behavioral health providers who are confident in their skills in assessing and treating suicide risk are more likely incorporate best practices into their clinical work. Also, it appears there is a small but significant benefit to multiple trainings for increasing both practice and confidence among providers.

With the increased recognition of suicide as a major public health problem as well as its preventable nature, there has been a significant advance in the science and practice of suicide prevention over the last decade (Bernert, Hom, & Roberts, 2014; Stone et al., 2017). Currently, there are a number of assessment tools and intervention approaches that have been developed and empirically tested to improve the suicide continuum of care (see Substance Abuse and Mental Health Services Administration [SAMHSA], 2017; Suicide Prevention Resource Center [SPRC], 2017a). Some of these approaches recognized as best

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practices for suicide are as follows: Question, Persuade, and Refer (QPR; QPR Institute, 2017), Collaborative Assessment and Management of Suicidality (CAMS; Jobes, 2012), Assessing and Managing Suicide Risk (AMSR; Pisani, Cross, & Gould, 2011), Dialectical Behavioral Therapy (DBT; Linehan et al., 2006, 2015), among others. Most of these models offer something unique and complementary to address system gaps, different intervention levels (e.g., prevention, treatment, and postvention), and the diverse need of the population that experience suicide thoughts (Brown & Jager-Hyman, 2014; Stone et al., 2017).

In addition to the advancement in prevention and treatment techniques, there has also been an increased emphasis and call for the dissemination of these approaches. In fact, leading suicide prevention models and organizations identify training in evidence-based practices as a gap and, thus, a primary goal in suicide prevention (Ahmedani & Vannoy, 2014; Goldston et al., 2010; Schmitz et al., 2012). Empirical data support the effectiveness of training as a dissemination strategy; individuals who participate in training specific to suicide care are better able to identify warning signs, report increased knowledge on the issue of suicide, indicate greater self-efficacy and competency in providing care, and have more useful attitudes and beliefs regarding suicide (Bernert et al., 2014; Cross, Matthieu, Lezine, & Knox, 2010; DeHay, Ross, & McFaul, 2015; Lamis, Underwood, & D'Amore, 2017; Sale et al., 2017). These findings have been replicated using community samples, primary care providers, and behavioral health practitioners, and through online delivery of training (Cross, Matthieu, Cerel, & Knox, 2007; Cross et al., 2010; DeHay et al., 2015; Lamis et al., 2017; Sale et al., 2017).

Importantly, data suggest that training gains are maintained over time (Gould, Cross, Pisani, Munfakh, & Kleinman, 2013; Litteken & Sale, 2017; Sale et al., 2017) and ultimately impact delivery of services and outcomes (Godoy Garraza, Walrath, Goldston, Reid, & McKeon, 2015; Graham, Rudd, & Bryan,

2011). For instance, through the effects of training, increased competence has been linked to greater willingness to provide suicide care among primary care physicians (Graham et al., 2011). Moreover, participants of QPR training report more efforts in seeking out youth who might be at risk and asking them more questions about suicide (Litteken & Sale, 2017). Preliminary findings have also revealed decreased suicide ideation and psychiatric symptoms among those who received care from counselors that have been trained in Applied Suicide Intervention Skills Training (Gould et al., 2013).

Although these findings are promising, there is little research examining the impact of multiple trainings on providers nor the incremental value of training on different treatment models (Bernert et al., 2014). Considering that there are a number of complementary alternatives to suicide prevention and treatment, it is likely that providers are exposed to not only one model of care but rather to a series of workshops of distinct training modalities (e.g., QPR plus CAMS and DBT) (Godoy Garraza et al., 2015). For example, the Garrett Lee Smith (GLS) grant, one of the largest youth suicide prevention projects sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), often utilizes treatment packages to enhance the capability of response among community members and behavioral health providers (Godoy Garraza et al., 2015; Goldston et al., 2010). This multifaceted training approach might be successful in addressing different system gaps and further increase providers' confidence and competency in delivering suicide-related services. Preliminary findings indicate a positive relationship between participating in multiple trainings and greater confidence in providing suicide care (Silva, Smith, Dodd, Covington, & Joiner, 2016). Furthermore, Silva et al. (2016) found that confidence levels were higher for those individuals who attended trainings when compared to those who did not and was even higher for staff who participated in Applied Suicide Intervention Skills Training (ASIST) compared to other

unknown trainings. One limitation of the study, however, is that it did not examine self-reported implementation of best practices and its association with confidence and training participation (Silva et al., 2016).

In this study, we investigated the relationship between different trainings attended and both perceived confidence and actual implementation of best practices of suicide assessment and treatment. Specifically, we examined whether (1) behavioral health providers were more likely to implement best practices for suicide assessment and treatment when they were more confident in their abilities to do so, (2) number of trainings was positively associated with perceived confidence in abilities and implementation of evidence-based practices, and (3) specific trainings were more impactful than others on increasing providers' level of confidence and/or practices. We hypothesized that providers who feel more confident in their ability to implement best practices would also be more likely to use adequate assessment and treatment techniques and that participants who attended a greater number of trainings would report greater levels of confidence and practice of recommended assessment and treatments tools.

METHOD

Participants

A total of 137 behavioral health providers at three community behavioral health centers participated in the study. These behavioral health centers provide services to three rural counties in Georgia, which in 2011–2013 evidenced higher suicide rates compared to other counties in the state. Demographic information about providers was not gathered for this study.

Measures

The Zero Suicide Workforce Survey (ZSWS; Suicide Prevention Resource Center [SPRC], 2017b) was used to assess provider's confidence in their abilities to provide treatment for suicide. The original 66-item ZSWS was designed by the Suicide Prevention Resource Center and the National Alliance of Suicide Prevention as part of the Zero Suicide initiative to evaluate staff knowledge, practices, and confidence in caring for patients who are at risk of suicide. For this study, the original ZSWS was shortened and one of the knowledge items was changed to be specific about suicide rates in Georgia. The adapted ZSWS contains 14 items and five sections: (1) knowledge about suicide prevalence, (2) beliefs about suicide, (3) current practices to address suicide, (4) training and confidence on skills, (5) training on screening and risk assessment, and (6) professional background information about the respondent. This survey uses a 5-point Likert response format (1 = *Strongly Disagree* and 5 = *Strongly Agree*). A sample item is as follows: "I am confident in my ability to provide care to patients who have been identified as being at elevated risk for suicide." For this study, the sum score of staff confidence (six items) and use of best practices (10 items) was obtained as an indicator of general confidence and adequate and actual implementation of best practices, respectively. Finally, to assess number of trainings attended, information about staff participation for each of the trainings provided was collected through self-report from a checklist of available trainings.

Procedures

Providers attended a variety of trainings in 2016. No staff attended all trainings, and any trainings with <10 participants were not included in the analyses. Trainings included were as follows: Assessing and Managing Suicide Risk (AMSR; N = 92), Collaborative Assessment and Management of Suicidality (CAMS; N = 47), Dialectical Behavior Therapy (AMSR; N = 34), and Question Persuade Refer (QPR; N = 82). Participants then completed the online form of the Zero Suicide Workforce Survey, created in SurveyMonkey. This procedure was approved by the appropriate institutional review board. Bivariate correlations were first

obtained to examine relations between practices scores, confidence scores, and number of trainings attended. Then, several multiple regression analyses were conducted to test the differential impact of trainings on practice and confidence scores.

RESULTS

Providers ($N = 137$) responded to the Zero Suicide Workforce Survey from three community behavioral health centers, with the participants being distributed among the three sites as follows: 31% ($n = 43$), 57% ($n = 78$), and 12% ($n = 16$). Moreover, 65% ($n = 89$) of respondents reported being behavioral health clinicians and 18% ($n = 24$) reported being managers, with fewer than 10 providers selecting the following positions (some providers selected multiple positions): case manager, crises services, nursing, physical health care, psychiatry, support and outreach, and technician. Eight percent ($n = 11$) of the providers indicated that they work with children, 20% ($n = 27$) indicated they work with adolescents, and 67% ($n = 92$) indicated they work with adults.

On a 5-point Likert scale, providers tended to rate their use of best practices highly ($M = 4.46$, SD $= 0.48$). The lowest rated practice item was "I use supervision when working with suicidal clients" ($M = 4.20$, SD $= 0.87$), whereas the highest rated practice item was "I always ask about suicide with new clients" ($M = 4.56$, SD $= 0.70$). Thus, although there was some variability, providers tended to report that they frequently use best practices.

On a 5-point Likert scale, providers also rated their confidence highly ($M = 4.19$, SD $= 0.65$). The lowest rated confidence item was "I am confident in my ability to manage a patient/client's suicidal thoughts and behavior" ($M = 3.96$, SD $= 0.87$), whereas the highest rated confidence item was "I have the skills to screen and assess a patient/client's suicide risk" ($M = 4.29$, SD $= 0.70$). Thus, providers also reported

relatively high confidence in their skills and ability to assess and treat suicidality.

Of those trainings that more than 10 providers attended, the average number of trainings attended was 1.86 (SD $= 1.1$). The total number of trainings attended ranged between 0 and 4, with the most common number of trainings attended being 2. After generating descriptive statistics, we investigated whether there were significant correlations among the number of trainings attended, provider's practice scores, and provider's confidence scores. There was a moderate positive correlation between participant's practice and confidence ($r = .60$, $p < .001$). The number of trainings in which an individual participated had a small, but significant positive correlation with both practice ($r = .32$, $p < .001$) and confidence ($r = .31$, $p < .001$).

Next, we conducted several independent-samples t tests to compare practice and confidence scores between attendees of the four included trainings. We found that providers who attended CAMS, $t(116) = 3.70$, $p < .001$, and DBT, $t(116) = 2.53$, $p = .013$, had significantly higher practice scores than those who did not, whereas there was no difference in practice scores between attendees and nonattendees of AMSR, $t(116) = 0.65$, $p = .50$, and QPR, $t(116) = 0.73$, $p = .47$. We found that providers who attended AMSR, $t(128) = 3.89$, $p < .001$, and DBT, $t(128) = 3.09$, $p < .01$, had significantly higher confidence scores than those who did not; whereas, there was no significant difference in practice scores between attendees and nonattendees of CAMS, $t(128) = 1.96$, $p = .052$, and QPR, $t(128) = 1.94$, $p = .88$, although the difference for CAMS was close to significant.

Finally, we ran two multiple regression analyses: one in which we predicted practice scores with dichotomous variables representing attendance for all four trainings (AMSR, CAMS, DBT, and QPR) and one in which we predicted confidence scores with the same four variables. The combined effects of these four trainings significantly predicted practice scores, $F(4, 113) = 3.67$, $p < .01$, Multiple

R^2 = 11.5%. In this analysis, CAMS attendance explained the majority of the variance in practice scores (β = .256, t = 2.78, p = .006, R^2 = 8.8%), followed by DBT (β = .156, t = 1.66, p = .099, R^2 = 2.2%), with negligible contributions from AMSR and QPR attendance. Thus, CAMS appeared to be the most impactful training on practice scores, even when taking into account other trainings attended. The combined effects of the four trainings also significantly predicted confidence scores, F(4, 125) = 5.83, p < .001, multiple R^2 = 15.7%. In this analysis, AMSR attendance explained the majority of the variance in practice scores (β = .290, t = 3.40, p = .001, R^2 = 10.6%), followed by DBT (β = .159, t = 1.79, p = .076, R^2 = 3.5%), with negligible contributions from CAMS and QPR attendance. Thus, it appears that AMSR was the most impactful training on confidence scores, even when taking into account other trainings attended.

DISCUSSION

In the present study, we examined whether behavioral health providers' confidence in delivering treatment for individuals experiencing suicidality was associated with self-reported implementation of evidenced-based practices specific to suicide care. We further investigated whether participating in a greater number of trainings on suicide prevention was linked to increased confidence and delivery of best practices, and lastly, we examined whether or not scores of confidence and/or practice were differentially associated with distinct treatment modalities received in training (DBT, CAMS, QPR, and AMSR).

As hypothesized, behavioral health providers who reported being more confidence in their skills related to suicide care were also more likely to incorporate best practices. This result is in accordance with previous research that suggests that level of comfort and self-efficacy beliefs associated with working with suicidal people are related to greater use of evidenced-based practices, even when controlling for individual differences and case load (Lee, Osteen, & Frey, 2016; Osteen, Frey, Woods, Ko, & Shipe, 2017; Roush et al., 2018). In fact, one previous study found that providers with higher comfort levels, regardless of fear of negative outcomes, were more likely to adequately implement suicide risk assessments (Roush et al., 2018).

The finding that staff members who attended a greater number of trainings were more likely to report higher confidence and use suicide prevention best practices is also consistent with our expectations and is supported by previous research demonstrating the effectiveness of training in impacting suicide-related knowledge, practices, and confidence (Silva et al., 2016). This preliminary result suggests that the delivery of multiple and complementary trainings to behavioral health providers, as opposed to just one training, might further improve outcomes of confidence and practice related to various dimensions of suicide care.

It is interesting that, when analyzing each training separately, significant differences on higher score of practice were only demonstrated among individuals that participated in CAMS and DBT, whereas this was not the case for staff who attended AMSR and QPR. The finding that QPR training was not related to higher practice scores among behavioral health providers is not entirely surprising giving that the skills taught in QPR are aimed at individuals who do not work primarily in the behavioral health field and might be too elementary for mental health providers (QPR, 2017). In fact, previous research documented that QPRT (Question, Persuade, Refer, and Treat) is not associated with greater knowledge about conducting suicide risk assessment, safety planning, and documenting risk among mental health providers (Gryglewicz, Chen, Romero, Karver, & Witmeier, 2017).

Overall, these results suggest that CAMS followed by DBT training are superior at impacting implementation of evidence-based practices of suicide care. These trainings are well known for providing clinicians with novel and specific tools for the

treatment of at-risk individuals who experience suicidality that go beyond basic training on best practices related to suicide prevention (Jobes, 2012; Landes et al., 2016; Tørmoen et al., 2014). CAMS, in particular, was specifically created to target suicidality by identifying distal and proximal risk factors and drivers of suicidal intention. One of the advantages of CAMS is that treatment is designed to be a collaborative process in which both the clinician and the client decide the focus of intervention to reduce suicidality (Ellis, Rufino, & Allen, 2017; Jobes, 2012). The empirical evidence on the effectiveness of CAMS to target suicidality is continuing to grow; for example, CAMS demonstrates effectiveness in reducing suicide ideation, overall distress, and increasing hope (Ellis, Rufino, Allen, Fowler, & Jobes, 2015; Jobes, Lento, & Brazaitis, 2012; Ryberg et al., 2016).

Results suggested that all trainings but QPR were associated with greater self-report confidence on providing suicide-specific care, with AMSR being a stronger predictor of these scores. As mentioned above, it appears that QPR, although effective for nonmental health providers in identifying individuals at risk of suicide (Cross et al., 2007, 2010; Litteken & Sale, 2017), might not be as effective in increasing confidence among clinicians who may already have the knowledge and skills associated with this training (Gryglewicz et al., 2017). All of the other trainings seem to have incremental value in their likelihood to increase comfort and delivery of best practices for suicide prevention (Ellis et al., 2017; Landes et al., 2016; Marshall et al., 2014; Tørmoen et al., 2014). However, this finding needs to be replicated with more studies comparing and exploring the effectiveness of these particular trainings in clinicians' confidence, skills, and implementation of recommended practices for suicide.

The results from this study should be interpreted in light of the following limitations. Given the cross-sectional nature of this study, assumptions cannot be made with regard to causality. Moreover, considering that pre-test levels of self-reported confidence

and practice were not available, conclusions about training's impact on these variables were hindered. Thus, it is possible that changes in comfort and actual practices occurred as a result of other extraneous factors that were unaccounted for in the study (e.g., cultural change associated with the implementation of the GLS grant) and not as a result of training. Another limitation is linked to potential inaccuracies associated with self-report of confidence and practices. For instance, clinicians could be biased in their accuracy of actual delivery of practices, exaggerate their use of evidence best practices, or misremembered their participation in trainings. At last, given that the study focuses on behavioral health providers, these results may not generalize to staff working at other settings.

This study is the first, to our knowledge, to compare the relationship between self-report confidence and actual practices among four different evidenced-based trainings for suicide prevention. Findings from this study suggest that there is a small but significant benefit to multiple trainings for increasing practice and confidence and that behavioral health providers who are confident in their skills are more likely to incorporate best practices. Although some trainings were revealed to be stronger predictors of either scores of confidence and practice, together the combination of DBT, CAMS, QPR and AMSR trainings was associated with an increased sense of confidence and implementation of practices for suicide prevention. However, it appears that QPR training might be less useful for behavioral health providers, who seem to benefit from more advanced training.

This study also outlines steps for a research agenda. In future studies, it will be important to administer pre-test and post-tests measures on knowledge, confidence, and skills before trainings, and follow samples longitudinally for a more rigorous design on the effectiveness of training. In addition, the use of behavioral observations or objective measures of implementation of evidenced-based practices to examine accuracy of self-

reports will provide further support to the impact of training in the delivery of suicide-related services. Researchers could also aim to determine whether there is an ideal number or combination of trainings and whether there is a point in which adding trainings is no longer beneficial and adds burden to clinicians. At last, it will be important to develop studies exploring whether some modalities of training (e.g., experiential training versus online training) are associated with higher confidence and implementation of practices among behavioral health providers (Roush et al., 2018; Silva et al., 2016). For instance, previous research has suggested that although most trainings might produce changes in knowledge and attitudes, it is through active learning strategies that behavioral changes are produced (Beidas & Kendall, 2010; Osteen et al., 2017). In sum, our results underscore the importance of examining packages of trainings for suicide prevention and of establishing if there is incremental utility of delivering multiple trainings to increase levels of confidence and practice among clinicians.

REFERENCES

Ahmedani, B. K., & Vannoy, S. (2014). National pathways for suicide prevention and health services research. *American Journal of Preventive Medicine*, *47*, S222–S228. https://doi.org/10.1016/j.amepre.2014.05.038

Beidas, R. S., & Kendall, P. C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice*, *17*, 1–30. https://doi.org/10.1111/j.1468-2850.2009.01187.x

Bernert, R. A., Hom, M. A., & Roberts, L. W. (2014). A review of multidisciplinary clinical practice guidelines in suicide prevention: Toward an emerging standard in suicide risk assessment and management, training and practice. *Academic Psychiatry*, *38*(5), 585–592. https://doi.org/10.1007/s40596-014-0180-1

Brown, G. K., & Jager-Hyman, S. (2014). Evidence-based psychotherapies for suicide prevention: Future directions. *American Journal of Preventive Medicine*, *47*, S186–S194. https://doi.org/10.1016/j.amepre.2014.06.008

Cross, W., Matthieu, M. M., Cerel, J., & Knox, K. L. (2007). Proximate outcomes of gatekeeper training for suicide prevention in the workplace. *Suicide and Life-Threatening Behavior*, *37*, 659–670. https://doi.org/10.1521/suli.2007.37.6.659

Cross, W., Matthieu, M. M., Lezine, D., & Knox, K. L. (2010). Does a brief suicide prevention gatekeeper training program enhance observed skills? *Crisis*, *31*, 149–159. https://doi.org/10.1027/0227-5910/a000014

DeHay, T., Ross, S., & McFaul, M. (2015). Training medical providers in evidence-based approaches to suicide prevention. *International Journal of Psychiatry in Medicine*, *50*, 73–80. https://doi.org/10.1177/0091217415592362

Ellis, T. E., Rufino, K. A., & Allen, J. G. (2017). A controlled comparison trial of the Collaborative Assessment and Management of Suicidality (CAMS) in an inpatient setting: Outcomes at discharge and six-month follow-up. *Psychiatry Research*, *249*, 252–260. https://doi.org/10.1016/j.psychres.2017.01.032

Ellis, T. E., Rufino, K. A., Allen, J. G., Fowler, J. C., & Jobes, D. A. (2015). Impact of a suicide-specific intervention within inpatient psychiatric care: The Collaborative Assessment and Management of Suicidality. *Suicide and Life-Threatening Behavior*, *45*, 556–566. https://doi.org/10.1111/sltb.12151

Godoy Garraza, L., Walrath, C., Goldston, D. B., Reid, H., & McKeon, R. (2015). Effect of the Garrett Lee Smith Memorial Suicide Prevention Program on suicide attempts among youths. *JAMA Psychiatry*, *72*, 1143–1149. https://doi.org/10.1001/jamapsychiatry.2015.1933

Goldston, D. B., Walrath, C. M., McKeon, R., Puddy, R. W., Lubell, K. M., Potter, L. B., et al. (2010). The Garrett Lee Smith memorial suicide prevention program. *Suicide and Life-Threatening Behavior*, *40*, 245–256. https://doi.org/10.1521/suli.2010.40.3.245

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*, 676–691. https://doi.org/10.1111/sltb.12049

Graham, R. D., Rudd, M. D., & Bryan, C. J. (2011). Primary care providers' views regarding assessing and treating suicidal patients. *Suicide and Life-Threatening Behavior*, *41*, 614–623. https://doi.org/10.1111/j.1943-278X.2011.00058.x

Gryglewicz, K., Chen, J. I., Romero, G. D., Karver, M. S., & Witmeier, M. (2017). Online

suicide risk assessment and management training: Pilot evidence for acceptability and training effects. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *38*, 186–194. https://doi.org/10.1027/0227-5910/a000421

Jobes, D. A. (2012). The Collaborative Assessment and Management of Suicidality (CAMS): An evolving evidence-based clinical approach to suicidal risk. *Suicide and Life-Threatening Behavior*, *42*, 640–653. https://doi.org/10.1111/j.1943-278X.2012.00119.x

Jobes, D. A., Lento, R., & Brazaitis, K. (2012). An evidence-based clinical approach to suicide prevention in the Department of Defense: The Collaborative Assessment and Management of Suicidality (CAMS). *Military Psychology*, *24*, 604–623. https://doi.org/10.1080/08995605.2012.736327

Lamis, D. A., Underwood, M., & D'Amore, N. (2017). Outcomes of a suicide prevention gatekeeper training program among school personnel. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *38*, 89–99. https://doi.org/10.1027/0227-5910/a000414

Landes, S. J., Matthieu, M. M., Smith, B. N., Trent, L. R., Rodriguez, A. L., Kemp, J., et al. (2016). Dialectical behavior therapy training and desired resources for implementation: Results from a national program evaluation in the Veterans Health Administration. *Military Medicine*, *181*, 747–752. https://doi.org/10.7205/MILMED-D-15-00267

Lee, S. J., Osteen, P. J., & Frey, J. J. (2016). Predicting changes in behavioral health professionals' clinical practice skills for Recognizing and Responding to Suicide Risk. *Journal of the Society for Social Work and Research*, *7*, 23–41. https://doi.org/10.1086/685037

Linehan, M. M., Comtois, K. A., Murray, A. M., Brown, M. Z., Gallop, R. J., Heard, H. L., et al. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry*, *63*, 757–766. https://doi.org/10.1001/archpsyc.63.7.757

Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., et al. (2015). Dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry*, *72*, 475–482. https://doi.org/10.1001/jamapsychiatry.2014.3039

Litteken, C., & Sale, E. (2017). Long-term effectiveness of the question, persuade, refer (qpr) suicide prevention gatekeeper training program: Lessons from Missouri. *Community Mental Health Journal*, *54*, 282–292. https://doi.org/10.1007/s10597-017-0158-z

Marshall, E., York, J., Magruder, K., Yeager, D., Knapp, R., Santis, M. L., et al. (2014). Implementation of online suicide-specific training for VA providers. *Academic Psychiatry*, *38*, 566–574. https://doi.org/10.1007/s40596-014-0039-5

Osteen, P., Frey, J. M., Woods, M. N., Ko, J., & Shipe, S. (2017). Modeling the longitudinal direct and indirect effects of attitudes, self-efficacy, and behavioral intentions on practice behavior outcomes of suicide intervention training. *Suicide and Life-Threatening Behavior*, *47*, 410–420. https://doi.org/10.1111/sltb.12288

Pisani, A. R., Cross, W. F., & Gould, M. S. (2011). The assessment and management of suicide risk: State of workshop education. *Suicide and Life-Threatening Behavior*, *41*, 255–276. https://doi.org/10.1111/j.1943-278X.2011.00026.x

QPR Institute. (2017). Retrieved June 6, 2017, from http://www.qprinstitute.com

Roush, J. F., Brown, S. L., Jahn, D. R., Mitchell, S. M., Taylor, N. J., Quinnett, P., et al. (2018). Mental health professionals' suicide risk assessment and management practices: The impact of fear of suicide-related outcomes and comfort working with suicidal individuals. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *39*, 55–64. https://doi.org/10.1027/0227-5910/a000478

Ryberg, W., Fosse, R., Zahl, P. H., Brorson, I., Moller, P., Landro, N. I., et al. (2016). Collaborative Assessment and Management of Suicidality (CAMS) compared to treatment as usual (TAU) for suicidal patients: Study protocol for a randomized controlled trial. *Trials*, *17*, 481. https://doi.org/10.1186/s13063-016-1602-z

Sale, E., Hendricks, M., Weil, V., Miller, C., Perkins, S., & McCudden, S. (2017). Counseling on access to lethal means (calm): An evaluation of a suicide prevention means restriction training program for mental health providers. *Community Mental Health Journal*, *54*, 293–301. https://doi.org/10.1007/s10597-017-0190-z

Schmitz, W. J., Allen, M. H., Feldman, B. N., Gutin, N. J., Jahn, D. R., Kleespies, P. M., et al. (2012). Preventing suicide through improved training in suicide risk assessment and care: An American Association of Suicidology Task Force report addressing serious gaps in U. S. mental health training. *Suicide and Life-Threatening Behavior*, *42*, 292–304. https://doi.org/10.1111/j.1943-278X.2012.00090

Silva, C., Smith, A. R., Dodd, D. R., Covington, D. W., & Joiner, T. E. (2016). Suicide-related knowledge and confidence among behavioral health care staff in seven states.

Psychiatric Services, *67*, 1240–1245. https://doi.org/10.1176/appi.ps.201500271

STONE, D. M., HOLLAND, K. M., BARTHOLOW, B., CROSBY, A. E., DAVIS, S., & WILKINS, N. (2017). *Preventing suicide: A technical package of policies, programs, and practices*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION (SAMHSA). (2017). *National registry of evidence-based programs and practices (NREPP)*. Retrieved January 31, 2017, from https://www.samhsa.gov/nrepp

SUICIDE PREVENTION RESOURCE CENTER (SPRC). (2017a). *Programs with evidence of effectiveness*. Retrieved March 1, 2018, from http://www.sprc.org/resources-programs

SUICIDE PREVENTION RESOURCE CENTER (SPRC). (2017b). *Zero suicide workforce survey*. Retrieved September 1, 2016, from https://zerosuicide.sprc.org/files/zero-suicide-workforce-survey-questions

TØRMOEN, A. J., GRØHOLT, B., HAGA, E., BRAGER-LARSEN, A., MILLER, A., WALBY, F., ET AL. (2014). Feasibility of dialectical behavior therapy with suicidal and self-harming adolescents with multi-problems: Training, adherence, and retention. *Archives of Suicide Research*, *18*, 432–444. https://doi.org/10.1080/13811118.2013.826156