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Effects of a Late Life Suicide Risk Assessment Training on Multidisciplinary Health Care Providers

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Abstract

Older adults are among the highest at risk group for completing suicide, and they are more likely to seek mental health services from providers outside of traditional mental healthcare. However, providers across the spectrum of care have limited training in suicide risk assessment and management and particularly lack training in suicide prevention for older adults. An educational program was developed to increase awareness and improve suicide risk assessment and management training for a range of health care providers who may see older adults in their care settings. One hundred and thirty two participants from two VA Medical Centers participated in a 6.5 hour long workshop in the assessment and management of suicide risk among older adults. Participants were asked to complete pre- and- post workshop case notes and report on subjective changes in knowledge, attitude, and confidence in assessment and managing suicide risk in older adults. Participants included social workers, nurses, physicians, psychologists, and occupational therapists coming from a variety of care settings including outpatient and inpatient medical, outpatient and inpatient mental health, specialty clinics, and home and community. Following the workshop, participants demonstrated improvement in the overall quality of case notes ($p<.01$), increased ability to recognize important conceptual suicide risk categories ($p<.05$), and reported

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heightened awareness of the importance of late life suicide. Results suggested that educational training may have beneficial impact on multidisciplinary care providers' ability to identify and manage suicide risk in the elderly.

Keywords

Late life suicide; Suicide Prevention Training; Multidisciplinary Education

INTRODUCTION

Older adults (age 65 or greater) are particularly vulnerable to suicide , and are disproportionately more likely to complete suicide compared to younger cohorts[1]. Little is known about the degree to which health and mental health care providers are aware of this disproportionate risk in this specific population. Awareness of this information alone may significantly improve suicide prevention strategies directed toward older adults[2]. Thus, awareness of and attitudes about this issue should be a target for educational activities. Once an appropriate level of appreciation for the problem is established, focus should turn to assuring that providers have the tools to adequately determine suicide risk and intervene when necessary.

Assessment and conceptualization of suicide risk have improved by increasing the utility of such assessments to clinical intervention and management[3]. However, the integration of these approaches into clinical work has been slow at best, even among mental health professionals[3]. For older adult patients, the problem is exacerbated by the fact that these patients typically present to primary care providers who receive far less relevant training than mental health specialists[4] and may be less inclined to discuss depression or suicide[5]. Yet, older adults are more likely to seek mental health care in primary care settings[6,7], with up to 73% of older patients who committed suicide visiting their primary care provider within one month of their death[6,7]. Improved identification of suicide risk among older adults will require training of providers across the health care spectrum.

Particularly among older adults, identification of suicide risk in a manner that informs intervention poses unique challenges. Primary among these is that individual risk factors may function differently for older adults than they do in general. One well-documented difference is that older adults may be less likely to express emotional distress [8–10] or to admit to having suicidal ideation or intent than younger cohorts[11]. This alone may test the utility of a standard clinical assessment of suicidal intent, plans, and means because the intent may be denied or not reported. Additionally, older adults are more likely to use highly lethal methods to complete suicide[12]. To effectively assess and manage suicide risk in an older patient, a provider needs to be aware of, and able to account for, the increased severity of the risk factor "access to lethal means." Other specific factors, including the presence of chronic disease and pain[7,13], and social isolation and loneliness[14,15] may be more common and function in a similar manner for older patients, increasing the need for specialized training.

Given the above considerations, any educational program seeking to equip providers across the spectrum of care to aggressively intervene in the presence of late life suicide risk should focus on: a) increasing provider awareness of and changing attitudes toward late life suicide risk among older adults, b) improving provider knowledge and skills for assessing and conceptualizing general suicide risk (i.e. incorporating the distinction between dynamic, changeable risk factors from static, unchanging risk factors consistent with that taught in McNiel et al. [3]), and c) improving knowledge and skills in applying these methods specifically to older adults. These goals comprised the primary objectives for the training program described here.

METHODS

This project represents a modification and extension of procedures employed by McNiel et al.[3], both in terms of the curriculum (heavily modified to apply to older adults), and the outcome assessment process (slightly modified). Data were collected during the normal course of this educational program activity and did not include collection of any identifiable information.

Participants

One hundred and thirty two participants from across two large west coast Veterans Affairs (VA) health care systems attended the training. A “Save the Date” announcement was emailed to care providers across multiple disciplines and settings throughout the two health care systems. An online registration link was sent two months prior to the conference and was open to all participants until two weeks prior to the workshop. Participants came from multiple disciplines including social work (44%, N=58), psychology (26%, N=31), nursing (17%, N=24), physicians (9% N=12, 9 of whom were psychiatrists), and 4% (N=5) “other” (e.g. occupational therapy, administration). Participants reported various amounts of previous training in suicide assessment and prevention, including “none” (7%), “less than 5 hours” (24%), “5–10 hours” (24%), “11–20 hours” (24%), and “more than 20 hours” (20%). Participants reported working in inpatient medical and mental health (15.8%); outpatient mental health (22.3%); outpatient medical clinics (15.1%); community based (18%); and “other” (6%; e.g., hospice and research) (see Table 1).

Training Content and Structure

The 6.5 hour training was offered concurrently at two major VA hospitals in California. Three presenters taught from the first hospital site, and one presenter taught from the second. Attendees at both sites were linked via videoconference.

Assessments and Measures

Educational programs must consider concepts of adult learning and be able to demonstrate effective changes in knowledge and behavior [16]. To address these requirements, we added the goal of altering awareness of and attitudes about suicide among older adults to the aims of the workshop. The efficacy of the training was assessed with measures collected at three time-points: pre- and post- workshop training assessments were collected (N= 67 respondents; 51% of 132 total attendees), and an online follow-up survey was conducted 3-

months later (n=51 participants responded; 39% of all attendees). In contrast to the McNiel study, the current protocol addressed suicide risk only and assessed long term (3 months) impact on self-perceived learning and professional practice. Consistent with the intent of this training to reach out to providers without traditional mental health backgrounds, participants were coded as either having a primarily mental health training background (i.e., social work, psychiatry, psychology) or not (i.e, nursing and rehab).

Analyses were conducted via mixed-model 2 (pre vs. post) × 2 (mental health vs. non-mental health) ANOVA where the main effect of pre- vs. post-test indicates change over time and a significant interaction would indicate differences in outcome between those with and without primarily mental health backgrounds. Differences between background training groups (mental health vs. not) would be indicated by a significant main effect of mental health background. To control for type I error within each family of analyses, results were required to reach significance at $p<.017$ (.05/3) for the self-report items and $p<.012$ (.05/4) for the behavioral coding items.

Attitude and Knowledge Assessment—Attitudes and knowledge were assessed via self-report paper-and-pencil testing during each of the three time points. Participants were asked to rate self-perceived 1) knowledge about older adult suicide, and confidence to 2) assess and 3) manage that risk on a 7-point scale ranging from “not knowledgeable” to “completely knowledgeable” and “completely unable” to “completely able”. At post-test only, participants were asked how likely they were to apply what they had learned into their clinical practice on a 5-point scale ranging from “not at all” to “definitely likely.” At 3-month follow-up only, participants were also asked about the continued impact of the training on their professional activities.

Clinical Behavior Assessment—Participants were presented with vignettes, modified from McNiel et al.[3], to represent older adults at risk for suicide, and asked to “Write a case note reflecting your assessment of risk and your plan for managing that risk.” The order of the two vignettes was counterbalanced within each of the two training sites. A trained rater (psychology intern), who was not part of the planning committee and did not attend the workshop, then independently coded the pre- and post- tests using a modified version of the coding form employed by McNiel et al.[3]. The rater was trained to acceptable initial reliability with one of the raters from the McNiel et al. study and kept blind to the pairing of the notes and to whether the notes were pre or post test. The modification for current purposes consisted of rater coding of three additional older adult specific items:

1. Does the note identify advanced age as risk factor for suicide?
2. Does the note indicate other consideration of older adult status regarding risk of suicide (e.g. modification of other factors)?
3. Does the note indicate consideration of advanced age in the management of suicide risk?

A total summary score, as well as three indices were calculated for each participant at each time point. The three indices included:

1. Mention of older-adult specific risk issues (the three new items above)
2. Distinguishing between static (i.e., unchanging) vs. dynamic (i.e., changeable) suicide risk factors
3. Treatment planning/risk management documentation

RESULTS

Attitudes and Knowledge Outcomes

Sixty-seven participants (51% of attendees) provided pre- and post-test responses to the self-report attitude and knowledge questions. As indicated in Table 2, participants from primarily mental health backgrounds reported greater confidence to assess and manage suicide risk at both assessment time points. Confidence and knowledge increased significantly during the training, and no differences in the improvement between groups was indicated (see Table 2). Ninety three percent of respondents indicated that they were “highly or definitely likely” to apply the information from the workshop to their clinical practice (see Figure 1).

At 3-month follow-up, 90% (N=49 of 53) of respondents “agreed” or “strongly agreed” that the workshop increased their awareness of late life suicide risk and management, 86% (N=44) indicated continued interest in learning more about the topic, and 84% (N=43) “agreed” or “strongly agreed” that the workshop helped them in their ability to conduct a suicide risk assessment in older adults (see Figure 1).

Qualitative Comments on Practice Change

At 3 months post workshop evaluation, participants reported making several changes to their clinical practice with regards to suicide risk assessment and management. Qualitative statements from participants included:

- “have asked more in-depth questions about depression during my assessments”
- “monitor closely if change in living arrangements; passing away of loved one/friend; c/o chronic pain. Make appropriate referrals for further assessment.”
- “use the risk factors checklist when I see a potentially suicidal veteran to make sure I don’t miss anything. It helps to guide my decisions as to what to do next.”
- “Helped teach medical students about risk assessment.”

Clinical Behavior Outcomes

For the detailed analysis of the pre and post-test vignette notes, 71 (53%) participants returned both pre and post-test notes. Of those 71, 14 (25%) showed considerably poorer motivation on completing post-workshop evaluations compared to that demonstrated on their own pre-test (scored > 1 SD worse). We interpret these 14 as providing invalid, essentially missing, post-test data and removed them from further analyses. Note that these exclusions

represent radically different pre- and post-tests (e.g. a thorough 1-page note at pre-test and a 2-sentence response on post-test). Two participants did not indicate their training background, leaving a remaining sample size of 55 (77% of the original 71). Comparisons between those retained and those removed were conducted via chi square or t-test as appropriate. Results indicated no differences between groups with regard to proportion of those with mental health vs. non-mental health background ($\chi 2$ (1) = 0.119, p = .731), years of experience (t (64) = 0.412, p = .681), baseline self ratings (p's = .616 – .917), or likelihood of employing the training information in their work (t (48) = 1.48, p = .146). The removed group did, however, score significantly better on pretest note ratings (t (69) = 3.18, p = .002), suggesting that novelty of training content was positively associated with cooperation with the posttest evaluation.

The results of the Clinical Behavioral Outcomes closely paralleled those of the self-report ratings above (see Table 2). The 38 participants (69%) from primarily mental health backgrounds scored significantly higher on the overall quality of their note and on the ratings specific to static vs. dynamic risk. Participants also demonstrated significant improvement in total quality and static vs. dynamic content from pretest to post-test, but not for content related to management or specific to older adults. Again, these effects applied across training background.

DISCUSSION

Given the strong association between age and completed suicides, and the evidence that older adults are more likely to come into contact with health professionals outside of mental health in the management of their mental health care needs, it is particularly imperative that a variety of health care professionals are competent in suicide risk assessment. Barriers to conducting adequate suicide risk assessments may include lack of access to training and low confidence in existing skills for assessing and managing risk, suggesting a need for better access to effective training. The current educational program was developed to meet these educational needs.

Provider Awareness and Attitudes

Interest in learning about suicide prevention for older adults was easily generated by a "save the date" announcement. We observed that the number of participants who inquired about the conference exceeded seating capacity and many were placed on a waitlist. This observation supported that there was a great need for such training. Health care providers representing a diverse range of specialties in the spectrum of patient care registered for and attended the workshop. Participants' backgrounds were equally split between mental health settings and general medical settings. Results from the initial evaluation immediately following the training demonstrated that all participants regardless of training background gained a heightened awareness of the clinical importance of, and increases in self perceived confidence in assessing and managing suicide risk in older adults. Three-month follow-up assessment findings suggested that these changes were likely sustained over time. While participants with mental health backgrounds had better skills and confidence at baseline than those with non-mental health backgrounds across all outcome measures, both groups

demonstrated significant improvements from pre- to post-workshop, and the absence of statistical interaction suggests the magnitude of improvement was similar across groups.

Clinical Behavior Outcomes

We demonstrated through written case notes that participants improved in general suicide risk assessment and management skills. Analyses of the clinical behavior (case note documentation) suggested significant improvement in all participants' overall medical record documentation quality following the workshop. Moreover, participants demonstrated significant improvement of conceptual clarity regarding static vs. dynamic risk, which may be important for targeting risk factors that are susceptible to intervention strategies. Participants also subjectively reported practice level changes at 3-month follow-up. Forty three percent (N=22) of participants who responded to the follow-up survey reported incorporating items, knowledge, and ideas learned from the workshop into their professional practice in a number of ways including, utilizing risk assessment scales described in the workshop and paying closer attention to specific risk factors in older adults. These findings suggest improvement in overall case conceptualization of suicide risk factors in a manner more supportive of treatment plan integration. In settings employing electronic medical records, such improvements can have positive system-wide effects on intra-clinic communication and improving the ability of providers across the care spectrum to intervene. In addition, such improvements may be important with regards to institutional and clinician liability risk.

The outcome assessments did not demonstrate participants' improvement in age specific aspects of suicide risk assessment and management. While the improvements demonstrated above did occur among providers who focus care on older adults, the lack of improvement on the older-adult specific content suggests an area for enhanced care and concentration in any training program focusing on a specific population. Although behavior change in this population-specific outcome was not demonstrated, participants reported subjective improvements in their understanding about the salience of suicide in older adults, and in applying risk assessment to this population. These subjective results held at 3-months follow-up and were accompanied by reported changes in actual practice with regards to suicide risk assessment and management with their older patients.

Limitations

Areas for future improvement include greater integration of case studies throughout the didactic sessions, which may have provided more continuity between lessons and aided in the consolidation of target concepts, such as the age specific factors. Case vignettes were included in only one didactic session and were well-received. In addition, although the planning committee discussed steps to facilitate completion of case notes pre- and post-workshop, it is possible that additional motivating steps would increase participation in this evaluation component of the training. For example, two possible steps could have been to announce that CME/CEU credits could only be given if pre- and post- workshop notes were completed and/or if more time were allowed for participants at the end of the workshop to complete the post-workshop notes.

CONCLUSION

To conclude, we demonstrated that a specially designed educational workshop may have large scale effects on multidisciplinary providers' abilities and confidence to intervene with older adults in crisis and at risk for suicide. Several participants informally reported to workshop staff that they experienced a paradigm shift in their understanding of suicide risk in older adults, which seemed representative of how other participants might have experienced the workshop based on their evaluation responses. The training made an impact not only on provider awareness of the critical importance of late life suicide risk assessment, which was in itself a significant outcome, but they also reported changes in attitude and knowledge and demonstrated objective changes in their conceptualization of key suicide risk assessment procedures. Furthermore, the training seemed to impact providers equally regardless of mental health training background. Providers expressed continued interest and perceived a need for more training in suicide prevention in older adults post-training. Results demonstrate that professionals from diverse training backgrounds can learn and improve from the same training, despite preexisting differences in skills and confidence. Further developing and improving suicide prevention training options particularly for high risk subgroups such as older adults clearly continues to be a high educational priority for many health care providers.

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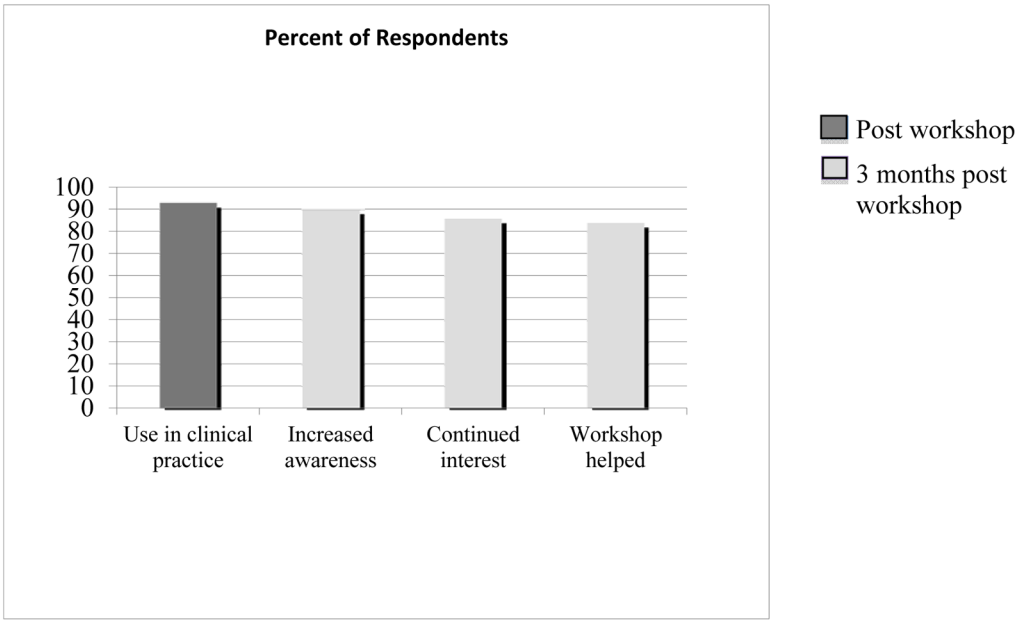

Figure 1.

Workshop impact on intent for practice change, and long term impact on awareness, interest and perceived utility. Figure 1 presents the percentage of participants who a) believed that they were likely or highly likely to apply knowledge and skills from the workshop into their clinical practice; and agreed or highly agreed that b) the workshop increased their awareness about late life suicide, c) they continued to be interest in learning more about late life suicide, and d) they thought the workshop was useful. Ranges for the "use in clinical practice" scale: 1= not at all, 2=unlikely, 3= somewhat likely, 4= highly likely, 5=definitely. Ranges for "workshop increased awareness" and "continued interest": 1=strongly disagree, 2= disagree, 3=neutral, 4=agree, 5=strongly agree.

Use in clinical practice= Percent of respondents indicating **highly likely or definitely** that they "would apply changes in knowledge, attitude, or skills obtained in this learning activity to their clinical practice."

Increased awareness= Percent of respondents who **agreed** or **strongly agreed** to the statement "the workshop increased my awareness about late life suicide."

Continued interest= Percent of respondents who **agreed** or **strongly agreed** to the statement "I would like to learn more about late life suicide."

Workshop helped= Percent of respondents who **agreed** or **strongly agreed** to the statement "I believe I gained a better understanding of how to conduct suicide risk assessment in older populations as a result of the Late Life Suicide Prevention Workshop."

Table 1

Demographic and Background Information on Workshop Participants

Total N=132		**N(%)**
Discipline (N=130 Provided Responses)		
	Social Work	58 (44)
	Psychology	31(26)
	Nursing	24 (17)
	MD Physicians	12 (9)
	Psychiatrists	9 (7)
	Other *	5 (4)
Hours of training in suicide (N=90 Provided Responses)		
	0	6 (7)
	<5	22 (24)
	5–10	22 (24)
	11–20	22 (24)
	>20	18 (20)
Work Settings (N=105 Provided Responses)		
	Inpatient	22 (21)
	Outpatient mental health	31 (30)
	Outpatient clinic	21 (20)
	Home or community	25 (24)
	Other †	6 (6)

* Occupational Therapist (N=1); Recreational Therapy (N=1); Chaplaincy (N=1); Administrative (N=2)

† Hospice, Research (N=2), Telephone care, neurosurgery/hemodialysis, and vet center

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Table 2

Mean Index Scores and Effects of Participant Background and Training

	Means (±SDs)		ANOVA Results (F =)		
Outcome/Background	**Pretest**	**Posttest**	**Effect of MH Background [1]**	**Effect of Training [2]**	**Background x Training Int. [3]**
Attitude and Knowledge Outcomes (all F's (1,65))					
Conf. Assess					
MH	4.93 (±0.90)	5.53 (±0.86)	7.61**	40.35***	3.96
Non-MH	4.05 (±1.53)	5.42 (±0.84)			
Conf. Manage					
MH	4.72 (±0.98)	5.38 (±0.95)	6.19*	36.10***	3.30 [4]
Non-MH	3.86 (±1.46)	5.10 (±1.00)			
Knowledge					
MH	4.80 (±1.02)	5.65 (±0.71)	4.93*[5]	47.71***	0.83
Non-MH	4.16 (±1.54)	5.26 (±0.87)			
Clinical Behavioral Outcomes (all F's (1,53))					
Total					
MH	22.29 (±5.88)	24.45 (±4.96)	14.37***	12.40***	0.63
Non-MH	15.47 (±8.01)	18.88 (±7.42)			
LL Specific					
MH	0.95 (±1.11)	0.97 (±1.24)	3.29 [4]	0.01	0.01
Non-MH	0.47 (±0.87)	0.47 (±0.87)			
Static/Dynamic					
MH	5.73 (±1.62)	6.26 (±1.41)	15.09***	9.69**	2.58
Non-MH	3.53 (±2.40)	5.18 (±2.65)			
Management					
MH	4.13 (±3.29)	4.68 (±3.78)	1.07	0.12	0.72

	Means (±SDs)		ANOVA Results (F =)		
Outcome/Background	**Pretest**	**Posttest**	**Effect of MH Background** [1]	**Effect of Training** [2]	**Background x Training Int.** [3]
Non-MH	3.53 (±4.21)	3.29 (±3.60)			

* $p<.05$,

** $p<.01$,

*** $p<.001$;

[1] Differences in mean scores between participants with and those without primarily mental health backgrounds. All differences indicate higher scores for those with mental health backgrounds.;

[2] Differences in mean index scores from pretest to post-test. All differences indicate improvement during training.;

[3] Interaction effect of background group by training. Significant differences would have indicated differences in training effect between those with and those without mental health backgrounds.

[4] Nonsignificant at p = .07 would likely obtain significance with increased sample size and power.

[5] $p = .03$ did not meet conservative study criteria to control for alpha error.

MH=Mental Health; Non-MH=Non Mental Health; Conf. Assess=Confidence to Assess Late Life Suicide (1=completely unable, 7=Completely able); Conf. Manage= Confidence to Manage Late Life Suicide (1=completely unable, 7=completely able), Knowledge=Knowledge about suicide and working with older suicidal patients (1=not at all knowledgeable, 7=Extremely Knowledgeable); Total= Total score on note quality; LL Specific= Mention of older-adult specific risk issues; Static/Dynamic= Distinguishing between static (i.e., unchanging) vs. dynamic (i.e., changeable) suicide risk factors; Management= Treatment planning/risk management documentation