

Assessing Suicide Ideation: Comparing Self-Report Versus Clinician Report

Hirut Yigletu, Sharon Tucker, Marcelline Harris, and Jacqueline Hatlevig

BACKGROUND: The accurate identification of suicidal individuals is an important but complex process. Common approaches to suicide assessment include self-report tools and clinician interview. **PURPOSE:** The purpose of this study was to examine and compare two assessment methods for determining suicidal ideation of patients admitted for treatment of a mood or anxiety disorder. **DESIGN:** A secondary analysis of an existing dataset was conducted. Sixty-eight inpatients treated for mood or anxiety disorders completed the Beck Depression Inventory (BDI) and were assessed by a clinician using an investigator-developed interview schedule. One item from BDI and one question from the interview schedule were used to compare two methods for assessing suicidal ideation. **RESULTS:** In 80% of cases, responses were in agreement between the two assessment methods. However, disagreement between assessment methods was found for 13 (19.4%) cases. The rate of disagreement was beyond chance ($p = .00$). **CONCLUSION:** The findings support inclusion of both a self-report method and a face-to-face interview to assess suicide ideations. Further research is warranted to examine if both methods for assessing suicide ideations are indicated during the first 24 hours after admission to an inpatient unit. *J Am Psychiatr Nurses Assoc, 2004; 10(1), 9-15.*

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Each year about 30,000 people die by suicide in the United States (Kaplan & Sadock, 1998). The loss of even one person's life by suicide is especially tragic and affects many others, particularly the victim's family, friends, and health care providers. However, the accurate identification of suicidal individuals is a complex

and difficult process. Patients are not always willing to talk openly about their suicidal ideas, and, in turn, clinicians may not always thoroughly or accurately assess this sensitive topic.

Self-rating instruments that include one or more items on suicidal thoughts, such as the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and clinical face-to-face interviews have been the most widely used methods to determine if a person is suicidal or not. Several authors suggest that some patients feel more comfortable disclosing their suicidal thoughts using a self-rating questionnaire than in discussing such information in a face-to-face interview (Erdman, Greist, Gustafson, Taves, & Klein, 1987; Greist et al., 1973; Levine, Ancill, & Roberts, 1989). According to the findings from these studies, self-rating instruments for assessing suicidal behaviors have the advantage of being standardized. Whereas clinicians may either rely on their intuitions and/or omit or fail to inquire about specific data relevant to suicide risk, standardized self-rating instruments encourage a more complete and objective assessment of suicidal behaviors (Asnis et al., 1994).

Hirut Yigletu, RN, MS, former graduate student in the College of Nursing and Health Sciences, Winona State University, Winona, MN.

Sharon Tucker, RN, CNS, DNSc, clinical nurse researcher, Department of Nursing, Mayo Clinic, Rochester, MN; tucker.sharon@mayo.edu.

Marcelline Harris, RN, PhD, clinical nurse researcher and assistant professor, Department of Nursing/Department of Medical Informatics, Mayo Clinic, Rochester, MN.

Jacqueline Hatlevig, RNC, PhD, professor, College of Nursing and Health Sciences, Winona State University, Winona, MN.

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Little research has been conducted on the agreement between clinician assessment of suicide and self-report methods, yet clinician assessment remains the primary standard for determining suicidal risk and treatment recommendation. By investigating and comparing these two methods of suicidal assessment, a better understanding of the consistency and agreement of each in assessing suicidal patients can be discovered.

Thus, the purpose of this study was to examine and compare two assessment methods for determining suicidal ideation. A secondary analysis of an existing dataset was performed to determine whether patients admitted for treatment of a mood or anxiety disorder disclosed the same suicide-related information on a self-administered questionnaire that clinicians subsequently reported based on a face-to-face structured interview with the patient. One item from a self-report questionnaire and one question from an interview schedule were used to compare two methods for assessing suicidal ideation.

The following research questions were addressed: (a) What is the observed agreement between two methods of assessing suicide ideation among patients admitted for inpatient treatment for a mood or anxiety disorder? (b) What is the observed agreement between two methods of assessing suicidal ideation among patients admitted for inpatient treatment for a mood or anxiety disorder based on gender, education, and age?

METHODS

The primary study consisted of a convenience sample of 68 participants admitted to a Midwestern adult inpatient psychiatric unit that treated primarily mood, anxiety, eating, and adjustment disorders. The purpose of the primary study was to examine the relationship between brief inpatient treatment intensity and treatment outcomes (Tucker, Moore, & Luedtke, 2000). At the time of admission and dismissal to the inpatient treatment unit, all participants completed the BDI (Beck et al., 1961) and a clinician/researcher interviewed (assessed) all patients using an interview schedule designed by the researchers. Data from the primary study were used in the current study to explore whether patients disclosed the same suicide-related information in the BDI that clinicians subsequently reported based on a face-to-face interview with the patient in the initial 24 hours following admission.

The two methods of assessment of suicide ideation compared in this study were one item from the BDI (Beck et al., 1961) and one item from the interview schedule designed for the primary study. The BDI is a

21-item scale that assesses the presence and severity of affective, cognitive, motivational, vegetative, and psychomotor components of depression. Each of the 21 items consists of three or four self-evaluative statements of increasing severity (ranging from 0 to 3 points). Patients choose the statement that best describes how they have been feeling over the past week. Scores range from 0 to 63, with higher scores indicating greater severity of depression. The BDI was standardized on two samples of mixed inpatients and outpatients and has been used on a wide range of groups including both clinical and nonclinical populations. Clinical cutoff scores have been identified for different degrees of depression. Validity and reliability have been demonstrated (Corcoran & Fischer, 1987, p. 107; Thompson, 1989). In this study, only one item from the BDI was used for analysis. This question directly addresses suicidal ideation by instructing the patient to circle the statement that best describes the way he or she has been feeling the past week, including the day of admission. The response statements include

- I don't have any thoughts of killing myself.
- I have thoughts of killing myself, but I would not carry them out.
- I would like to kill myself.
- I would kill myself if I had the chance.

An interview schedule was developed in the primary study for purposes of guiding and standardizing a clinical interview with patients. The interview schedule was developed and tested on nonstudy patients to provide training so that a consistent interview process was established for the clinicians and patients. It consisted of 35 questions and was used for all interviews with study participants at time of admission and dismissal to the inpatient psychiatric unit. Examples of questions include

- Describe what symptoms brought you to the hospital.
- What previous psychiatric/emotional problems have you experienced?
- What do you want most to change as a result of your hospital stay?
- Have there been times when you have felt unusually depressed, sad, hopeless for several days at a time? Describe.
- Describe your energy level.
- Do you ever experience hopelessness or suicidal thinking? Describe.

Only this last question among the examples from the interview schedule was used for the purpose of this secondary analysis. For this question, participants were asked to elaborate on any answer that was not a definite *no*. The interviewer used prompting questions

such as “Tell me what you mean by sometimes” or “Are you having suicidal thoughts now?” or “How would you carry out a suicidal thought?”

Secondary data analysis was conducted. Demographic data (age, gender, marital status, employment status, and education) are reported in frequencies and percentages, as well as central tendencies where appropriate. The responses on both the BDI and interview schedule were dichotomized into two categories for each instrument: negative for *or denies suicide ideations* and positive for *or expresses suicide ideations* (regardless of degree or seriousness). Any ambivalence was counted as a positive. The responses for both the item on the BDI and the item from the interview schedule are summarized with frequencies and percentages. Agreements and disagreements between methods are also reported with frequencies and percentages. The data are then compared by subsets based on gender, education, and age. A Kappa statistic was calculated to determine if observed disagreement between methods of suicide ideation assessment is statistically significant.

RESULTS

The sample was a convenience sample that consisted initially of 68 patients admitted to a Midwestern adult inpatient psychiatric unit that treated primarily mood, anxiety, eating, and adjustment disorders. Of the 68 patients, 18 (26.5%) were male and 50 (73.5%) were female. The sample ranged in age from 19 to 80 years, with a mean age of 38.4 years. Marital status, education level, employment status, and primary diagnoses of the 68 patients are described in Table 1.

Observed Agreement Between Two Methods

Among the 68 participants in this study who completed the BDI, 50 (73.53%) responded positive to the suicide item, 17 (25%) responded negative, and 1 (1.47%) left the item blank. This latter participant's data were deleted from further analysis. For the face-to-face interview, clinicians recorded a positive response for suicide ideations for 45 (67.16%) participants and a negative response for 22 (32.84%) participants.

The two sets of data were compared for each subject. Figure 1 displays the agreement between the two assessment methods. Of the 50 participants who responded positive for suicide ideations on the BDI, 41 (82%) were also rated as positive by clinicians following the face-to-face interviews. Nine (18%) of the 50 partici-

TABLE 1. Sample Demographic Frequencies and Percentages (N = 68)

	Frequency	(%)
Marital status		
Single	18	(26.9)
Married	36	(53.7)
Divorced	9	(13.4)
Widowed	4	(6.0)
Education		
Below high school	6	(8.8)
High school	39	(57.4)
College	19	(27.9)
Beyond college	4	(5.9)
Employment		
Employed	39	(57.4)
Unemployed	29	(42.6)
Primary diagnoses		
Major depression disorder	40	(59.7)
Adjustment disorder	19	(28.4)
General anxiety disorder	8	(11.9)
Dysthymia	6	(9.0)
Panic disorder	4	(6.0)
Bipolar disorder	3	(4.5)
Agoraphobia	1	(1.5)
Obsessive compulsive disorder	1	(1.5)
Posttraumatic stress disorder	1	(1.5)

Note: Patients often had more than one diagnosis.

pants who responded positive on the BDI were rated by clinicians as negative for suicide ideations following the face-to-face interviews. Of the 17 (25.4%) participants who responded negative for suicide ideations on the BDI, clinicians rated 13 (76%) as negative for suicide ideations and 4 (24%) as positive following the face-to-face interviews. Overall, the responses between assessment methods were in agreement for 80% of the 67 cases. However, for 13 cases (19.4%) there was disagreement between the two assessment methods. The Kappa statistic suggests this disagreement is statistically significant (.53, $p = .00$).

Observed Agreement Based on Gender, Education, and Age

The responses between assessment methods were further compared by subsets based on gender, education, and age. Figure 2 displays frequencies of agreements and disagreements between suicide ideation assessment methods by gender. Agreement between assessment methods was found for 80% of the 49 female participants, and for 83% of the 18 male participants.

Figure 3 presents frequencies of agreements and disagreements between suicide ideation assessment

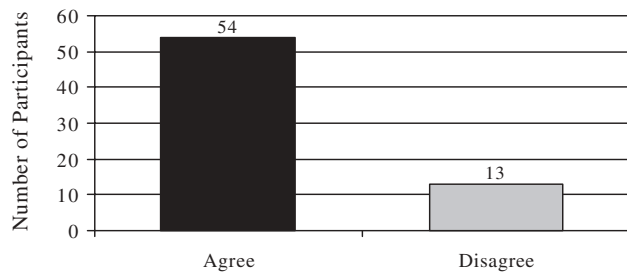


FIGURE 1. Frequencies of agreement/disagreement between methods of assessing suicide ideations.

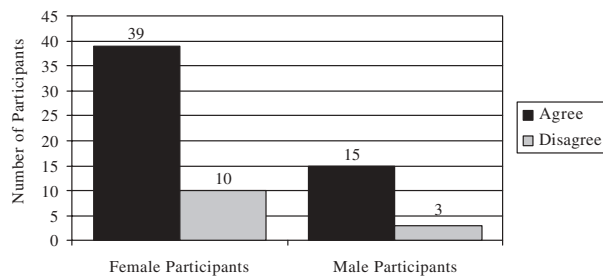


FIGURE 2. Frequencies of agreement/disagreement between methods of assessing suicide ideations by gender.

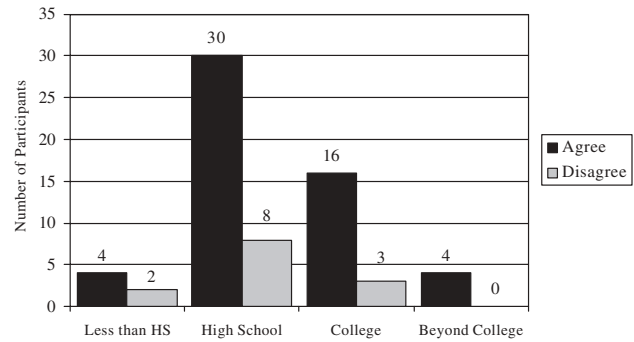


FIGURE 3. Frequencies of agreement/disagreement between methods of assessing suicide ideations by education.

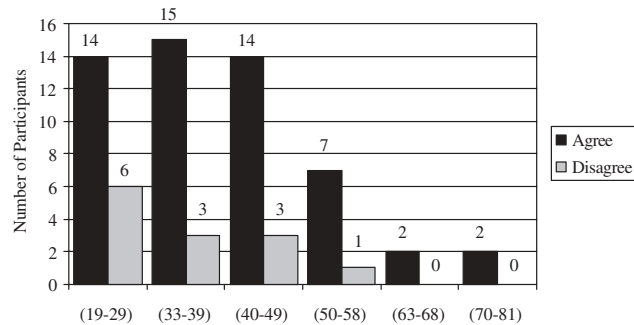


FIGURE 4. Frequencies of agreement/disagreement between methods of assessing suicide ideations by age.

methods by education. Agreement between assessment methods was found for 66% of the participants who had less than a high school education ($n = 6$), 79% of participants who had a high school education ($n = 38$), 84% of participants who had a college education ($n = 19$), and 100% of participants who had an education beyond college ($n = 4$). Overall, agreement rates increased as education levels increased.

Figure 4 presents frequencies of agreements and disagreements between suicide ideation assessment methods by age groups. Agreement between assessment methods was found for 70% of participants who were 19 to 29 years old ($n = 20$), 83% of participants who were 33 to 39 years old ($n = 18$), 82% of participants who were 40 to 49 years old ($n = 17$), 88% of participants who were 50 to 58 years old ($n = 8$), and 100% of participants who were 63 to 78 years old ($n = 4$). As with education, agreement between methods increased as age levels increased.

In summary, the data indicate a fairly high observed agreement between assessment methods for suicide ideation. However, disagreement between methods

was found for about 20% of the sample, which is statistically significant. Analyzing demographic subsets indicated that agreement between assessment methods increased as age and education levels increased.

DISCUSSION

The purpose of this study was to examine and compare two assessment methods for assessing suicidal ideation. A secondary analysis of an existing dataset was conducted to explore whether participants admitted for treatment of a mood or anxiety disorder disclosed the same suicide-related information on a self-administered questionnaire that clinicians subsequently reported based on a face-to-face interview with the patient.

Few studies have been conducted on suicidal assessment to determine whether self-report or the face-to-face interview is more or equally reliable in assessing a

suicidal patient. Only one published article was found that compared different assessment measures. Asnis and colleagues (1994) prospectively examined whether patients disclosed the same information about suicidal behaviors on a self-reported instrument that they conveyed to a clinician in a face-to-face interview. The results indicated a generally high level of agreement between these two forms of suicide assessment. The authors concluded that there was no significant difference between the two methods of assessing a suicidal patient. The one exception was the question that concerns "recent suicidal ideation," where patients tended to disclose more on the self-report form. The current study, which focused specifically on recent suicide ideations, found that three fourths of the sample participants responded positively to suicide ideations on the self-report tool, whereas clinicians rated two thirds of participants positive for suicide ideation following a face-to-face interview.

The results of this study demonstrated some differences between the information gathered by the two assessment methods. Although for the majority of participants (81%) the two suicide ideation assessment methods were in agreement, for almost 20% of participants, data collected with the two methods disagreed. There are several possible explanations that might account for these findings.

Both the BDI and the interview schedule were administered upon admission to the inpatient psychiatric unit within a 24-hour period since admission. That is, participants may have completed the two tools at separate hours during the 24-hour period. This may have played a role in the observed agreement found between assessment methods. Although 24 hours is not a great amount of time, ambivalence often accompanies suicidal ideations creating a very unstable thought process for depressed persons. Additionally, some persons have ambivalence about admitting to suicidal thoughts, whereas others experience fluctuating thoughts with even slight changes in mood or environmental events. Thus, with more time and stabilization of patients in an inpatient setting, greater agreement between assessment methods may be observed.

Also related to time of data collection is the comfort level of the patients at the time that the BDI and the interview schedule were administered. In general, most people are not comfortable revealing their innermost thoughts to strangers that they have known for a very short time. This is a matter of not only their level of comfort but also that of trust. So although they might answer with a positive response about suicidal thoughts in a self-report assessment tool such as the BDI, they might feel initially uncomfortable in reveal-

ing a similar response during the face-to-face interview.

Indeed, the data in this study indicated that although three fourths of participants reported suicide ideations on the self-report tool (BDI), clinicians rated only two thirds of the participants as positive for suicide ideation. Conceivably, a later comparison of assessment methods might reveal greater agreement in methods of assessing participants' responses because their comfort and trust level would be higher at a later time. It would also be important to look at reasons these participants came to the hospital initially. If the decision was voluntary, then it would make sense that these participants would reveal as much as possible in order to get treatment and feel better. On the other hand, those who were forced or encouraged against their choice, either by family members or friends, to go to the hospital may not feel like they need help or treatment. Consequently, they might not reveal as much to avoid an extended stay at the hospital.

Another possible explanation could be participant misunderstanding or misinterpretation of the questions posed either during the face-to-face interview or on the BDI. This explanation may be associated with education level because for those with the least amount of education, who might have the most difficulty understanding a question, the rate of agreement between methods was lowest (66%). Establishing clear and concise questions during the interview may eliminate misunderstandings that might possibly influence what patients reveal about suicidal thoughts and behaviors. Being sensitive to education level when performing the assessment would be important.

Like education, age also appeared to influence rate of agreement. The youngest group had the lowest observed agreement (70%) between assessment methods, whereas the agreement increased with each older age bracket. Hence, trust issues or ambivalence could be greater among younger patients.

In sum, the findings of this secondary analysis indicated that for the majority (approximately 80%) of participants, ratings of suicide ideations were similar between methods. However, the data also suggested suicide ideation assessments in the first 24 hours of admission to an inpatient setting might vary depending on assessment method, particularly with younger and less-educated participants. The factors outlined above should be considered in the suicide assessment process. Being aware of these factors and using different methods may result in more accurate assessments of suicidal tendencies, more appropriate and effective treatments, and optimally, prevention of suicide.

SCOPE AND LIMITATIONS

This study included several limitations. There are many complex issues related to the assessment of suicidal ideation. Many variables and issues could not be addressed or controlled in this particular study.

Because the study was analyzed in the form of secondary analysis, no direct contact with the participants was made to clarify aspects of responses made on the self-reports. There was also the limitation of uncontrolled/unknown clinical bias imposed on the secondary analysis due to the subjectivity of clinicians' reports. The researchers were not present for the face-to-face interviews; therefore, the original study research clinicians may have relied on their own intuition and/or omitted or failed to inquire about specific data relevant to suicide risk. Any biases or omissions of the original study research clinician may have been incorporated in the documents reviewed for this study. Another limitation concerns comprehension of the questions for the participants. Questions posed in the self-rating instrument or administered by the clinician may have been stated unclearly to participants, thereby leading to ambiguities that would be impossible to glean from a secondary analysis of the original study.

The small sample size and involvement of only one institution limit generalizability of the findings. Moreover, the small sample size limited the analyses of subsets of data based on demographics. For example, 70% of the participants were female, resulting in a disproportionate gender distribution. On the other hand, the high rate of females is consistent with previous demographic reports of gender distribution for depression. Nonetheless, future investigation of the effects of age, gender, and education on suicide ideations and tendencies is warranted. Despite the limitations of this study, the findings are clinically important and need to be considered when implementing and improving assessment of suicidal ideation.

IMPLICATIONS AND RECOMMENDATIONS

Practice and Treatment

The findings support inclusion of both a self-report method such as the BDI and a face-to-face interview to assess suicide ideations with each patient admitted to an inpatient setting for treatment of a depression-related disorder. Patients have different needs, and although some may not feel comfortable enough to reveal thoughts of suicide to a clinician in a face-to-face interview, they may be able to do so on a self-report question-

naire. Collecting both self-report method and interview data may serve as a best practice and verify a patient's mental status and thoughts on suicide. Administering both methods rather than only one may reduce some doubt or failure to identify a suicidal patient. Because the overall goal is to accurately identify those with suicidal ideations and provide them with the best possible treatment, minimizing doubts and questions should be of utmost importance.

To increase the efficacy of suicide assessment methods, a follow-up assessment plan should also be implemented so that patients who might feel overwhelmed and disoriented upon admission might have a chance to reveal accurate and/or changing information about their suicidal tendencies. Regular suicide assessments through different methods are advised throughout hospitalization. The results of this study show that the utilization of self-report and interview methods rather than just one method may help to improve identification of a suicidal patient and minimize the risk of suicide.

Research

Although suicide has been the focus of much research, unanswered questions remain in regard to assessment and factors that influence how, when, and what a patient decides to reveal about his or her suicidal thoughts. Studies examining suicidal assessment to determine whether a self-report or the face-to-face interview is more or equally reliable in assessing a suicidal patient are needed. Also, subsets of patients based on gender, age, education level, and other such factors need to be explored in the context of suicide assessment in order to investigate their weight in accurately assessing suicidal ideation. Future research to explore the role of these subsets would be of importance to the study and practice of suicidal assessment.

Another idea for future research is to replicate this study using the same assessment methods and tools but with a larger sample size. A wide variety of participants of a wide range of ages, from different race, ethnic, educational backgrounds, and settings would improve generalizability. Future studies could also focus on patient preferences in regard to type of assessment tools to determine what, if any, differences exist regarding patient preferences for revealing suicide ideations. Finally, it would be interesting to rigorously compare those patients who were admitted to a psychiatric facility and immediately administered the BDI and interview schedule with those who had a delay between admission and assessment.

SUMMARY

This study compared two methods of assessing suicide ideations among participants receiving inpatient treatment for depression and anxiety disorders. For the majority of the participants, agreement between methods was observed. However, for a subset of the sample, a statistically significant rate of disagreement between methods was found. Although the study design imposed several limitations, the findings support using both self-report and interview methods to obtain the best suicide ideation assessment data on each patient. Future investigations are needed on comparing suicide ideation assessment methods and tools and their efficacy in identifying suicide ideations.

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