Factor Analysis of the Beck Scale for Suicide Ideation With Female Suicide Attempters

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A sample of 119 female suicide attempters completed the Beck Scale for Suicide Ideation (BSS). Although confirmatory common factor analyses of BSS items failed to support previously hypothesized one-, two-, or three-factor models, confirmatory principal components analyses substantiated hypothesized one- and two-dimensional models. Heuristics for the number of factors converged on two latent dimensions and exploratory principal components analyses verified the presence of two previously hypothesized suicide ideation factors: motivation and preparation. Scales based on this two-dimensional model demonstrated convergent validity with other suicide indices.

Keywords: suicide ideation; factor analysis; motivation; preparation; attempters

As one of the 10 primary causes of death in the United States (Anderson, Kochanek, & Murphy, 1997) and Canada (Health Canada, 1994), suicide represents a major public health concern. More specifically, suicide ideation is an important precursor of attempted or completed suicide (Ranieri et al., 1987). The risk for future suicide attempts among suicide ideators is more than 6 times that in nonideators (Kuo, Gallo, & Tien, 2001). Moreover, having suicidal thoughts is a relatively common experience, with rates ranging from 10% to 18% of the general population worldwide (Weissman et al., 1999). Consequently, suicide ideation is a mental health issue in its own right, and refining tools for its measurement may play a crucial role in ultimately reducing suicide risk.

To quantify suicide ideation, Beck, Kovacs, and Weissman (1979) formulated the 19-item Scale for Suicide Ideation (SSI), a clinical rating instrument for use with psychiatric patients. The SSI demonstrated strong internal consistency (coefficient alpha = .89) and interrater reliability (correlation between clinicians of .83) as well as an ability to differentiate between hospitalized suicide ideators and outpatient depressives. Using principal components analysis with varimax rotation, Beck et al. also found that the SSI produced three meaningful underlying factors: Active Suicidal Desire, Preparation, and Passive Suicidal Desire. Although Holden, Mendonca, and Mazmanian (1985) replicated the internal consistency (coefficient alpha = .84) and interjudge reliabilities (correlation between raters of .86) of the SSI, its three-factor structure was not confirmed by principal components analysis of psychiatric patients' data. Holden et al. reported the emergence of only two factors, Suicidal Desire and Suicide Preparation, which failed to support Beck et al.'s (1979) differentiation of suicidal desire into separate active and passive facets. Furthermore, based on the data of 444 suicide ideators, Beck, Brown, and Steer (1997) using promax rotation of maximum-likelihood factors identified two dimensions, Preparation and Motivation, that appeared more similar to the factors of Holden et al. (1985) than to those of Beck et al. (1979).

Subsequent attempts to measure suicidal ideation have led to the development of several different self-report ver-

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sions based on the original SSI. For instance, Miller, Norman, Bishop, and Dow (1986) added and deleted items and expanded the response options to produce an 18-item self-report form that has since been adapted (Clum & Yang, 1995) for use with student suicide ideators. Principal components analysis with varimax rotation yielded three factors, Suicidal Desire, Preparation for Attempt, and last, Perceived Capability of Making an Attempt, which was interpretively unlike any of Beck et al.'s (1979) factors. The SSI has also been translated into French as a self-report version that was administered to a mixed sample of clinical patients and general students (De Man, Balkou, & Iglesias, 1987). Principal components analysis of this variation produced three meaningful varimax-rotated factors that despite being interpreted as similar to those of Beck et al. (1979), actually appeared to differ from the original SSI. In particular, although De Man et al.'s (1987) third factor was labeled as Passive Suicidal Desire, it had only one of three items in common with Beck et al.'s (1979) third factor. Beck, Steer, and Ranieri (1988) have also converted the original SSI to a self-report version. Maximum-likelihood factoring with promax rotation produced three factors, Desire for Death, Preparation for Suicide, and Active Suicidal Desire (Steer, Rissmiller, Ranieri, & Beck, 1993), that did not conform to those of Beck et al. (1979). This version is now referred to as the Beck Scale for Suicide Ideation (BSS), and its manual (Beck & Steer, 1993) reports a five-factor solution (Intensity of Suicidal Ideation, Active Suicidal Desire, Planning, Passive Suicidal Desire, and Concealment) based on varimax rotation of principal components.

Taken together, the previous research on the assessment of suicidal ideation suggests that differences in its obtained dimensionality may depend on the population being sampled, the particular suicide ideation scale being used, and the specific factor-analytic methods employed (e.g., factoring algorithm, criterion for deciding on the number of factors, method of rotation, etc.). The purpose of this study was to advance current knowledge of the structure of suicide ideation by examining its dimensionality for suicide attempters. Various demographic (e.g., gender), psychiatric (e.g., depression), and symptomatic (e.g., hopelessness) variables are documented (e.g., Clark & Fawcett, 1992) as important risk factors for suicide. Nevertheless, a history of serious suicide attempts may be the single best predictor of completed suicide (Moscicki, 1997). Suicide ideation is a logical precursor to actual suicide attempts. Consequently, the present investigation focuses on the nature of suicide ideation for a sample of attempters. As a primary step toward prevention, understanding the structure of ideation for attempters may provide important insight into the dysfunctional thinking of individuals who are at relatively extreme risk for suicidal behavior.

METHOD

Participants

Eligibility criterion for inclusion in this study was a lifetime history of at least one suicide attempt. Voluntary participants were recruited through a university introductory psychology subject pool (77% of sample) and through community newspaper advertisements (23% of sample). The sample comprised 134 participants (119 women, 15 men) with a mean age of 24.39 years (SD = 11.47, range = 17-68) and provided an 83.75% response rate for the 160 individuals who were provided with the research materials. No information on race or ethnicity was collected.

The number of suicide attempts per individual ranged from 1 to 25 (M = 3.02, SD = 3.34). The time since the most recent attempt varied between 1 week and 27 years. The percentages of the sample that had attempted suicide within the previous 6 months, 1 year, 2 years, and 5 years were 22%, 35%, 52%, and 77%, respectively. The most common method for the most recent attempt was poisoning (56%), followed by cutting and piercing (29%), and gases and vapors (3%).

Procedure

Prior to the initiation of data collection, the research procedure received approval by a university General Research Ethics Board. Potential research participants who gave informed consent were provided with a BSS booklet and a letter of information that briefly described the types of questions they could expect. The BSS comprises 19 positively keyed groups of statements. For each group, statements represent increasing severity (from 0 to 2), and respondents answer by selecting one option. On the cover page of the BSS booklet, participants were asked to indicate their age, gender, number of previous suicide attempts, and both method and intent to kill oneself (on a 5-point scale) associated with their most recent suicide attempt. A debriefing sheet that included information for any participant who wished to contact a local health practitioner or mental health counseling agency and an addressed, stamped envelope were also provided. Individuals completed the materials at their own convenience and returned their responses anonymously through the mail.

RESULTS

Due to potential gender differences and to the small number of men in the total sample, reported analyses are restricted to the 119 female suicide attempters. This sample had a mean age of 23.53 years (*SD* = 10.92). Of these participants, 71% had been recruited through the university subject pool.

The latent structure of the BSS was examined using three procedures that differed in terms of (a) analyzing item covariances or correlations, (b) factoring algorithms, (c) allowing correlated or uncorrelated factors, (d) rotational criteria, and (e) fit indices.

First, a maximum-likelihood confirmatory factor analysis (CFA) was undertaken on item covariances. Because the self-report BSS was meant to mirror the clinician-based SSI, four models for the BSS, all derived from the SSI structure with samples of suicide ideators, were examined (see Table 1). These included the original (Beck et al., 1979) one-factor and three-factor SSI models for 90 hospitalized ideators, Holden et al.'s (1985) two-factor model of the SSI derived from 50 suicide ideators attending a psychiatric hospital crisis unit, and Beck et al.'s (1997) two-factor model for the SSI based on 444 outpatient ideators. Absolute fit between the obtained and implied covariance matrices considered χ^2, the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), Akaike's Information Criterion (AIC), and the standardized root mean square residual (SRMR). For comparative fit relative to the null model, the comparative fit index (CFI) was evaluated. For parsimonious fit, the root mean square error of approximation (RMSEA) and its confidence interval were calculated. Guidelines have suggested acceptable fit when GFI and AGFI exceed .90, CFI is .95 or greater (Hu & Bentler, 1999), RMSEA is .08 or less (Browne & Cudeck, 1993), and SRMR is .08 or less (Hu & Bentler).

Results of the CFAs are displayed in Table 1. Based on a one-factor model (Beck et al., 1979) whereby all items were free to load on a single dimension, fit indices were as follows: $\chi^2(152) = 425.31$, $p < .01$, GFI = .72, AGFI = .66, RMSEA = .12, 90% RMSEA confidence interval = .11 to .14, CFI = .86, SRMR = .11, and AIC = 501.31. With a three-factor model corresponding to the scoring key for Beck et al.'s (1979) tridimensional structure of the original SSI, fit measures were $\chi^2(152) = 376.84$, $p < .01$, GFI = .75, AGFI = .69, RMSEA = .11, 90% RMSEA confidence interval = .098 to .13, CFI = .86, SRMR = .16, and AIC = 452.84. For examining the two-factor model based on the scoring key of Holden et al. (1985), indices were $\chi^2(152) = 426.76$, $p < .01$, GFI = .72, AGFI = .66, RMSEA = .12, 90% RMSEA confidence interval = .11 to .14, CFI = .83, SRMR = .17, and AIC = 502.76. Finally, based on the scoring key for salient loadings in Beck et al.'s (1997) two-factor model, $\chi^2(152) = 459.00$, $p < .01$, GFI = .71, AGFI = .64, RMSEA = .13, 90% RMSEA confidence interval = .12 to .14, CFI = .83, SRMR = .15, and AIC = 535.00. Because the various models examined are nonhierarchical, they could not be compared statistically for relative fit. An inspection of AIC values does favor the three-factor solution; however, if scales are scored based on this three-factor solution, one of the resulting scales (Passive Suicidal Desire) has a coefficient alpha that is unacceptably low (i.e., .47). In general, therefore, none of the models examined resulted in indices with acceptable fit.

Second, confirmatory principal components analysis (McCrae, Zonderman, Costa, Bond, & Paunonen, 1996; Nunnally & Bernstein, 1994) was performed on the item intercorrelations. This involved extracting the same number of components as in the model being tested and rotating them, using a procrustes procedure to a target matrix based on the model. The target matrix had the same number of columns as components in the model and 19 rows (i.e., one for each of the BSS items). Entries in this target matrix were +1.00 for items keyed on a particular component and 0.00 for nonkeyed items. The fit between the observed data and the target matrix was evaluated using coefficients of congruence (Harman, 1976). Guidelines for congruence coefficients suggest minimum values of .80 or .90 to define a matching factor (Barrett, 1986).

For Beck et al.'s (1979) one-factor model, the obtained congruence was .89. Their three-factor model yielded congruence coefficients of .86, .73, and .71 for Active Suicidal Desire, Preparation, and Passive Suicidal Desire, respectively. Holden et al.'s (1985) two-factor model generated congruence coefficients of .84 and .77 for Suicidal Desire and Suicide Preparation, respectively; and Beck et al.'s (1997) two-factor model produced congruence values of .84 for each of Preparation and Motivation. If a congruence value of .80 is used as a heuristic for indicating factor matching, then neither Beck et al.'s (1979) second and third factors nor Holden et al.'s (1985) second factor are adequately replicated in the current sample of suicide attempters. Acceptable congruence is found for Beck et al.'s (1979) one-factor model and for both of Beck et al.'s (1997) factors in their two-dimensional model (see Table 2).

Third, because the confirmatory maximum likelihood and principal components analyses yielded discrepant results with the latter but not the former supporting previous one- and two-factor models, exploratory analytic techniques were additionally employed. Initially, a principal

TABLE 1
Beck Scale for Suicide Ideation Item Confirmatory Models and Maximum Likelihood Factor Loadings (N = 119 female suicide attempters)

	Beck, Kovacs, and Weissman (1979) Model				*Holden, Mendonca, and Mazmanian (1985) Model*		*Beck, Brown, and Steer (1997) Model*	
	One-Factor Solution	*Three-Factor Solution*			*Two-Factor Solution*		*Two-Factor Solution*	
	Factor	*Factor*			*Factor*		*Factor*	
Item Number and Abridged Content	*1*	*1*	*2*	*3*	*1*	*2*	*1*	*2*
1. Wish to live	.67	.68	—	—	.69	—	.69	—
2. Wish to die	.80	.83	—	—	.84	—	.81	—
3. Reasons for living or dying	.64	.64	—	—	.66	—	.65	—
4. Desire for active attempt	.81	.82	—	—	.82	—	—	.82
5. Passive suicidal desire	.64	—	—	.88	.62	.04	.66	—
6. Duration of suicide ideation	.50	.47	—	—	.46	—	.49	—
7. Frequency	.60	.55	—	—	.55	—	.58	—
8. Attitude toward ideation	.69	.70	—	—	.70	—	.70	—
9. Control over action	.64	—	—	—	—	—	—	—
10. Deterrents to active attempt	.25	.25	—	—	—	.08	.25	—
11. Reason for attempt	.33	.33	—	—	.33	—	—	.35
12. Specificity of planning	.14	—	.96	—	—	.67	—	.15
13. Method availability	.28	—	.31	—	—	.42	—	.29
14. Capability for attempt	.37	—	—	.36	—	.46	—	.36
15. Expectancy of actual attempt	.77	.76	—	—	—	.37	.11	.66
16. Actual preparation	.05	—	.65	—	—	.65	—	.06
17. Suicide note	.21	—	—	—	—	.54	—	.21
18. Final acts	.24	—	—	—	—	.52	—	.25
19. Concealment of contemplations	.12	—	—	.24	—	—	—	—

NOTE: Models are based on item scoring designated by authors. For Beck et al.'s (1997) two-factor model, freed parameters are based on their designated salient loadings. A fixed parameter is designated as "—." With multifactor models, in addition to estimating factor loadings and 19 measurement errors (one per item), factor correlations were also estimated. Coincidentally, each model estimates 38 parameters and, given 190 observed covariances, has 152 degrees of freedom.

components analysis of item intercorrelations examined the number of factors to retain. Although six eigenvalues (i.e., 5.81, 2.50, 1.41, 1.08, 1.03, and 1.01) exceeded unity, this heuristic is noted for yielding an overextraction of factors (Nunnally & Bernstein, 1994). A scree test (see Figure 1), parallel analysis (Horn, 1965) based on either mean or 95th percentile eigenvalues, and Velicer's (1976) minimum average partial criterion all converged to indicate the retention of two factors. Consequently, two components (43.69% of the total variance) were extracted and rotated orthogonally to a varimax criterion (see Table 2). Component 1 is interpreted as Suicidal Motivation/Desire and, based on currently observed loadings exceeding .40, shares eight items with Beck et al.'s (1997) nine-item Motivation factor. Component 2 is labeled Suicide Preparation and, predicated on present loadings greater than .40, shares six items with Beck et al.'s nine-item Preparation factor. Interestingly, when the exploratory, two-component, varimax-rotated solution was compared to a model based on salient loadings for Beck et al.'s maximum-likelihood, promax-rotated solution, congruence coefficients were .84 between motivational dimensions and .84 between preparation dimensions. Thus, based on interpretation and common salient items, this exploratory solution with orthogonal rotation to simple structure matches Beck et al.'s two-dimensional model and, in doing so, confirms the generalizability of Beck et al.'s results.

Given that confirmatory principal components and exploratory analyses supported Beck et al.'s (1979) one-dimensional and Beck et al.'s (1997) two-dimensional results, descriptive statistics for these model-based scales for suicide attempters are reported in Table 3. The mean for the total BSS is similar to that (i.e., 15.63) reported in the manual (Beck & Steer, 1993) for inpatient ideators and greater than that (i.e., 11.23) reported for outpatient ideators. Scale scores all demonstrated internal consistency reliabilities greater than .70, and the Beck et al. (1997) Motivation and Preparation scales correlated .57. If correlations with suicide criteria can be regarded as validity coefficients, then the BSS Total Scale and the BSS Preparation Scale demonstrate medium-sized (> .30; Co-

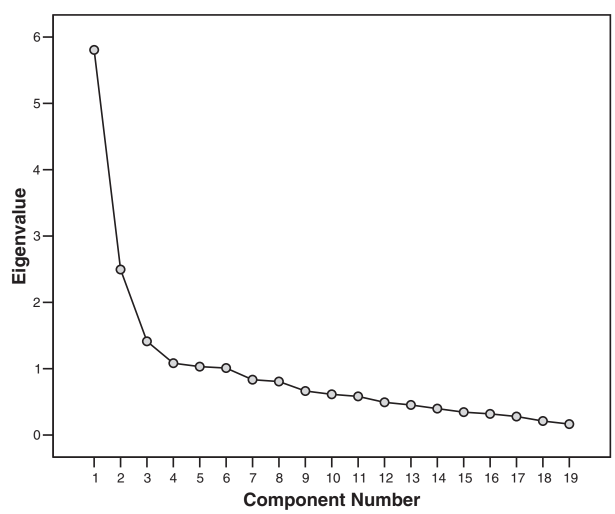
TABLE 2
Rotated Component Loadings for Beck Scale for Suicide Ideation Items (*N* = 119 female suicide attempters)

	One-Component Solution		*Two-Component Solution*				
			Procrustes Rotated		*Varimax Rotated*		
	Component		*Component*		*Component*		
Item Number and Abridged Content	*1*	*Communality*	*1*	*2*	*2*	*1*	*Communality*
1. Wish to live	**.68**	.47	.09	**.73**	.05	**.74**	.56
2. Wish to die	**.76**	.58	.09	**.82**	.03	**.82**	.68
3. Reasons for living or dying	**.67**	.44	.07	**.72**	–.02	**.74**	.55
4. Desire for active attempt	**.78**	.60	.19	**.79**	.15	**.81**	.67
5. Passive suicidal desire	**.66**	.44	.14	**.68**	.10	**.68**	.47
6. Duration of suicide ideation	**.59**	.35	**.51**	**.40**	**.49**	**.43**	.42
7. Frequency	**.69**	.47	**.45**	**.54**	**.42**	**.57**	.49
8. Attitude toward ideation	**.72**	.51	.19	**.71**	.16	**.73**	.56
9. Control over action	**.67**	.45	.26	**.63**	.21	**.64**	.45
10. Deterrents to active attempt	.28	.07	.01	.32	–.03	.31	.10
11. Reason for attempt	.39	.15	.31	.27	.29	.28	.17
12. Specificity of planning	.25	.06	**.79**	–.15	**.79**	–.11	.63
13. Method availability	.37	.13	**.52**	.13	**.52**	.16	.29
14. Capability for attempt	**.48**	.23	**.50**	.27	**.48**	.30	.31
15. Expectancy of actual attempt	**.78**	.61	.29	**.73**	.25	**.75**	.62
16. Actual preparation	.13	.01	**.72**	–.24	**.73**	–.22	.57
17. Suicide note	.29	.08	**.60**	.00	**.61**	.03	.37
18. Final acts	.34	.11	**.60**	.05	**.60**	.09	.37
19. Concealment of contemplations	.15	.02	.14	.10	.12	.09	.02
Congruence Coefficient	.89	.84		.84	.84	.84	

NOTE: Loadings greater than .40 are in bold. For the one-component solution, congruence is based on Beck, Kovacs, and Weissman's (1979) one-component model in which all items are scored on a single scale. For the two-component models, congruence is based on Beck, Brown, and Steer's (1997) two-component model in which items are scored on scales based on reported salient loadings.

hen, 1992) validities for suicide intent and small (< .30) but significant validities based on number of suicide attempts. The BSS Motivation scale possesses a medium-sized validity based on its correlation with suicide intent for the most recent attempt.

FIGURE 1
Scree Plot for Beck Scale for Suicide Ideation Item Components



DISCUSSION

Suicide ideation is recognized as an important health issue in and of itself and as an antecedent of suicidal action (Ranieri et al., 1987). For example, using the BSS, Cochrane-Brink, Lofchy, and Sakinofsky (2000) indicated that suicidal ideation had a large effect size as a separately evaluated correlate of hospital admission for clinically assessed suicide risk. In addition, with a longitudinal study of more than 3,000 outpatients seeking psychiatric treatment, Beck, Brown, Steer, Dahlsgaard, and Grisham (1999) reported that suicide ideation was not only a significant predictor of subsequent suicide but that ideation was more important than hopelessness in indicating suicidal risk. Thus, suicide ideation constitutes both a clinical phenomenon per se as well as a risk factor for self-harm.

Establishing and operationalizing the dimensionality of suicide ideation has made important contributions to the

TABLE 3
Variable Descriptive Statistics and Intercorrelations (*N* = 119 female suicide attempters)

Variable	M	SD	*Coefficient* α	*Intercorrelations* 1	2	3	4	5
1. BSS Total scale	15.51	6.73	.84					
2. BSS Preparation scale	9.46	3.68	.73	.87				
3. BSS Motivation scale	5.30	3.96	.85	.88	.57			
4. Number of suicide attempts	3.05	3.34	—	.27	.28	.15		
5. Suicide intent for last attempt	3.09	1.24	—	.54	.58	.36	.13	

NOTE: BSS = Beck Scale for Suicide Ideation. Correlations of .18 and .23 correspond to significance levels of .05 and .01, respectively.

understanding of suicide. Holden and Kroner (2003) reported that although a scale of suicidal desire clustered closely with measures of depression and hopelessness to represent a dimension of negative cognitions, an index of suicide preparation grouped with measures of internally based suicide motivations and a history of previous suicide attempts to define a distinct dimension of action orientation. The bi-dimensional nature of suicidal manifestations found by Holden and Kroner with a sample of maximum-security, federal prison inmates mirrored closely the latent structure reported for a nonclinical sample primarily composed of undergraduate students (Johns & Holden, 1997). Thus, the differentiation of suicide ideation into separate components can produce measures that have distinct associations with other indices of suicidal risk.

Current findings indicate that suicide ideation, as operationalized by the BSS with suicide attempters, is multidimensional. Although observed results do not exactly confirm some of the specific multidimensional models previously reported (i.e., Beck et al., 1979; Holden et al., 1985), data do support the bi-dimensional model of Beck et al. (1997) and the interpretations of Holden et al. (1985) and Beck et al. (1997). As in the latter two investigations, we find two factors: one with salient loadings for items whose content deals with wishes, reasons, desires, attitudes, and expectancies; and a second factor with item content, including planning, preparation, and acts. The two-factor solution was supported by (a) the convergence of four exploratory heuristics, two of which have substantial Monte Carlo support (Zwick & Velicer, 1986) for their comparative merit; (b) congruence values associated with confirmatory principal components; (c) the interpretability of the rotated solution; and (d) the similarity of the resulting interpretations, based on both targeted and varimax rotations, with those of Holden et al. (1985) and Beck et al. (1997). Although our results could be interpreted as offering yet another two-factor solution from which scales could be developed, we interpret the exploratory solution, in conjunction with the confirmatory principal components analyses, as supporting Beck et al.'s (1997) model and scales based on items with salient loadings in their solution.

If confirmatory principal components analysis and exploratory principal components analysis with varimax rotation of present data support Beck et al.'s (1997) two-factor model that incorporated maximum-likelihood estimation with promax rotation, why did confirmatory maximum-likelihood factor analysis (CFA) produce no fit indices that were deemed to be acceptable for that or any of the four tested models? Although issues of data distributional assumptions may be raised with regard to BSS items, Church and Burke (1994) and McCrae et al. (1996) have indicated that simple structure models of inventory item structure will usually not adhere to conventional or loose goodness-of-fit criteria because of the presence of secondary loadings and correlated residuals that are not theoretically predicted a priori. Individual items will rarely have secondary loadings that are exactly zero; nevertheless, simple structure models assume that these loadings vary randomly about zero. Church and Burke (1994) highlighted further limitations associated with CFA applied to personality measures, and McCrae et al. (1996) advocated the targeted rotation (either with factors or principal components) used here.

Scales based on Beck et al. (1997) have coefficient alpha reliabilities that exceed .70, a standard of adequate reliability (Nunnally & Bernstein, 1994). Furthermore, these scales demonstrate convergent validity for indicating previous number of suicide attempts and suicide intent associated with the most recent attempt. Whether they differentially correlate with various suicide criteria remains to be determined empirically, but previous research (Holden & Kroner, 2003; Johns & Holden, 1997) does suggest the potential merit of this distinction.

Holden et al. (1985) have noted that psychiatric patients' hopelessness tends to be largely unrelated to suicide preparation in contrast to suicidal desire and have suggested that although very intense levels of suicidal intention may be present, clinical assessment may look to focus on variables other than hopelessness (e.g., anger, revenge against a loved one) as antecedents. Steer et al. (1993) indicated that because suicide ideators actively thinking about killing themselves are considered at greater risk than ideators with vague death wishes, subscales of suicide ideation scales may provide clinicians with a systematic basis in screening for at-risk patterns of ideation. The merits of these clinical applications for this differentiation have yet to be explored empirically.

Potential limitations to this research exist. First, respondents were a nonclinical female sample of convenience that had a history of at least one suicide attempt. Differences between men and women and among nonattempter ideators, ideators who attempt suicide, and attempters who subsequently complete suicide are avenues for future research. Second, analyses were based on a sample of 119 respondents. Although the participants to variables ratio (119/19) exceeded 6, an adequate sample size for factoring also depends on the communalities associated with the variables and the number of indicators per factor (MacCallum, Widaman, Zhang, & Hong, 1999). MaCallum et al. (1999) indicated that for communalities of wide range (.2 to .8), good recovery of population factors occurs for sample sizes greater than 60, provided there are at least three indicators per factor. Present conditions conform to those guidelines. Third, the obtained structure of suicide ideation was based on the BSS and, therefore, depends on the content validity of the original 19-item SSI. Fourth, issues of predictive validity were not examined. Screening instruments with high predictive validity for suicide would provide an efficient and economical means of identifying individuals who have a long-term risk of suicide and would allow for ongoing monitoring of risk factors, such as suicide ideation. Criteria such as future suicide attempts, hospitalization, or suicide completion represent outcomes for additional longitudinal investigation. Jackson, Paunonen, Fraboni, and Goffin (1996) suggested that the usefulness of uncovered dimensions cannot be determined by their prominence in factor space alone but should be based on their differential utility in predicting relevant criteria. Particularly relevant for this study would be an examination of the differential predictive validity of the Beck et al. (1997)–based scales of Preparation and Motivation.

In summary, the dimensionality of the BSS in nonclinical suicide attempters is described in two factors that replicate the findings of Beck et al. (1997). Scales of Preparation and Motivation demonstrate acceptable levels of internal consistency reliability and convergent validity. Further research with these separate scales appears justified.

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