

Assessment and Treatment of Suicidal Clients in a University Counseling Center

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Two studies addressed assessment and treatment issues pertaining to suicidal student-clients. In Study 1, the theoretical construction and psychometric properties of the Suicide Status Form (SSF) were described. Results suggest that SSF items have good convergent validity, strong criterion-prediction validity, and moderate test-retest reliability. In Study 2, the SSF was applied to a sample of suicidal student-clients. Results suggest differences between client and clinician pretreatment SSF ratings. Client (not clinician) pretreatment SSF ratings could be used to correctly classify clients into acute resolver and chronic nonresolver treatment-outcome groups. Whereas all suicidal student-clients globally improved with treatment, chronic nonresolvers remained suicidally preoccupied throughout the academic year. These findings are discussed with regard to training, clinical practice, and future research.

The tragedy of a student suicide can profoundly disrupt a campus milieu. As the second leading cause of death on campus (Silverman, 1993), suicide has become a major concern for college and university administrators, faculty, staff, resident-life personnel, campus security, campus ministry, and campus-based health professionals. As discussed by Silverman, a student suicide can virtually halt the daily routines of teaching, research, and scholarship that define campus life. The act of suicide itself is often perceived as a rejection of all that college life strives to be for ambitious and talented adults.

Although concerns about college and university student suicide are self-evident, the literature addressing these concerns is largely limited to considerations of epidemiology, prevention programming, and studies of psychosocial factors of suicide risk among introductory psychology students. Literature that specifically addresses how a counseling center clinician should best assess and treat a suicidal student is remarkably scant, and what does exist is not empirically based.

Since the 1980s the literature on college and university student suicide has increasingly focused on campus-wide suicide prevention and postvention programming (Hipple, Cimboic, & Peterson, 1980; Meilman, Pattis, & Kraus-Zeilmann, 1994; Rickgarn, 1994; Webb, 1986; Westefeld, Whitchard, & Range, 1990). Much of the work in this area has emphasized the critical role of campus-based mental

health services (Trimble, 1990). For example, in a 1-year prospective study of suicidal events that occurred within one campus community, follow-up counseling was by far the most widely used intervention to prevent student suicides (Meilman et al., 1994). Paradoxically, however, campus counseling centers typically do not have specific policies and procedures for evaluating and treating suicidal student-clients. Indeed, in a survey of 147 counseling center directors, Westefeld and Pattillo (1987) found that only 33 (22%) directors had specific procedures for responding to suicidal students. When policies and procedures for suicidal students are established, the focus still tends to be on suicide risk factors rather than on specific clinical guidelines for suicide assessment and treatment (Meilman et al., 1994). Even when guidelines are present, the assessment of suicide risk is often a very challenging undertaking (Berman & Jobes, 1991). Suicidal states are extraordinarily complex; self-destructive feelings are usually multidetermined and tend to wax and wane over time. In truth, it is virtually impossible to validly and reliably predict any form of suicidal behavior (see Maris, Berman, Maltzberger, & Yufit, 1992), and there is very little empirical research available to inform practitioners as to how they should conduct a competent assessment of risk (Jobes, 1995).

Survey data suggest that few mental health practitioners (even psychologists who are trained to use assessment instruments and tests) either use or find effective available suicide-specific assessment instruments or psychological tests (Jobes, Eyman, & Yufit, 1995). Instead, clinicians prefer to ask risk-oriented questions and to make observations during the course of face-to-face clinical interviews (Jobes et al., 1995; Truant, O'Reilly, & Donaldson, 1991). Interestingly, clinicians tend to be extremely confident in their interview assessment abilities, even when there is evidence of interview assessment failures (Coombs et al., 1992). Jobes et al. (1995) found that clinicians tend to be highly wary of potential limitations related to the validity and reliability of suicide assessment instruments but had virtually no qualms about the unknown (and probably

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dubious) validity and reliability of clinical interviews. Critically, preliminary data suggest that interviewing clinicians may sometimes overlook suicide risk or significantly misperceive a suicidal client's motivations and inner experience (Bancroft et al., 1979; Coombs et al., 1992; Hawton, Cole, O'Grady, & Osborn, 1982). Alternatively, however, other studies have found that clinicians can accurately perceive the client's self-report of suicide risk through clinical interviews (Eddins & Jobes, 1994; Kaplan et al., 1994).

Given the above concerns and the serious nature of suicidal conditions, Jobes et al. (1995) have advocated the routine use of suicide risk assessment instruments to augment interview-based assessments of suicide risk. However, even though such an approach may be clinically prudent, a number of the available suicide-specific assessment instruments do have distinct psychometric limitations and sometimes marginal clinical utility. Indeed, as Rothberg and Geer-Williams (1992) have discussed in their review of such instruments, the relative absence of information on the psychometric properties of suicide risk assessment instruments is striking. Beyond issues of validity and reliability, many existing instruments do not have cogency, which refers to the extent to which a scale is developed from a thorough analysis of the problem. For example, many suicide risk assessment instruments do not necessarily use theoretically derived operational constructs. Thus, intuitively appealing suicide risk items (that may be highly intercorrelated) are used to construct scales that have no theoretical base. A final problem with some assessment instruments is related to clinical utility. Given the apparent reluctance of clinicians to use such instruments in the first place, scales that may include over 300 items may seem overly time-consuming, cumbersome, and clinically intrusive (see Eyman & Eyman, 1990).

With regard to clinical treatments of suicidal conditions, the empirical data are similarly scarce (Jobes, 1995). Although there are some exceptions (Lieberman & Eckman, 1981; Linehan, Armstrong, Suarez, Allman, & Heard, 1991; Rudd et al., 1996; Salkovskis, Atha, & Storer, 1990), there are few data about what actually works and does not work in counseling suicidal clients. Treatment-oriented data pertaining specifically to suicidal students is virtually nonexistent.

To address the limitations of the research literature in clinical suicidology, we undertook two studies in which we used samples of "normal" nonsuicidal students (selected from introductory psychology courses) and suicidal students (selected from a university counseling center). In Study 1 we examined the psychometric properties of a novel suicide risk assessment instrument, and in Study 2 we investigated the application of this instrument to a suicidal student sample.

Study 1

An initiative was undertaken in 1988 at the counseling center of The Catholic University of America to establish new policies and procedures for assessing and treating suicidal student-clients. As discussed by Jobes and Berman (1993), initial work in this area involved the construction of

a new instrument that was eventually called the Suicide Status Form (SSF). The SSF was specifically designed to address many of the previously noted problems that plague clinical assessment instruments of suicide risk (e.g., theoretical cogency and clinical utility). Thus, our purpose in Study 1 was to investigate the validity and reliability of the SSF.

Method

Participants

We selected participants from a clinical sample of suicidal students who were seen in a university counseling center from 1991 to 1996 ($n = 106$). This sample consisted of 42 men and 64 women, aged 17–55 ($M = 22.96$ years, $SD = 6.24$). The sample was predominantly Caucasian (79%); the remainder of the sample consisted of the following racial composition: 5% African American, 4% Latino, 4% Asian, 4% Hispanic, 2% "international," and 2% Native American. Additional participants were selected from a sample of nonclinical undergraduate students enrolled in introductory psychology courses ($n = 161$). This sample consisted of 67 men and 94 women, aged 18–26 ($M = 19.60$ years, $SD = 1.40$). The sample was predominantly Caucasian (80%); the remainder of the sample consisted of the following racial composition: 5% African American, 8% Asian, 4% Hispanic, 2% "international," and 1% Native American. From these two samples, both suicidal student-client and nonclinical student subsamples were used for studies of validity and reliability.

Materials

Suicide Status Form. The SSF consists of six self-report and clinician-report items that measure a client's initial presentation of suicidal symptomatology (see Appendix). It includes ratings of five theoretically based items (on 5-point, low-to-high Likert scales) thought to underlie suicide and a sixth item for rating overall risk of suicide. Slight modifications in the language of these theoretical constructs were necessary to accommodate nonprofessional (client) raters (e.g., *agitation* was used on SSF forms in place of *perturbation*).

Page 1 of the SSF is completed by the clinician and contains the client's identifying information, suicide status (e.g., ideation, gesture, or attempt), and the presence of a plan, access to means, suicidal history, substance abuse, significant losses, interpersonal isolation, and psychopathology (see Jobes & Berman, 1993). The six theoretically derived suicide-related items (assessing various affects, cognitions, and behaviors) are independently completed by the clinician (page 2) and client (page 3), respectively.

The first three SSF items (pain, press, and perturbation) were derived from a theoretical model presented by Shneidman (1985, 1987). Shneidman developed his theoretical "cubic" model of suicide that conceptualizes the acute suicidal moment as a convergence of three major dimensions: psychological pain, press, and perturbation. Psychic pain is defined as an unbearable level of psychological suffering (the term *psychache* has more recently been used to describe this particular type of intense mental pain; see Shneidman, 1993). *Press* is defined in terms of Murray's (1938) theory of needs and pressures; pressures are pressures (stressors) that fundamentally impinge on one's psychological world. *Perturbation* is a general term describing an intense state of emotional upset; it is thought to include agitation, perceptual constriction, impulsiveness, and a penchant for action.

The fourth SSF item was taken from Beck's (1986) work on the critical relationship between hopelessness and suicide. Empirical

studies of completed suicides have demonstrated that hopelessness is among the most important suicide risk variables to consider (Beck, Brown, Berchick, Stewart, & Steer, 1990; Beck, Steer, Kovacs, & Garrison, 1985). In addition, the theoretical work of Beck and his colleagues (Beck, Rush, Shaw, & Emery, 1979) on depression has emphasized the crucial motivational symptom of hopelessness that can fundamentally lead to suicidal wishes of escape from a seemingly unbearable situation.

The fifth SSF item is self-regard, which was derived from Neuringer's (1974) empirical work related to the suicidal person's attitude toward the self. In addition, more recent theoretical work by Baumeister (1990), in which suicide is conceptualized as a fundamental escape from self, is implicated as well.

The sixth SSF item is an overall global assessment of suicide risk. This measure is designed to assess potential suicidal behaviors—the clinical–legal bottom line in the overall assessment and treatment of suicide risk (Jobes & Berman, 1993). The SSF is thus a brief, theoretically constructed form of six potentially critical ratings of suicide risk that are independently completed by both members of the counseling dyad.

Hopkins Symptom Checklist (HSCL-90). The HSCL-90 is a 90-item self-report measure that assesses a client's current symptoms on a 0–4 Likert scale (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) as well as the severity of these symptoms during the past week. This study used the Global Severity Index (GSI) scale as a measure of overall client distress upon intake as well as at treatment termination. As discussed by Imber (1975), early versions of the HSCL-90 had good test–retest reliability ($r = .74$). Later studies (e.g., Derogatis, Rickels, & Rock, 1976) of the HSCL-90 indicated good convergent validity (ranging from .40 to .75).

Pressure Inventory (PI). The PI, developed by Weiten (1988), is a 48-item self-report inventory that lists 42 specific examples of pressure evenly divided among six sectors of interaction (family relationships, work relationships, intimate relationships, school relationships, neighbor relationships, and self-imposed pressures) and includes six fill-ins for each respective sector. Ratings are made on 5-point, mild-to-severe, Likert scales. The third version of the PI was used in the current study. Test–retest reliability for the PI (after a 2-week interval) was found to be strong ($r = .72$). The average correlation between the PI and Sarason, Johnson, and Siegel's (1978) Life Experiences Survey was moderate ($r = .57$), demonstrating adequate convergent validity.

Hopelessness Scale (HS). The HS, developed by Beck, Weissman, Lester, and Trexler (1974), is a 20-item true–false questionnaire that was constructed from both a theoretical and a clinical perspective. Overall internal consistency of the scale was .93, and tests of convergent validity yielded a correlation of .74 between HS scores and clinician ratings of hopelessness.

Osgood Semantic Differential (OSD). Neuringer's (1974) self-esteem adaptation of Osgood's Semantic Differential (Osgood, Suci, & Tannebaum, 1957) is a self-report measure in which participants rate feelings about themselves on twenty-five 7-point Likert scales of self-descriptors (e.g., good–bad, kind–cruel, wise–foolish). As reported by Osgood et al., the test–retest reliability of the Semantic Differential (after a 2-week interval) was strong ($r = .85$). In the classic text *The Measurement of Meaning*, Osgood et al. described in depth the rigorous construction, validation, and robust factor structure of the Semantic Differential.

Reasons for Living Inventory (RFL). The RFL developed by Linehan, Goodstein, Nielsen, and Chiles (1983), is a self-report measure in which participants respond to 48 reasons for not committing suicide by rating the importance of these statements on a 6-point scale, ranging from *not at all important* to *extremely important*. Osman, Jones, and Osman (1991) found that the RFL

(after a 3-week interval) had strong test–retest reliability ($r = .83$). Cole (1989) demonstrated that the RFL had moderate convergent validity (ranging from .49 to .57).

Procedure

We conducted three convergent validity studies to examine the SSF items of pain, press, agitation, hopelessness, self-regard, and overall risk. In the first convergent validity study ($n = 70$), we examined the correlations between suicidal student-client SSF ratings of pain and agitation with the HSCL-90 GSI. In the second convergent validity study ($n = 26$), we examined the correlations between nonclinical student SSF ratings of hopelessness and self-regard with the HS and the OSD, respectively. In the third convergent validity study ($n = 37$), we examined the correlations between nonclinical student SSF ratings of press and overall risk with the PI and the RFL, respectively. In a fourth study ($n = 72$), we investigated the test–retest reliability of nonclinical student SSF ratings of all six items after a 2-week interval.

We obtained suicidal student-client SSF ratings and HSCL-90 scores for the first convergent validity study from clinical case records. In additional convergent validity and reliability studies, in which we used nonclinical student ratings, we followed the same procedures. We obtained informed consent, and student participants completed paper-and-pencil measures for which they fulfilled educational–research requirements or received extra credit. Student participants were given 30 min to complete the measures, after which a debriefing was provided.

Results and Discussion

Factor Analysis

As discussed earlier, it can be theoretically argued that the six SSF items measure potentially unique constructs of the suicidal condition (Jobes, 1995). Although such a theoretical argument can be made, the possibility of an underlying factor structure among items must be explored when establishing a psychometrically sound instrument. To that end, we conducted a series of factor analyses on suicidal student-client SSF ratings. A maximum likelihood factor analysis, in which a varimax rotation was used, produced a two-factor solution (eigenvalues = 1.51 for Factor 1 and .66 for Factor 2) that was potentially theoretically meaningful but limited (accounting for 36% of the common variance). Although the six SSF items share about one third of the common variance, there remains a considerable amount of unexplained variance, even when potential error variance is considered. Moreover, the relatively low communalities (pain = .30, press = .16, agitation = .72, hopelessness = .55, self-regard = .20, and overall risk = .24) provide support that each respective SSF item contributes specific variance. Furthermore, when we examined zero-order interitem client SSF correlations; the coefficients were low (ranging from .01 to .45; see Table 1), suggesting limited collinearity among the six items. Taken together, the limited shared common variance, the low communalities in the factor analyses, and the lack of interitem collinearity suggest that there is not one underlying factor that best explains the six SSF items. These results provide support for the quasi-independent nature of the six SSF items.

Table 1
Intercorrelations of the Six Items on the Suicide Status Form (SSF)

SSF item	1	2	3	4	5	6
Client Pretreatment SSF ratings						
1. Pain	—					
2. Press	.18	—				
3. Agitation	.45	.35	—			
4. Hopelessness	.24	.09	.24	—		
5. Self-regard	.02	.05	.05	.33	—	
6. Overall risk	.28	.05	.24	.34	.19	—
Clinician Pretreatment SSF ratings						
1. Pain	—					
2. Press	.36	—				
3. Agitation	.44	.31	—			
4. Hopelessness	.35	.16	.26	—		
5. Self-regard	.34	.02	.11	.33	—	
6. Overall risk	.42	.17	.39	.37	.24	—

To further study the potential quasi-independence of the six SSF items, we calculated Cronbach alphas for each factor in the two-factor solution. A Cronbach alpha of .62 was obtained for the first factor, and a coefficient of .54 was obtained for the second factor. When we calculated an additional Cronbach alpha on all six variables in a forced one-factor solution, the coefficient was .61, which was lower than would be expected. The coefficient for the forced one-factor solution thus represents a nominal increase in internal consistency, thereby providing further support for the quasi-independence of the six SSF items.

We also performed a similar series of factor analyses on clinician SSF ratings. A maximum likelihood factor analysis, in which a varimax rotation was used, produced an even less interpretable two-factor solution (eigenvalues = 1.89 for Factor 1 and .57 for Factor 2), accounting for 41% of the common variance. The communalities associated with this solution were also relatively low (pain = .54, press = .24, agitation = .44, hopelessness = .29, self-regard = .60, and overall risk = .35). Moreover, zero-order interitem clinician SSF correlations were low (ranging from .02 to .44; see Table 1). Cronbach alpha tests, performed to examine the internal consistency of the two respective factors, yielded a coefficient of .68 for the first factor and .49 for the second factor. Again, there was a nominal increase (.70) in the internal consistency when all six items were forced into a one-factor solution. Overall, results for the clinician ratings are similar to results for client ratings, providing further evidence of the quasi-independent nature of the six SSF items.

Validity

Given the weak underlying factor structure of the six SSF items for either clients or clinicians, we concluded that the six SSF items should not be combined together into a single measure of suicidality. If indeed the six SSF items are quasi-independent measures of suicidality, then the need for

establishing convergent validity for each respective item becomes especially critical. Accordingly, each SSF item was validated against well-established, psychometrically sound instruments published in the research literature (see Table 2).

Having available data from a nonsuicidal student sample as well as from a suicidal student sample afforded the opportunity to study criterion-prediction validity as described by Anastasi and Urbina (1997). These authors have asserted that the term *prediction* can be used in a broader sense to refer to a test of a criterion situation. Accordingly, we performed a multivariate analysis of variance (MANOVA) on the six SSF item ratings made by nonsuicidal undergraduates ($n = 72$) and suicidal student-clients ($n = 106$), which yielded a significant finding, $F(6, 168) = 24.79, p < .0001$. When the groups are considered coded predictors of a criterion (in this case, suicidality), a significant MANOVA can be interpreted as evidence of criterion-prediction validation. As shown in Table 3, suicidal client ratings of all six SSF ratings were significantly higher than nonsuicidal undergraduate SSF ratings (using a Bonferroni correction to reduce Type I error inflation due to multiple tests, $p < .008$). These robust results provide convincing evidence that the six SSF items effectively distinguish a clinically suicidal sample from a nonclinical sample.

Reliability

Evidence of test-retest reliability was determined using a sample of 72 nonsuicidal undergraduates. The test-retest reliability coefficients (after a 2-week interval) were as follows: pain ($r = .69$), press ($r = .51$), agitation ($r = .50$), hopelessness ($r = .35$), self-regard ($r = .55$), and overall risk ($r = .51$). If these coefficients were measuring trait-based concepts, their reliability would be considered low. However, it can be argued that the six SSF items primarily represent state-based concepts (i.e., transitory emotional experiences that can change at any given moment; see

Table 2
Convergent Validity Results: Correlations Between SSF Items and Other Measures of Similar Constructs

SSF item	Sample type	Measure	<i>n</i>	Pearson <i>r</i>
Pain	Clinical	HSCL-90 GSI	70	.25*
Press	Normal	PI	37	.50***
Agitation	Clinical	HSCL-90 GSI	70	.24*
Hopelessness	Normal	HS	26	.73****
Self-regard	Normal	OSD	26	.74****
Overall risk	Normal	RFL	37	-.42**

Note. The clinical sample consisted of undergraduate and graduate suicidal students seen in a mid-Atlantic university counseling center. The "normal" sample consisted of undergraduate introductory psychology students. For purposes of establishing convergent validity, the best established measures of constructs corresponding to each Suicide Status Form (SSF) construct were used. HSCL-90 = Hopkins Symptom Checklist; GSI = Global Severity Index; PI = Pressure Inventory; HS = Hopelessness Scale; OSD = Osgood's Semantic Differential; RFL = Reasons for Living Inventory.

* $p < .05$. ** $p < .005$. *** $p < .001$. **** $p < .0001$.

Table 3
Comparison of Suicidal Student-Client and Nonsuicidal Undergraduate SSF Item Means and Standard Deviations

SSF item	Suicidal student-clients		Nonsuicidal undergraduates		Univariate <i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Pain	3.34	0.99	1.92	1.00	87.03****
Press	3.90	0.90	3.15	1.00	26.73****
Agitation	3.64	1.01	2.56	1.03	48.10****
Hopelessness	3.02	0.90	1.96	0.86	61.22****
Self-regard	3.31	1.05	2.11	0.87	63.87****
Overall risk	1.79	0.96	1.15	0.40	28.13****

Note. The suicidal student-client sample consisted of 106 undergraduate and graduate students seen in a mid-Atlantic university counseling center. The nonsuicidal undergraduate sample consisted of 72 introductory psychology students. SSF = Suicide Status Form.

**** $p < .0001$.

Endler, 1981), and thus the obtained coefficients may reflect a moderate level of test-retest reliability. Clinical constraints in our study prohibited a test-retest study of the suicidal student-clients. Clearly, further research is needed to better establish the reliability of the six SSF items, particularly among suicidal samples.

Summary of Findings

The above analyses provide preliminary support for the validity and reliability of the six SSF items. As a brief, cogent, theoretically conceived, and clinically practical suicide assessment instrument, the SSF represents a significant departure from previously developed suicide risk assessment items that may have greater psychometric limitations, no theoretical basis, or potentially limited clinical utility.

Study 2

The limited empirical data related to the treatment of suicidality indicates that some forms of structured, cognitive-behavioral treatments for individuals and groups may be useful with certain types of suicidal clients (e.g., some suicidal adolescents, suicide attempters, or parasuicidal women diagnosed with borderline personality disorder; see Lerner & Clum, 1990; Liberman & Eckman, 1981; Linehan et al., 1991; Rudd et al., 1996). Although these studies primarily tested theory-driven structured treatments for particular subtypes of suicidal clients, there are no studies to date that examine the general assessment and treatment of a range of suicidal clients seen in typical outpatient settings. Critically, although some preliminary data exist concerning those suicidal clients who drop out of outpatient treatment (Rudd, Joiner, & Rajab, 1995), there are virtually no empirical process-and-outcome research studies, using actual clinical samples, that pertain to suicidal clients who remain in treatment. Clinicians who are treating suicidal clients in ongoing psychotherapy are thus required to rely on

suicide-treatment literature that is case based and largely anecdotal (Jobes, 1995).

The purpose of Study 2 was to study suicide risk assessment and general treatment outcomes among suicidal student-clients who remained in outpatient counseling (i.e., those clients for whom suicidality operationally resolved and those clients who remained chronically suicidal). We proposed the following research questions: (a) Are there significant differences between client and clinician pretreatment ratings of the six SSF items; (b) can client pretreatment ratings of the six SSF variables be used to classify treatment-outcome group membership (acute resolver vs. chronic nonresolver); (c) can clinician pretreatment ratings of the six SSF variables be used to classify treatment-outcome group membership (acute resolver vs. chronic nonresolver); (d) for suicidal student-clients who successfully resolve their suicidality (acute resolvers), will there be a significant improvement in client and clinician SSF ratings; (e) will posttreatment GSI scores be significantly lower than pretreatment GSI scores for acute resolvers and for chronic nonresolvers; and (f) will there be significant differences between acute resolver and chronic nonresolver GSI scores at pretreatment and posttreatment?

Method

Participants

The complete sample of participants included 106 student-clients and their clinicians at a mid-Atlantic university counseling center. The sample consisted of suicidal student-clients seen at the counseling center during the 1992-1993, 1993-1994, 1994-1995, and 1995-1996 academic years. The client sample had 42 men and 64 women, aged 17-55 ($M = 22.96$ years, $SD = 6.24$). The sample was predominantly Caucasian (79%); the remainder of the sample consisted of the following racial composition: 5% African American, 4% Latino, 4% Asian, 4% Hispanic, 2% "international," and 2% Native American.

The clinicians included 18 men and 88 women; 72% of the clinicians were trained in psychology, and 28% were trained as clinical social workers. In addition, 70% of the clinicians were junior (training) staff, consisting of 2nd-, 3rd-, and 4th-year doctoral trainees in clinical or counseling psychology programs approved by the American Psychological Association and 2nd-year MSW graduate students; 30% were senior clinical staff (consisting of PhDs and MSWs). The racial composition of the staff was 98% Caucasian and 2% African American.

The final sample for the analyses of Study 2 was 73, which included 55 participants who met operational criteria for resolution (acute resolvers) and 18 participants who did not meet resolution criteria (chronic nonresolvers; see the *Procedure* section). There were 33 suicidal student participants with incomplete data due to administrative error ($n = 2$), to their dropping out of treatment ($n = 23$, $M = 2.40$ sessions, $SD = 1.35$), or to their hospitalization ($n = 8$, $M = 5.33$ sessions, $SD = 0.58$).

Previous research in this same setting has shown virtually no demographic differences between the suicidal student-clients and nonsuicidal student-clients (Jobes & Eddins, 1992). Moreover, the general counseling center population seen in the setting of our study is not meaningfully different from the general university population with regard to demographic variables (Parkhurst, 1996).

Materials

SSF. The SSF is an instrument consisting of client and clinician ratings of the clients' suicidality. As discussed in depth in Study 1, preliminary studies of the SSF's psychometrics have indicated clear evidence of convergent validity, criterion-prediction validity, and test-retest reliability.

HSCL-90. As noted in Study 1, the HSCL-90 is a 90-item self-report measure that assesses a client's current symptoms on a 0-4 Likert scale (Derogatis et al., 1974) as well as the severity of these symptoms during the past week. This study also used the GSI scale as a measure of overall client distress upon intake as well as at treatment termination.

Procedure

Prior to the first therapy session, all counseling center student-clients completed a demographic form that included such items as age, gender, ethnicity, religion, and general reasons for seeking counseling. In addition, all clients completed the HSCL-90 upon intake and at termination of counseling.

The SSF was routinely administered to any client who indicated any current suicidal thoughts, feelings, or behaviors. According to counseling center policy and procedures, the SSF was administered whenever a client acknowledged suicidality either verbally or by checking a suicide-related question on an intake assessment form. The SSFs were also administered to clients determined by the clinician to have any suicidal thoughts, feelings, or behaviors in the course of a clinical interview. Upon administration of the SSF, the clinician completed the first SSF page (concerning basic information and presence of empirical risk factors), and both the clinician and client independently rated the six SSF items. After the SSF was completed, the client was administratively placed on "suicide status," requiring the clinician to monitor the client's suicidality (in terms of suicidal thoughts, feelings, or behaviors) in successive sessions through direct verbal inquiry. Once a client was on suicide status, written suicide status updates were completed by the clinician and given to an administrative "tracker" after each counseling session to facilitate administrative tracking of the case. This tracking procedure was continued until the client resolved his or her suicidality. Resolution of suicidality was operationally defined as three consecutive sessions of counseling in which the client stated in response to direct inquiry that he or she no longer had any suicidal thoughts, feelings, and was behaviorally safe. Three sessions for determining resolution was chosen following established conventions in psychotherapy research (Horvath & Symonds, 1991). During the suicide resolution session, both the clinician and the client completed ratings of the original six SSF items as a resolution measure.

Following this procedure and the above operational criteria for resolution, the suicidal clients who remained in treatment over the course of each academic year were divided into two treatment-outcome groups. Those clients meeting the above resolution criteria were called acute resolvers, and those not meeting the resolution criteria (i.e., those who remained preoccupied with suicidal thoughts, feelings, and behaviors) were called chronic nonresolvers. In this sample, acute resolvers reached resolution criteria in an average of six-and-one-half sessions ($M = 6.50$ sessions, $SD = 2.20$). Chronic nonresolvers were continuously suicidal throughout the academic year, for an average of almost 17 sessions ($M = 16.53$ sessions, $SD = 4.15$). It should be noted that the vast majority of these chronic nonresolvers entered treatment near the start of the academic year.

Results and Discussion

Pretreatment Measures

We performed a MANOVA to examine client and clinician pretreatment SSF ratings. The overall F statistic was significant, $F(6, 66) = 6.41, p < .0001$, suggesting that there were distinct differences between the way in which clients and clinicians perceived and rated the client's suicidality. Further analysis of the univariate tests (see Table 4), using an adjusted alpha ($p < .008$), demonstrated that clinician ratings of pain were significantly higher than client ratings. Thus, the MANOVA results suggest that clinicians may misperceive certain aspects of client suicidality, especially with regard to client self-report of psychological pain. Alternatively, these results may reflect either clients' denial of pain or clinicians' empathic failures to recognize such pain in their clients.

Following the work of Huberty (1984), we performed a discriminant function analysis specifically to classify participants into well-defined groups; we used pretreatment acute resolver and chronic nonresolver SSF client ratings. The overall canonical correlation ($R = .42$) was significant for this analysis, $\chi^2(6, N = 73) = 13.52, p < .036$. Thus, we could use client pretreatment SSF ratings to correctly classify 71% of the suicidal clients into the two separate treatment-outcome groups. Overall, acute resolvers tended to rate agitation and hopelessness more highly than did chronic nonresolvers. Conversely, chronic nonresolvers tended to rate press, self-regard, and overall risk more highly than did acute resolvers. This analysis suggests that the self-report pretreatment SSF ratings of suicidal clients can be used to classify treatment-outcome group membership.

We performed an additional discriminant function analysis by using pretreatment acute resolver and chronic nonresolver SSF clinician ratings. The overall canonical correlation ($R = .32$) was not significant for this analysis, $\chi^2(6, N = 73) = 7.17, p < .305$. Thus, clinician pretreatment SSF ratings could not be used to correctly classify the suicidal clients into the two separate treatment-outcome groups. Clearly, differences seen in client pretreatment SSF ratings

Table 4
Comparison of Pretreatment Client and Clinician Mean SSF Ratings and Standard Deviations

SSF item	Client ratings		Clinician ratings		Univariate F
	M	SD	M	SD	
Pain	3.35	0.99	3.71	0.85	13.71****
Press	3.86	0.91	3.86	0.92	0.00
Agitation	3.64	1.05	3.36	1.20	6.12
Hopelessness	2.99	0.88	3.06	0.84	0.53
Self-regard	3.37	1.05	3.47	0.82	0.86
Overall risk	1.75	0.87	2.06	0.85	6.70

Note. The client sample consisted of 73 undergraduate and graduate students seen in a mid-Atlantic university counseling center. The clinician sample consisted of 73 mental health professionals and trainees at a mid-Atlantic university counseling center. SSF = Suicide Status Form.

**** $p < .0001$.

were not perceived by clinicians, providing further evidence of perceptual divergence between clients and clinicians.

Pre- and Posttreatment Measures

We performed a MANOVA to examine pretreatment and posttreatment client and clinician SSF ratings for acute resolvers. Chronic nonresolvers were not included in this analysis because we did not obtain posttreatment SSF ratings (i.e., these clients did not meet the operational criteria for resolution as discussed in the *Procedure* section). The overall F statistic was significant, $F(6, 46) = 17.39, p < .0001$. As shown in Table 5, univariate tests, in which an adjusted alpha ($p < .008$) was used, indicated that all six SSF ratings significantly decreased from pretreatment to posttreatment (when collapsed across client and clinician ratings). These results suggest that clients and clinicians perceive overall improvement for acute resolvers on the SSF items similarly. Thus, 55 of 106 (52%) suicidal student-clients had a robust treatment response, resulting in resolution of suicidality.

We performed a repeated measures analysis of variance to examine client pretreatment–posttreatment HSCL-90 GSI scores for both acute resolvers and chronic nonresolvers. The overall F statistic was significant, $F(1, 48) = 13.74, p < .001$. Further examination of the results showed decreases in GSI scores for both treatment-outcome groups, suggesting that all suicidal clients who remained in treatment clinically improved at a global level of symptomatology. Specifically, acute resolvers' pretreatment GSI scores were significantly higher ($M = 71.97, SD = 14.72$) than posttreatment GSI scores ($M = 61.62, SD = 8.72$). Chronic nonresolvers' pretreatment GSI scores were significantly higher ($M = 75.33, SD = 17.39$) than posttreatment GSI scores ($M = 68.53, SD = 14.44$). Additionally, there was no significant main effect for outcome group, $F(1, 48) = 1.83, p < .182$, suggesting that the two outcome groups were not significantly different at pretreatment or posttreatment with regard to global symptomatology. Given that each treatment-outcome group similarly improves over the course of

counseling, "being suicidal" may mean something fundamentally different for each respective group.

General Discussion

The two studies presented here represent an effort to address distinct limitations in the empirical research literature in clinical suicidology. Study 1 investigated the validity and reliability of the SSF, a novel instrument to assess suicide risk. Results suggest that SSF items have good convergent validity, strong criterion-prediction validity, and moderate test–retest reliability. Study 2 investigated the application of the SSF to a clinical sample of suicidal students seen in a university counseling center. Results suggest that differences exist between client and clinician pretreatment SSF ratings. In addition, client (but not clinician) pretreatment SSF ratings could be used to correctly classify clients into unique treatment-outcome groups. Finally, whereas all suicidal student-clients globally improved with treatment, chronic nonresolvers nevertheless remained suicidally preoccupied over the course of the academic year.

As discussed in Study 1, the SSF is a brief, cogent, theoretically conceived, and clinically practical suicide assessment instrument. Unlike many assessment measures of suicide risk that are either atheoretical or rely exclusively on empirical construction, the SSF was conceptually constructed to incorporate major theoretical approaches of leading suicidologists and has preliminary empirical evidence of validity and reliability. Specifically, key elements of the respective theories of Shneidman (1985, 1987), Murray (1938), Beck (1986), Neuringer (1974), and Baumeister (1990) were incorporated into a single instrument of six items that appear to function quasi-independently, measuring unique aspects of suicidal conditions.

Whereas most suicide risk assessment forms are either client self-report or clinician rated, the SSF affords both members of the clinical dyad the opportunity to independently rate the same items. Because most clinicians primarily rely on clinical interviews to assess suicide risk and feel very confident about their abilities to accurately perceive relative risk (Jobes et al., 1995), the SSF offers an innovative way of verifying clinician perceptions of client suicidality. This is important because effective clinical management and treatment of suicidality may well be compromised if the clinician fundamentally fails to perceive and understand the client's suicidal experience (Jobes & Maltzberger, 1995).

In Study 2, the application of the SSF in a university counseling center was examined to determine its clinical utility. Previous literature on clinical perceptions of the suicidal client's experience is decidedly mixed (Coombs et al., 1992; Kaplan et al., 1994). The analyses of the current study that compare client and clinician initial independent ratings of six dimensions of suicidality suggest that clients and clinicians do not exactly see eye-to-eye, especially with regard to psychological pain. These data suggest an overarching cautiousness in ratings, reflecting the relative inexperience of the clinicians, who were largely graduate students in training. More critically, perhaps, such data may

Table 5
Comparison of Pretreatment and Posttreatment Mean SSF Ratings and Standard Deviations

SSF item	Pretreatment ratings		Posttreatment ratings		Univariate F
	M	SD	M	SD	
Pain	3.53	0.93	2.20	0.83	93.50****
Press	3.83	0.88	2.99	1.02	37.22****
Agitation	3.48	1.16	2.36	0.91	41.60****
Hopelessness	3.05	0.88	2.03	0.77	59.92****
Self-regard	3.42	0.97	2.93	0.85	13.08***
Overall risk	1.80	0.86	1.14	0.36	46.72****

Note. Pretreatment and posttreatment mean SSF ratings were compared when collapsed across 55 acute-resolver student-clients seen by their respective clinicians at a mid-Atlantic university counseling center. SSF = Suicide Status Form.

*** $p < .001$. **** $p < .0001$.

reveal a degree of empathic failure on the part of clinicians to recognize certain aspects of client suicidality.

The results of the discriminant function analysis of client SSF ratings for the two treatment-outcome groups revealed that 72% of the clients could be appropriately classified as either acute resolvers or as chronic nonresolvers. It is important to note that clinician ratings could not be used to make such a discrimination. The possible implications of having empirically based methods of suicidal client classifications are promising. For example, if it is known at the beginning of treatment what the possible treatment outcomes might be, then referral of suicidal clients to appropriately skilled clinicians and even targeted prescriptive treatments may be possible (see Jobes, 1995).

In a larger context, Jobes (1995) has argued that many clinicians in general practice do not necessarily make distinctions between different types of suicidal conditions; suicidality is often seen as a unitary (acute crisis) phenomenon. Our current findings provide preliminary empirical support for this assertion. This apparent bias is further reflected in a literature that overemphasizes the treatment of acute crisis cases, with nominal attention paid to chronic and dropout cases (Jobes, 1995). Although our data are limited, potentially useful typologies of suicidal clients who remain in counseling emerge from our studies: one suicidal group that resolves their suicidality in the course of general counseling and another that remains chronically preoccupied with suicide.

From a treatment-planning perspective, being able to identify potential typologies of different suicide treatment outcomes may be especially critical. As Jobes (1995) has asserted, different types of suicidal conditions often require distinctly different types of treatments. For example, using traditional suicide crisis intervention techniques may not be the best approach for every suicidal presentation. Indeed, in certain chronically suicidal cases, traditional crisis intervention techniques may actually serve to behaviorally reinforce, perpetuate, and even increase certain suicidal behaviors (see Pulakos, 1993). There is a clear need for us to develop more sophisticated assessments of different types of suicidal conditions so that we can provide more specific and appropriate treatments (Jobes, 1995).

In summary, these data suggest that some clinicians may have difficulty assessing certain aspects of suicidality. In terms of overall treatment outcome, it appears that general outpatient counseling can be very helpful for many suicidal students (52% of our sample), but a worrisome number of suicidal students either remain suicidal or simply leave outpatient treatment. As discussed by Jobes (1995), the need for additional assessment and treatment-outcome research in the area of suicide is crucial. Essentially, we need to better identify, understand, and treat those suicidal clients who actually seek outpatient treatment but do not seem to respond or who drop out after only a few sessions (see Rudd et al., 1995). Moreover, in the age of managed care, we need data that specifically address the relative efficacy of contemporary inpatient treatment versus outpatient treatment, even for the potentially high-risk suicidal client.

There are some limitations to our studies that should be

noted. For example, samples in both Study 1 and Study 2 were very homogeneous, and the generalizability of the data are thereby limited. Because of clinical constraints, most of the subsamples used in Study 1 investigations of SSF reliability and validity were nonclinical. Further studies of the SSF's psychometrics with clinical samples need to be pursued, particularly with regard to reliability. In addition, in Study 2, neither specific diagnostic information about the clients nor specific information about what clinicians actually did with these clients beyond general counseling were available. The results of these two studies are therefore preliminary and general. Nevertheless, we have obtained data with obvious clinical and training relevance, which may prompt additional research in the assessment and treatment of suicidal students. Given the lack of empirical work in this area, the seriousness of the suicidal presentation, and the potential efficacy of our treatments, further research is needed to improve the assessment and treatment of suicidal clients.

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