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ATTITUDES OF COLLEGE STUDENTS TOWARD SUICIDE

The University of Arizona

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ATTITUDES OF COLLEGE STUDENTS
TOWARD SUICIDE

by

Tomás González Forestier

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF PSYCHOLOGY
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
The University of Arizona

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THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the Final Examination Committee, we certify that we have read
the dissertation prepared by Tomas Gonzalez Forestier
entitled Attitudes of College Students Toward Suicide

and recommend that it be accepted as fulfilling the dissertation requirement
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ABSTRACT

Attitudes toward suicide have been linked to the way health professionals and lay people behave toward suicidal individuals. In some instances negative attitudes toward suicidal persons seem to have contributed to repeated attempts or to suicide completion. This study examines attitudes held by college students toward suicide, explores whether their attitudes are related to their skills at recognizing therapeutic verbal interventions, and seeks to identify personality variables that might predict attitudes toward suicide as well as skills at recognizing therapeutic interventions.

Three instruments, the Suicide Opinion Questionnaire (SOQ), the Suicide Intervention Response Inventory (SIRI), and the California Psychological Inventory (CPI), were administered to 215 volunteer undergraduates (122 males and 93 females) from introductory psychology classes. Subjects' modal age range was 18 to 21 years. Forty-five attitudinal items from the SOQ yielded a total favorableness score for each subject; skills at recognizing suicide intervention responses to imaginary suicide callers was rated by a SIRI score from 0 to 25.

The first hypothesis, that favorableness in attitudes toward suicide would correlate positively with skills at recognizing facilitative suicide intervention responses, was not supported by test data. The second hypothesis was accepted in that both, favorableness in attitudes toward suicide (SOQ scores) and recognition of facilitative intervention responses (SIRI scores), can be predicted from a personality test. SOQ scores were predicted positively by CPI scales Flexibility, and Achievement via independence, and negatively by Achievement via conformance. SIRI scores were predicted positively by Intellectual efficiency and Dominance, and negatively by Good Impression. The literature identifies flexibility as one of the behaviors of good crisis intervention workers.

An implication from this study is that students showing more flexibility and autonomy are likely to show also more favorableness in attitudes toward suicide. Another implication is that students who are more intelligent and quick at making use of their intellectual abilities, who show initiative, and who have a moderate concern about their impression on others, are more likely to recognize intervention responses that may be helpful to suicidal persons.

CHAPTER 1

INTRODUCTION

The communication of negative attitudes to individuals who are suicidal seems to be linked to these individuals becoming more suicidal (Bloom, 1967; Rosenbaum and Richman, 1970). Do people who communicate such negative attitudes lack sufficient interest or skills for helping others; do they lack information as to what behaviors might help suicidal individuals to improve? Is there a combination of these factors? Are people with positive attitudes and helpful behaviors necessarily aware of what it is that they do or say that is helpful to the suicidal individuals? Answers to questions like these give direction to efforts toward suicide prevention.

This study seeks to address one of those questions: whether there is a relation between positive attitudes toward suicide and the identification of verbal responses that are believed to facilitate interventions with suicidal individuals. If a positive correlation exists, this may support the notion of the existence of natural and spontaneous helpers who, if identified, might not need extensive training as suicide interventionists and could become counselor role models.

Attitudes toward suicide are measured in this study by the attitudinal items in the Suicide Opinion Questionnaire (SOQ) (Domino, Gibson, Poling, and Westlake, 1980). The Suicide Intervention Response Inventory (SIRI) (Niemeyer and MacInnes, 1981) is used in this study to measure ability to identify therapeutic responses.

This work also explores whether there are personality tendencies linked to positive attitudes toward suicide and linked to the ability to identify therapeutic responses. For this purpose, the well-known California Psychological Inventory (CPI) (Gough, 1956) is employed.

Attitudes Toward Suicide

The definition of attitudes that Anastasi (1968) presents is appropriate for the present study:

An attitude is often defined as a tendency to react favorably or unfavorably toward a designated class of stimuli, such as a national or racial group, a custom, or an institution. . . . In actual practice the term "attitude" has been most frequently associated with social stimuli and with emotionally toned responses.

In the area of suicidology attitudes seem to play an important role in influencing behaviors directed toward suicidal individuals. At present in our society certain negative attitudes toward suicide seem to influence the behaviors of significant others toward suicidal people (Andriola, 1973; Ansel and McGee, 1971; Bloom, 1967; Goldney and Bottrill, 1980; Hackel and Asimos, 1981; Motto

and Greene, 1958; Rockwell and O'Brien, 1973; Rosenbaum and Richman, 1970). Although no cause and effect relationship can be demonstrated, there are instances where the attitudes held toward suicide have shown a significant connection with the interpersonal relations shown toward suicidal individuals (Bloom, 1967; Rosenbaum and Richman, 1970).

Bloom's (1967) study on suicide at a training center and Rosenbaum and Richman's study (1970) on the reactions of families to the suicidal attempts of some of their members illustrate the notion that the attitudes portrayed by significant others in the suicidals' lives influence their self-acceptance and can lead to suicide attempts.

Rosenbaum and Richman (1970) interviewed 35 suicidal patients and as many members of their families as they could. Each family was interviewed as a group, with the suicidal member included. Fifteen non-suicidal patients and their families were also interviewed for comparison. An analysis of these interviews indicated that several factors stood out in the lives of the suicidal patients: (1) the presence of death wishes directly communicated to the patients by family members; (2) direct blaming by family members to the patient, as well as the tendency of the patient to passively acknowledge the blame and not be able to defend him/herself; (3) the unavailability of

persons who could provide support to the suicidal individual. The authors infer that "death wishes become particularly potent when the patient has no one to support or side with him." In one of their case samples they mention an alcoholic father who attempted suicide after he became the scapegoat in a family where the oldest daughter, who had always assumed the major mothering role, had just moved away to live in another state.

Bloom (1967) made a retrospective analysis of 32 cases of suicide where the victims had been patients in a psychiatric training center. In this article Bloom examined in detail the psychotherapeutic relationship in six cases in which the patient committed suicide while in psychotherapy. This relationship was analyzed using the psychoanalytical concepts of the psychodynamics of depression and transference-countertransference. Bloom underscores the rejection by all the significant figures at the times when patients are in a "regressed" state as "the key factor" in most of the suicides he reviewed. He writes: "In some cases, especially when there is an intense transference, the rejection by the therapist may play a crucial role, since he has become the most important person in the patient's life" (Bloom, 1967). Therapists who offer considerable support to their clients, particularly in times of crisis, during which the latter may become more dependent and demanding, may be the only allies those

clients have. Such therapists probably have particular attitudes and personality characteristics which may allow them to withstand the pressures of their patients' demands, exert adequate judgment as to the amount of support to offer, and maintain self-confidence and genuineness.

According to Parloff, Waskow, and Wolfe (1978), existentialists and humanists have placed primary value on the human qualities of the therapists as a contributing factor to effective psychotherapy. Parloff and co-writers (1978) quote Jung, who wrote in 1934 that "It is in fact largely immaterial what sort of techniques he uses, for the point is not the technique . . . the personality and attitude of the doctor are of supreme importance--whether he appreciates this or not." Parloff and co-authors (1978) suggest that good therapists should share certain characteristics. They list "various prescriptions for the ideal psychotherapist" as presented by different authors they mention. The list includes objectivity, honesty, capacity for relatedness, emotional freedom, security, integrity, humanity, commitment to the patient, intuitiveness, patience, perceptiveness, empathy, creativity, and imaginativeness.

In a study analyzing patient-therapist compatibility, Hiler (1958) concluded that therapists who are perceived as warm by their patients retain in treatment

significantly more patients from all socioeconomic status levels than therapists rated as cold, distant, or passive.

The above descriptions are pertinent to the attitudes and personalities of crisis telephone workers, who often perform crucial interventions with suicide persons. According to Litman (1966), good crisis-line workers should show certain qualities:

To function well as a telephone therapist, the interviewer should have a talent for interpersonal communication, a willingness to become personally involved, and a need to rescue people in trouble. The danger of overinvolvement with patients is real.

Certain attitudes and personality attributes have been noticed in crisis telephone volunteers when these workers have been compared to non-volunteers, particularly to untrained college students (Smart, 1972; Tapp and Spanier, 1973). Tapp and Spanier (1973) describe their volunteer telephone counselors as more self-actualizing and as showing a greater degree of openness (self-disclosure) than the group of college students they studied. Smart (1972) found more flexibility, autonomy and independence in telephone volunteers than in untrained college students.

Although no particular style claims to be successful with suicidal clients, a particular style seems to be favored from the standpoint of crisis intervention therapy (Hatton, Valente, and Rink, 1977a; Litman, 1966; Niemeyer

and MacInnes, 1981). This style seems to be embodied in the Rogerian approach of empathy, genuineness, and accurate understanding (Meador and Rogers, 1979) and also includes contract-type variants which helpers can use for increasing directiveness and providing structure when lethality grows high (e.g., Hatton et al., 1977a; Niemeyer and MacInnes, 1981).

Should Suicide be Prevented?

The majority of people in the United States would probably agree that suicide should be prevented. However, some suicidologists have raised the issue of how suicide prevention may interfere with people's right to kill themselves. The issue seems to involve a balance between the values of life and of liberty (Heilig, 1977). Heilig (1977) describes at length the ambivalence of suicidal persons, and this description raises the questions of whether many suicidal individuals are really free when they choose suicide or if they are not led into that choice by circumstances. After describing two case-histories of men who committed suicide but whose deaths occurred several days after the attempt, Heilig writes, "Obviously, these men both died by suicide, but given some additional time to consider whether or not they wanted to die, both changed their minds and decided they wanted to live." Heilig adds, "It is not really death which is wanted but rather an end

to suffering and pain." On a somewhat different vein, Pretzel (1977) states:

Suicide is a highly personal act and although it does affect the culture in general and certain specific related individuals in a special way, I think we have often gone too far in trying to protect individuals from their own wishes about their own death.

Pretzel criticizes psychiatric labeling and involuntary commitment of suicidal patients and suggests that much of this may be done not for the suicidal person's peace of mind but rather for that of the counselor's. Pretzel's conclusions, however, do not deviate from what probably is a counselor's reasonable attitude:

What I do feel I owe all my patients and all my friends is the benefit of my experience, knowledge, and whatever caring I can offer. . . . I want that person to listen to me--listen to my reactions to his situation, my suggestions if any, and my thoughts about the possible influence his suicide may have on his family. And I want that person to explore seriously whatever other possible alternatives may be open to him. . . .

Attitudes showing more acceptance of, favorableness, or positiveness toward the suicide phenomenon seem to be appropriate tools for the prevention of suicide. Yet, can much acceptance be too much and perhaps facilitate rather than help to prevent suicide?

Farberow's (1975) review of the history of suicide suggests that attitudes toward suicide tend to be open and flexible among more intellectual groups in times when the

societies involved were more knowledge-oriented rather than tradition-oriented. He also suggests that:

. . . the rate of suicide has been high or low in particular eras in direct relationship with variations in social controls and different emphases on the value of the individual in comparison with the state, such as idealization of reason, rationality, individuality, and democratic processes. Where the controls were the greatest, the rate was lower; where the individual was more free, the rate was higher.

Domino, Moore, Westlake and Gibson (1982) suggest that an understanding of attitudes held toward suicide is important for the implementation of educational and preventive services.

Assessment of Attitudes Toward Suicide

Attitudes toward suicide and suicidal persons have been measured in several ways. Goldney and Bottrill (1980) used the semantic differential approach to tap "sympathetic" vs. "non-sympathetic" feelings reported by staff members of general hospitals who had initial contact with patients who had attempted suicide. This method used a five-interval scale and offered mean ranks for each of 13 staff groups studied. The semantic differential was also used by Ansel and McGee (1971). The scales used to explore the attitudes of hospital staff, of the police, and of lay public toward attempters were "good-bad," "high-low," "positive-negative," and "reputable-disreputable." Each of these was represented by a seven-point scale. Another

method has been to use open-ended questions. Ginsburg (1971) used this method in exploring public conceptions and attitudes about suicide.

Domino and co-workers (1980) used a five-point scale (i.e., strongly agree, agree, undecided, disagree, and strongly disagree) to quantify opinions and attitudes to an extensive list of questions given to college students. Their 100-item instrument, the Suicide Opinion Questionnaire (SOQ), contains about 65 items that are considered attitudinal (e.g., "If someone wants to commit suicide, it is their business and we should not interfere"), and about 35 items that measure factual knowledge (e.g., "The large majority of suicide attempts result in death"). In this study (Domino et al., 1980) 400 male and 400 female undergraduate students from nine different colleges answered the SOQ. Item analyses showed wide heterogeneity in students' attitudes: some items were endorsed strongly by a majority of students; other items reflected indecision; while still others showed split or opposite opinions among students. The majority of students showed solid views toward "the sanctity of human life and human dignity"; most seemed to have sensitive attitudes toward suicidal individuals and toward the seriousness of all suicidal attempts, and some showed low approval of the phenomenon per se. Need for educational action was evident

too, based on the fact that many students reflected little factual knowledge about suicide.

The SOQ was also used to analyze factors involved in suicide attitudes (Domino et al., 1982). A factor analysis of responses provided by 285 subjects yielded 15 factors that accounted for 76.6% of the total variance. Some factors relate, among other things, to acceptability of suicide, immorality of the act, aggressiveness involved, religious convictions, and to motivational aspects. In a study comparing attitudes held by Mexican-Americans and by Anglo-Americans toward suicide, Domino (1981a) found significant differences in 35 of the 100 SOQ items. In a similar study Domino, Cohen, and Gonzalez (1981) also found statistically significant differences in 35 out of the 100 SOQ items, between Jewish and Christian subjects. Results suggest complexity in attitudes toward suicide and heterogeneity both within and between religious groups.

Assessment of Intervention Skills

In the area of evaluation of intervention skills with suicidal clients, several scales or structured assessment systems have been developed. Fowler and McGee (1973) developed the Technical Effectiveness Scale which basically resembles a check-list by which an evaluator of telephone counselors determines whether these followed through with the expected steps during a crisis call (e.g., gathering

specific information, communicating willingness to help, attempting to obtain certain commitments from the client). Knickerbocker and McGee (1973) describe three differentiated scales for empathy, warmth, and genuineness which they used for rating professional and non-professional volunteers whose interventions had been audio-taped. Williamson, Goldberg, and Packard (1973) used patient-confederates who called up a counseling center and then, by using specific checklists, evaluated the help they received from specific counselors.

Niemeyer and MacInnes (1981) constructed a 25-item multiple-choice questionnaire, the Suicide Intervention Response Inventory. These authors explain that the SIRI measures ability to recognize facilitative intervention responses and not necessarily an ability to produce them. Each SIRI item presents a remark by an imaginary suicidal caller and two different response alternatives to the remark. One of the alternatives is facilitative from the standpoint of crisis theory; the other choice is considered by the authors to be deleterious to effective intervention (Niemeyer and MacInnes, 1981). Respondents are asked to choose the alternative they believe to be more appropriate. Niemeyer and MacInnes (1981) selected their subjects from among paraprofessionals working at crisis intervention agencies, from one group of alcohol counselor trainees, and from among students enrolled in either of two

adult education classes (one in introductory psychology and the other concerning death and dying). All crisis-worker trainees completed the SIRI during the first and last training sessions prior to their service in a hotline center. Training consisted of three months of weekly meetings. All other groups were administered the SIRI before and after the three-month interval. The authors report significant differences in the groups on their SIRI scores before and after the three-month crisis intervention training. No significant pre-post SIRI mean score differences were found among control groups.

One of the control groups in the above study, psychology students without any prior training in crisis intervention or courses on death and dying, showed, when compared to other control and to all groups with training, the lowest SIRI mean score (about 17.8) and the largest standard deviation (about 5.0). Niemeyer and MacInnes (1981) suggest that on the basis of these results, the SIRI may be useful for assessing ability to recognize facilitative responses among people who are not trained in crisis intervention.

The above-mentioned score variability in recognizing facilitative responses is not associated with training, since those subjects were given none. There might have existed a variability in attitudes toward suicide covarying with SIRI scores. That this may be true for

laypeople (e.g., untrained college students) may be deduced from the fact that the evaluation of attitudes has been described as one of the criteria used in the selection of crisis helpers (Motto, Brook, Ross, and Allen, 1974). Motto and co-writers (1974) mention that lecture-discussion sessions have been used by the Samaritans, a British group who assist potential suicide victims, as a means for identifying "unhelpful attitudes" and screening out those unqualified to work as Samaritan Helpers.

Variability in SIRI scores among college students not trained or experienced in crisis intervention may correlate with variability in favorableness of attitudes toward suicide as measured by the SOQ. This may be true, especially if the continuum favorableness-unfavorableness in attitudes toward suicide holds for the SOQ: in spite of the fact that the SOQ attitudinal items represent a heterogeneous variety (Domino et al., 1982), most of these items can be seen also as reflecting a greater or lesser degree of value judgment about causes of suicide, about motivations of suicidal persons, and about the act of suicide per se. More positive or favorable SOQ attitudinal responses suggest less of a judgmental attitude. Therefore both SIRI and SOQ may correlate positively in university students enrolled in introductory psychology courses, who have had no courses on death and dying or crisis intervention training. Specifically:

H₁: The ability to identify facilitative responses to suicidal persons as measured by the SIRI will be related to favorableness in attitudes toward suicide, as measured by the SOQ.

College students may find themselves having to deal with a suicidal friend or relative at some point. As such, they would be playing the role of "gatekeepers" (Roberts, 1975) or mediators between people in mental distress and the professionals or para-professionals trained to assist them. Gatekeepers are usually the first source of support sought by distressed individuals who are trying to get rid of stressful feelings. Gatekeepers' attitudes may be important to the way they react toward those who seek their help.

Attitudes Toward Suicide and Personality

A basically favorable attitude toward suicide and suicidal individuals is desirable when a person is trying to help suicidal people. This is implied in a book by Motto and co-authors (1974), as well as in other studies mentioned earlier where attitudes held toward suicide were linked to the interpersonal approach followed toward suicidal individuals (e.g., Bloom, 1967; Rosenbaum and Richman, 1970).

Specific personality attributes which have been listed as desirable for professionals and paraprofessionals

in their treatment of suicidal clients include: sensitivity, warmth, interest, concern (Farberow, 1961), emotional stability, emotional maturity, ability to tolerate pressure, low anxiety, tolerance for frustration, and insight into one's own personality and problems (Motto et al., 1974). Yet among an extensive list of personality variables, which ones correlate more highly with attitudinal favorableness toward suicide? This study seeks to identify personality variables that may be correlated with attitudes toward suicide as measured by the SOQ attitudinal items.

Personality factors might be identifiable too, among persons who show ability to recognize facilitative intervention responses, but it is not clear what personality variables may identify students with higher skills at recognizing such intervention alternatives. The following hypothesis was therefore postulated:

H₂: The ability of college students to identify facilitative responses toward the suicidal, and attitudinal favorableness toward suicide can be predicted from a personality inventory.

The California Psychological Inventory (CPI) (Gough, 1956) was considered appropriate for fulfilling the above goal because of its varied pool of personality descriptors and suitability for use with normal

populations, and because of the extensive research generated by this instrument (Anastasi, 1968).

Among research studies that may have some bearing on the present work, the CPI has been used, for instance, to examine the relationship between counselor personality and interview behavior (Freedman, Antenen, and Lister, 1967), to explore personality differences between crisis hotline volunteers and controls in university settings (Smart, 1972), to analyze directiveness of counselor verbal behavior (Bohn, 1965), and to screen volunteer alcoholism counselors (Covner, 1969).

Freedman and co-workers (1967), in their study of the relationship between counselor personality and interview behavior, analyzed the verbal responses of 37 guidance and counseling students during a role-playing interview with a coached client. CPI variables that accounted for 3% or more of the variance predicted 81% of probing behavior, 79% of interpretive behavior and 72% of supportive and of understanding behaviors, among other results. Smart (1972) found that experienced telephone volunteers showed higher flexibility and lower socialization scores than controls. Bohn (1965) found no relation between dominance (CPI) and the degree of directiveness shown by counselors (graduate and undergraduate students) to multiple-choice response questionnaires filled out while listening to tape recordings of simulated clients. In Covner's (1969) study,

community volunteers, some of whom were alcoholics, underwent an eight-week training and were assigned to try to get alcoholics of 242 families to quit drinking and become involved in treatment. After 11 months of performance, two CPI variables significantly predicted successful counselors. These counselors showed higher Femininity scores and much lower Dominance scores than unsuccessful counselors.

CHAPTER 2

METHOD

Sample

The sample in this study consisted of 215 college students enrolled in a college-level introductory psychology course. These students responded voluntarily to posted advertisements. Volunteers were offered ten extra-credit points toward their course grades for the completion of three paper-and-pencil questionnaires. Out of 249 students who volunteered, 232 completed the three questionnaires and received their extra points. This group was then reduced to the final 215 subjects, because 17 did not complete all of the questions that were necessary for the present study.

The final sample of 215 consisted of 122 male and 93 female subjects. The modal age span for the sample was between 18 and 21 years. Subjects also described themselves according to other categories (see Appendix A). Some of these categories were based on whether (1) they had taken a course on "death-and-dying" or crisis intervention or worked for a crisis center; (2) whether they had ever seriously considered suicide; (3) ever attempted suicide; (4) personally known someone who had committed suicide; (5) whether their own probability of attempting suicide at some

point in their life was zero, less than 10%, 50-50, somewhat probable, or highly probable; and (6) whether their responses to the SOQ should be accepted as fully honest, accepted with reservation, probably disregarded, or disregarded as not valid. The categories that were given more close attention in the present study are sex, training in crisis intervention or death-related topics, and degree of credibility that subjects thought their responses should be given.

Validity of subjects' responses was analyzed by two methods: (1) by their response to question 111 of the SOQ which, as mentioned above, asked subjects to express their judgment as to the degree of validity of their own responses to the questionnaire; and (2) by the subjects' scores on the three CPI validity scales: Well-being (Wb), Good Impression (GI), and Communality (Cm). Wb can be used to identify individuals who try to present a picture of inordinate distress, GI is sensitive to attempts to present an abnormally good psychological state, and Cm is elevated when the test is answered in a random or careless way. Given the above methods, none of the subjects needed to be eliminated from the sample, since none showed consistently deviant protocols.

Instruments

Three standardized paper-and-pencil questionnaires were employed in this study: The Suicide Opinion Questionnaire (SOQ), the Suicide Intervention Response Inventory (SIRI), and the California Psychological Inventory (CPI).

The Suicide Opinion Questionnaire is a 100-item questionnaire consisting of factual and of opinion-based information about suicide (Domino et al., 1982). In the construction of the Suicide Opinion Questionnaire, about 3000 items were selected by means of an extensive review of the literature on Suicide (Domino et al., 1982). After eliminating poorly worded and closely similar terms, the remaining items were given to judges including experienced crisis interventionists, psychologists working with suicidal patients, and graduate students from various disciplines. As a result of the judges' comments, a pool of 138 items was retained and administered twice to 96 college students, with a 6-week interval. The 100 items with the highest test-retest reliabilities (all above .68) were retained as the final version of the Suicide Opinion Questionnaire.

These 100 items had been classified in a Likert-type scale format (Anastasi, 1968) with items presented in the form of statements to stimulate graded responses (i.e., strongly agree, agree, undecided, disagree, and strongly disagree). These were assigned points from 1 to 5. A

group of three judges who were experienced in clinical intervention with suicidal patients were asked to sort the SOQ items into either factual or opinion items; items were classified as factual or attitudinal as a result of judges' unanimous consensus (Domino, 1981b).

A factorial analysis of the SOQ, using a principal component solution with normalized varimax rotation, yielded 15 factors which accounted for 76.7% of the total variance in a study where a total of 285 adult volunteers (139 males and 146 females) responded to the 100 items in the questionnaire (Domino et al., 1982). The first three factors consisted of 16, 13, and 7 items, respectively, with factor loadings above .30, a value arbitrarily selected as the cut-off point by the authors. The other 12 factors contain from six to three items, each with factor loadings above .30. Domino and co-authors (1982) suggest that based on these results, attitudes toward suicide are a rather complex phenomenon and that an analysis of attitudes, based solely on favorableness-unfavorableness of attitudes toward suicide may be simplistic for an understanding of the phenomenon.

Domino (1980) did a pre-post study in which students enrolled in an abnormal psychology course responded to the SOQ at the beginning and ten months after the end of the course. Seventeen students who as part of their course requirements had been assigned to do an

in-depth investigation on the topic of suicide, were the subjects used in this analysis. As part of their course requirement, students had been assigned readings and book reports on suicide texts, had heard therapy transcriptions of suicidal patients, and had met with professionals involved in suicide prevention as well as with suicide attempters. The author reports that the SOQ questionnaires "were scored on five areas based on the results of prior factor analyses: (a) Normality of suicide (22 items accounting for 16.8% of the variance, e.g., "Potentially every one of us can be a suicide victim"); (b) Motivational aspects (18 items, 16.2% variance, e.g., "Most suicide attempts are impulsive in nature"); (c) Religious-moral aspects (19 items, 13.9% variance, e.g., "People who commit suicide lack solid religious convictions"); (d) Demographic dimensions (9 items, 8.7% variance, e.g., "The suicide rate is higher for blacks than for whites"); and (e) Risk (8 items, 7.6% variance, e.g., "A person whose parent has committed suicide is a greater risk for suicide").

Results showed significant changes in the first four areas mentioned above, among the 17 subjects. No control groups were employed in the study. According to Domino, "these results may be viewed in the context of an initial study which nevertheless suggests that attitudes toward suicide can indeed be altered in a more positive direction" (Domino, 1980).

Other studies with the Suicide Opinion Questionnaire have shown differences in groups whose opinions about suicide are expected to differ along factors like religion and ethnicity (e.g., Domino, 1981a; Domino, Cohen, and Gonzalez, 1981). Additional validity studies for the SOQ are in progress.

The 100 SOQ items consist of 35 items based on factual information about suicide (e.g., "In the U.S. suicide by shooting oneself is the most common method") and 65 based on opinions about suicide (e.g., "Suicide is an acceptable means to end an incurable disease"). Of these 65 items, 46 were identified in the test's scoring key as scorable by means of a favorable-unfavorable continuum (see Appendix B). These 46 items were the ones actually used for analysis in the present study although the entire questionnaire was administered (Appendix A lists these items). In this study the SOQ attitudinal score for each subject consisted of a single score obtained by adding the individual scores from the 46 items employed. Theoretically, scores could range from 46 to 230.

In addition to the 100 items, the SOQ contains seven items for demographic information-gathering purposes. Four new demographic items were added (items 102, 103, 108 and 109 in Appendix A) to get information of interest for the present study.

The second questionnaire administered to subjects was the Suicide Intervention Response Inventory (Niemeyer and MacInnes, 1981). As described earlier, this is a 25-item multiple choice questionnaire (see Appendix C). Each item presents a remark by an imaginary suicide caller and two response alternatives. Subjects are asked to choose which of the two responses would be helpful to the client in distress; the other response is considered to be deleterious. For example, these are two SIRI items:

Client: I really need help . . . it's just . . .
(voice breaks; silence).

Helper A: It must be very difficult for you
to talk about what's bothering
you.

Helper B: Go on. I'm here to listen to you
talk.

Client: I have a gun pointed at my head right now, and
if you don't help me, I'm going to pull the
trigger!

Helper A: You seem to be somewhat upset.

Helper B: I want you to put down the gun so
we can talk.

Each correct response in the SIRI (see Appendix D) is given a score of 1; thus, any one subject can score up to 25 points. For each subject in this study, SIRI scores consisted of one single total score with a potential range from 0 to 25.

In the validation study for the Suicide Intervention Response Inventory, crisis-worker trainees completed the questionnaire in group administrations during the first and last training sessions prior to their serving in a

crisis-line service (Niemeyer and MacInnes, 1981). Their training spanned over three months of weekly meetings. Control groups were administered the SIRI before and after the 3-month period. Several methods for investigating SIRI, construct validity were followed. First, a known-groups comparison method was used. The reasoning followed in this study was that if the SIRI actually measured skill in choosing an appropriate response to a suicidal client, then experienced hotline crisis workers should receive the highest scores, followed by crisis-line trainees and finally by untrained subjects. Statistically significant differences were found as predicted, among the three groups, with experienced workers showing highest SIRI scores ($\bar{x} = 24.49$, $SD = 1.05$), followed by the scores of volunteers in training ($\bar{x} = 20.86$, $SD = 4.03$), and by those of untrained psychology students ($\bar{x} = 17.98$, $SD = 4.64$). This analysis was performed on data obtained in the first of the two SIRI administrations.

A second method for assessing SIRI construct validity was by measuring the effect of training on SIRI scores. Theoretically, the SIRI taps skills that should be affected by training in crisis intervention. Thus, Niemeyer and MacInnes (1981) predicted that SIRI scores would increase over the 3-month period for those subjects receiving training ($N = 127$) while no significant changes should occur among control subjects (introductory

psychology students, $N = 18$; death education students, $N = 15$; veteran crisis counselors, $N = 18$). Trainees showed a statistically significant increase in scores (from $\bar{x} = 20.89$, $SD = 3.69$, to $\bar{x} = 23.05$, $SD = 2.30$) while no significant change was noticed among controls (from $\bar{x} = 21.57$, $SD = 4.29$, to $\bar{x} = 22.0$, $SD = 4.36$).

A third approach to assess SIRI construct validity was by investigating its correlation with a previously validated instrument measuring a similar skill. Niemeyer and MacInnes (1981) did this by comparing trainees' scores on the SIRI to their scores on a film technique for assessing global therapeutic skills. The film employed was the Counseling Skills Evaluation film (Wolf and Wolf, 1974). Subjects' ratings of the helpfulness of several simulated counseling scenarios were compared to the ratings of expert judges. Correlations between the SIRI and split-half items of the film were $r = .58$ at the beginning of training and $r = .66$ after the 3-month period.

Reliability for the SIRI was assessed by an analysis of internal consistency using a Kuder-Richardson 20 formula to calculate an average inter-item correlation. A correlation of $.84$ was obtained. Additionally, a test-retest analysis showed an $r = .86$ over the 3-month period for subjects used as controls (Niemeyer and MacInnes, 1981).

The California Psychological Inventory (Gough, 1956) was administered to subjects. This test offers a variety of personality descriptors based on the behavior of normal people and thus would be suitable for the population to be sampled in this study. The CPI is a well-known and extensively researched instrument (Anastasi, 1968). This instrument consists of eighteen scales to represent different behavioral tendencies. Raw scores are converted to T-scores for easy comparison between scales. The appropriateness of the CPI to this study is reflected in this description by Gough (1968) regarding the choice of test items:

Because the instrument is intended for the diagnosis and comprehension of interpersonal behavior, the concepts selected are those that occur in everyday social living and, in fact arise from social interaction. Most simply, such variables may be described as "folk concepts"--aspects and attributes of interpersonal behavior that are to be found in all cultures and societies, and that possess a direct and integral relationship to all forms of social interaction.

The California Psychological inventory consists of 480 items, 178 of which were taken from the Minnesota Multiphasic Personality Inventory. The test consists of the following 18 scales, grouped for convenience into four classes or broad categories:

Class I: Measures of Poise, Ascendancy, Self-Assurance, and Interpersonal Adequacy.

1. Dominance (Do)

2. Capacity for Status (Cs)
3. Sociability (Sy)
4. Social Presence (Sp)
5. Self-acceptance (Sa)
6. Sense of Well-being (Wb)

Class II: Measures of Socialization, Responsibility, Interpersonal Values, and Character.

7. Responsibility (Re)
8. Socialization (So)
9. Self-control (Sc)
10. Tolerance (To)
11. Good Impression (Gi)
12. Communality (Cm)

Class III: Measures of Achievement Potential and Intellectual Efficiency.

13. Achievement via Conformity (Ac)
14. Achievement via Independence (Ai)
15. Intellectual Efficiency (Ie)

Class IV: Measures of Intellectual and Interest Modes.

16. Psychological-mindedness (Py)
17. Flexibility (Fx)
18. Femininity (Fe)

Gough (1975) and Megargee (1972) present data on reliability and validity studies for the CPI. In one test-retest reliability study, 125 female and 101 male high school students took the CPI during their junior year and again a year later as seniors (Gough, 1975). Test-retest correlations for females ranged between .44 and .77 for the 18 scales; correlations for males ranged between .38 and .75. In another test-retest study 200 male prisoners took the test twice with a lapse of from 7 to 21 days between testings (Gough, 1975). Test-retest correlations for this study ranged from .49 to .87. There is considerable variability in internal consistency; for example, Megargee (1972) reports coefficients ranging from .22 to .94 when applying Kuder-Richardson Formula 21 to the means and standard deviations for the largest normative group presented in the CPI Manual (Gough, 1975): 3,572 male and 4,056 female high school students.

The 18 CPI scales were not all derived in the same manner; some were derived by correlations with other tests, some were originally constructed as MMPI scales and later revised for inclusion in the CPI, and for a few scales no clear derivation procedure is reported (Megargee, 1972). Evidence for validity varies for the different scales; the assessment of validity is based largely on differences between extreme groups. For the Dominance scale, for example, correlations ranging from .40 and .48 were found

with ratings based on pooled dominance ratings done by University of California personality research staff on military officers and medical school applicants (Gough, 1975). Validity studies reported by Gough (1975) show correlations for the 18 CPI scales ranging from .25 to .58 with ratings done by University of California personality research staff. Correlations of the CPI with several other personality tests are also reported (e.g., the MMPI, Cattell 16PF Test, Edwards Personal Preference Schedule) (Gough, 1975).

Statistical Analyses.

Response differences between male and female subjects were examined by means of t-tests and chi-square analyses. Next, a Pearson correlation analysis was run to compare SOQ and SIRI responses and thereby test Hypothesis 1. Hypothesis 2 was tested by regression analyses to predict SOQ and SIRI scores from CPI. Levels of .05 were chosen as the significance level for all statistics.

Statistical analyses were run using the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975).

The above statistical procedures were focused on subjects who had not taken courses on crisis intervention or death-and-dying and who had not worked in crisis centers.

CHAPTER 3

RESULTS

Tests for significance of differences between means (t-tests) were run to determine whether the variable sex had any significant effect on SIRI and on SOQ scores. Chi-square analyses were also run to detect sex effects on six other demographic variables (SOQ item numbers 102, 104, 105, 106, 110 and 111--see Appendix A). Only one of the eight variables analyzed showed statistically significant differences due to sex. This difference was in response to SOQ question 105, "Have you ever attempted suicide?" Table 1 shows sample sizes and percentages for this variable, which yielded a chi-square of 3.88 ($p < .05$). Since the chi-square analysis for the variable "Have you ever attempted suicide?" was the only analysis that showed a statistically significant result, and since this result agrees with previous literature in that more women than men do attempt suicide (Hatton et al., 1977b), it was not considered necessary to analyze the possibility of alpha slippage. The number of subjects who reported having ever attempted suicide, 3 males and 9 females, was considered too small to submit to further analyses to be generalized reliably to the general student population. Statistical

Table 1. Contingency table for chi-square analysis of subjects who had attempted suicide and those who had not, as a function of sex.

	Yes	No
Male	2.5% n = 3	97.5% n = 118
Female	9.7% n = 9	90.3% n = 84

$\chi^2 = 3.88$
 $p < .05$

analyses performed from this point on did not distinguish between subjects on the basis of sex.

A Pearson correlation analysis was run between scores on the Suicide Opinion Questionnaire and the Suicide Intervention Response Inventory. This was the statistical procedure chosen to test Hypothesis 1, which states that "The ability to identify facilitative intervention responses to suicidal persons, as measured by the SIRI, is related to attitudinal favorableness toward suicide, as measured by SOQ attitudinal items."

A correlation coefficient of .07 was obtained between SIRI and SOQ scores. This is not statistically significant. As a result, the first null hypothesis, presented below, is not rejected.

H_0 : The ability to identify facilitative responses to suicidal persons, as measured by the SIRI, is not related to attitudinal favorableness toward suicide as measured by SOQ attitudinal items.

Regression analyses were run next, to explore the second hypothesis, which states:

H_2 : The ability of college students to identify facilitative intervention responses to suicidal persons, as measured by the SIRI, and attitudinal favorableness toward suicide, as measured by the SOQ can be predicted from a group of personality

factors, as measured by the California Psychological Inventory.

Table 2 shows the results of the stepwise multiple regression analyses run to predict SIRI scores and SOQ attitudinal scores from the California Psychological Inventory. As shown in that table and as expected from the results of H , CPI predictors for SOQ scores are different from SIRI predictors. Suicide Opinion Questionnaire scores are best predicted by the CPI scales of Flexibility (Fx), Achievement via conformance (Ac), and Achievement via independence (Ai). These results are statistically significant and account for .20 of the variance in SOQ scores. Both Fx and Ai turned out to be positive predictors of SOQ scores, while Ac showed an inverse correlation with these scores.

The CPI scales that best predicted for the Suicide Intervention Response Inventory scores are Intellectual efficiency (Ie), Good Impression (GI), and Dominance (Do) (see Table 2). Together they account for .08 of the variance in SIRI scores. Whereas the Ie and Do scales show a positive correlation with SIRI scores, GI shows an inverse correlation.

From the above results, Hypothesis 2 is accepted to read that:

The ability of college students to identify facilitative intervention responses to suicidal

Table 2. Results of multiple regression analyses to predict SOQ and SIRI scores from the California Psychological Inventory scales (N = 215).

CPI Predictors	Multiple Correlation (R)	Increment in R ²	F	Simple r
<u>SOQ Regression</u>				
Flexibility (Fx)	.34	.12***		.34
Achievement via conformance (Ac)	.40	.04***	11.41***	-.13
Achievement via independence (Ai)	.45	.04***	11.31**	.26
<u>SIRI Regression</u>				
Intellectual efficiency (Ie)	.16	.03*		.16
Good Impression (GI)	.24	.03**	7.56**	-.11
Dominance (Do)	.28	.02*	5.14*	.15

* p < .05
 ** p < .01
 *** p < .001

persons, as measured by the SIRI, and attitudinal favorableness toward suicide, as measured by the SOQ, can be predicted from a group of personality factors, as measured by the CPI.

Because significantly different SIRI scores have been found between experienced crisis counselors, and college students without counseling or crisis intervention training (Niemeyer and MacInnes, 1981), the responses of students who reported having "taken a course on 'death-and-dying' or on crisis intervention or worked for a crisis center" were analyzed in the present study. Twenty-one subjects answered YES to this inquiry. In spite of the sample size difference when compared to those who answered NO to this question (21 vs. 194), two t-tests were run.

No significant difference between these two groups (training vs. no-training) was found in their mean SOQ scores or in their mean SIRI scores (see Table 3). A Pearson correlation analysis for SOQ and SIRI scores in the group with training revealed no significant correlation.

A stepwise multiple regression analysis, run to determine which CPI variables predict SIRI and SOQ scores among subjects with training yielded the following results: scales Femininity (Fe), Self-acceptance (Sa), and Socialization (So) were the best predictors for SOQ scores; Dominance (Do), Femininity, and Psychological-mindedness (Py) predicted SIRI scores best. As Table 4 shows, SOQ scores vary positively with the Fe scale, and inversely

Table 3. Comparison of subjects with training and without training.

	SOQ			SIRI			$r_{\text{SOQ-SIRI}}$
	\bar{x}	SD	t	\bar{x}	SD	t	
<u>Training</u> (n = 21)	142.57	17.31		14.48	1.99		
			.60			.71	0.09
<u>No Training</u> (n = 194)	140.19	14.37		14.76	2.10		
<u>Total Ss</u> (N = 215)	140.42	14.66		14.73	2.09		

Table 4. Results of multiple regression analyses to predict SOQ and SIRI scores from the California Psychological Inventory scales for subjects with training (n = 21).

CPI Predictors	Multiple Correlation (R)	Increment in R ²	F	Simple r
<u>SOQ Regression</u>				
Femininity (Fe)	.54	.29*		.54
Self-acceptance (Sa)	.62	.10	3.15	-.18
Socialization (So)	.71	.12	4.44*	-.33
<u>SIRI Regression</u>				
Dominance (Do)	.54	.29*		.54
Femininity (Fe)	.68	.17*	5.93*	.42
Psychological mindedness (Py)	.77	.13*	5.62*	-.01

* p < .05

** p < .01

with scales Sa and So. SIRI scores show a positive correlation with Do and Fe, and an inverse correlation with Py.

Interpretation of these results should be done with caution due to the larger number of CPI variables (i.e., 18) and comparatively small sample size ($n = 21$). This low sample-to-variables ratio overdescribes the sample, and generalization to the population would be questionable (Pedhazur, 1982).

Some of the demographic information obtained through the questions at the end of the SOQ (see Appendix A) was used for further analysis of SOQ and SIRI scores. The information utilized was based on SOQ questions 104, 105, 106 and 110. These allowed four pairs of groups according to whether or not subjects had ever seriously considered suicide (104); ever attempted suicide (105); known someone who committed suicide (106); and according to whether their estimated probability of attempting suicide in the future was higher or lower than 50% (110). T-tests were run in each pair of groups to determine whether they had significantly different SOQ or SIRI mean scores.

Table 5 presents the results of these t-tests. Only one t-test showed a significant result: subjects who reported having seriously considered suicide at some point in the past ($N = 37$) showed a significantly higher SOQ attitude mean score ($\bar{x} = 145.13$, $SD = 12.82$) than subjects

Table 5. T-test results for SOQ and SIRI in selected demographic variables.

Criteria	Response	SOQ				SIRI			
		\bar{x}	SD	t	p	\bar{x}	SD	t	p
Have you ever seriously considered suicide?	Yes (n=37)	145.13	12.82	2.17*	.03	14.86	1.99	.41	.68
	No (n=178)	139.44	14.85			14.71	2.12		
Have you ever attempted suicide?	Yes (n=12)	147.25	11.19	1.67	.10	14.42	2.15	.54	.59
	No (n=203)	140.01	14.76			14.75	2.09		
Have you personally known someone who committed suicide?	Yes (n=86)	141.09	14.60	.55	.58	14.95	1.91	1.20	.23
	No (n=129)	139.97	14.74			14.59	2.33		
What is the probability that at some point in your life that you might attempt suicide?	$\geq 50\%$ (n=12)	145.83	16.69	1.32	.19	14.42	2.35	.54	.59
	$< 50\%$ (n=203)	140.10	14.51			14.75	2.08		

* p = < .05

who had never seriously considered suicide ($N = 178$, $\bar{x} = 139.4$, $SD = 14.85$). These two groups were not significantly different in their SIRI mean scores. Although there were no significant differences in SOQ or in SIRI mean scores in any of the other three pairs of groups, there was a trend for higher SOQ mean scores in subjects who rated themselves as having 50% or higher chance of attempting suicide vs. those who rated themselves lower than 50%, in subjects who had previously attempted suicide vs. those who had not, and in subjects who had known a suicide vs. those who had not.

CHAPTER 4

DISCUSSION

SOQ-SIRI Correlation

Results in this study did not support the hypothesis that positive attitudes toward suicide correlate significantly with the ability to identify helpful interventions, as measured by SOQ and SIRI. These results give support to the conclusion that the behaviors measured by the SOQ and the SIRI are essentially independent of each other, and that any commonalities in what these two questionnaires measure were not reflected in a significant form by the statistical analysis chosen. Therefore, a person with a high degree of openness toward, or acceptance of, suicidal individuals may not be able to recognize what verbal responses might help prevent a suicide even when that person might behave in a helpful and supportive way when in contact with the suicidal.

Viewing these results from the endpoint of the SIRI, an individual who is good at recognizing responses that can facilitate suicide prevention may, however, not experience any positive attitudes toward suicidal persons, let alone the possibility of doing or not doing effective interventions with the suicidal.

Personality Predictors of SOQ and SIRI

The second hypothesis in this study, that SOQ and SIRI scores could be predicted from the CPI, was accepted and CPI predictors were presented in Table 2. The fact that the CPI scales predicting SOQ scores came out to be different from the ones predicting SIRI scores seems to further support the conclusion that attitudes toward suicide and ability to select helpful suicide intervention responses as measured by the instruments used in this study, are independent of each other.

Attitude Predictors

Higher favorableness in attitudes toward suicide is related to higher Flexibility (Fx), higher Achievement-via-independence (Ai), and lower Achievement-via-conformance (Ac) scores. According to Gough (1975), the Fx scale has the purpose of indicating "the degree of flexibility and adaptability of a person's thinking and social behavior." High Fx scorers are described as "insightful, informal, adventurous, confident, humorous, rebellious, idealistic, assertive and egoistic; as being sarcastic and cynical; and as highly concerned with personal pleasure and diversion" (Gough, 1975).

The purpose of the Achievement-via-independence scale is to "identify those factors of interest and motivation which facilitate achievement in any setting where

autonomy and independence are positive behaviors" (Gough, 1975); the Achievement-via-conformance scale has a similar purpose except that the factors to be identified are those where conformance is the positive behavior that may lead to achievement (Gough, 1975). Ai and Ac correlate about 0.39 (Gough, 1968), and Gough suggests that consequently the tendency will be to find people scoring high on both or low on both. According to the CPI Manual (Gough, 1975), high Ai scorers tend to be seen as "Mature, forceful, strong, dominant, demanding, and foresighted; as being independent and self-reliant; and as having superior intellectual ability and judgment." Similarly, those who score high on Ac are seen as "Capable, cooperative, efficient, organized, responsible, stable and sincere; as being persistent and industrious; and as valuing intellectual activity and intellectual achievement."

Fx and Ai are the two highest CPI predictors of SOQ scores and Ac shows a lower, inverse correlation. Thus individuals with more favorable attitudes toward suicide are flexible and adaptable, with a great degree of independence and self-reliance, but less given to stability and industriousness.

SIRI Predictors

SIRI scores are predicted directly by the CPI Intellectual Efficiency (Ie) and Dominance (Do) scales and

inversely by the Good Impression (GI) scale, as was presented in Table 2. The Ie scale tries "to indicate the degree of personal and intellectual efficiency which the individual has attained" (Gough, 1975). Subjects who score high on Ie are described as "Efficient, clear-thinking, capable, intelligent, progressive, planful, thorough, and resourceful; as being alert and well-informed, and as placing a high value on cognitive and intellectual matters" (Gough, 1975).

The Do scale was designed "to assess the factors of leadership ability, dominance, persistence, and social initiative" (Gough, 1975). Those who score high in Do are described with the following adjectives: "Aggressive, confident, persistent, and planful; as being self-reliant and independent; and as having leadership potential and initiative" (Gough, 1975). The Good Impression scale is designed "to identify persons capable of creating a favorable impression, and who are concerned about how others react to them" (Gough, 1975).

In the present study the multiple correlation of Ie, GI and Do with SIRI scores is somewhat lower than the multiple correlation of Fx, Ai and Ac with SOQ scores. This suggests that CPI variables show more common variance with SOQ attitudinal scores than with SIRI scores for this population. In part this may reflect the greater complexity of the SOQ vis-a-vis the SIRI.

From the above results, an overall interpretation of CPI predictions on SOQ and SIRI would suggest that students with a positive attitude (SOQ) toward suicide may be described as being flexible and adaptable in their thinking and social behavior, and likely to be successful in goals that require autonomy and independence rather than conformance. Students with a high ability to recognize facilitative responses in suicide intervention (SIRI) might be described as intelligent and resourceful, as showing persistence and social initiative, and as somewhat concerned about creating a good impression on others.

Although the results of the present study were found in a sample of students, 90% of whom (i.e., 194 subjects) had never taken courses on death and dying or had been trained in crisis intervention, similar results have been found among crisis-telephone volunteers. Flexibility in volunteers' management of suicide prevention center clients has been identified as a favorable factor in suicide prevention (Maris, Dorpat, Hathorne, Heilig, Powell, Stond, and Ward, 1973). As mentioned earlier, Smart (1972) found more flexibility, autonomy and independence in telephone volunteers than in untrained college students.

Smart led a comparative study between university hotline volunteers and controls where the CPI was used and results showed some similarities between that study and the present one. In Smart's study the group of interest was made up of 134 male and female undergraduate campus crisis hotline volunteers from two universities in Colorado. Controls were 94 undergraduates from one of those universities, who were advanced and successful students in their training as school teachers. Both groups were compared by means of the CPI and of the Self-Assessment of Attitudes Toward Suicide Scale, a 17-item experimental instrument. CPI results showed that telephone volunteers had significantly higher Flexibility scores and significantly lower Socialization scores than controls. Telephone volunteers also showed a trend toward higher scores in the Achievement-via-independence scale and a trend toward lower scores in the Achievement-via-conformance and in the Self-control scales. It is of interest to note that the Self-Assessment of Attitudes Toward Suicide Scale did not statistically discriminate between crisis volunteers and controls.

In the present study, some similarities with Smart's results can be observed. First, in both studies Flexibility (Fx) was an important predictor: in this study Fx predicted more favorableness in attitudes toward suicide; in Smart's study Fx identified hotline volunteers. SOQ attitudinal items as predicted by Fx may be, therefore,

sensitive indicators of individuals who may relate well with suicidal persons and perhaps be good agents at preventing their suicide.

Another similarity is that in the present study, Achievement via conformance (Ac) and Achievement via independence (Ai) resulted in predictor variables and in Smart's study they showed a trend toward discriminating line volunteers from controls. In both studies Ai varied in the same direction as Fx while Ac varied in the opposite direction.

The strongest conclusion in the present study involves an association between openness in attitudes toward suicide, and flexibility and independence as personality characteristics. An earlier question was whether too much acceptance or openness toward suicide may facilitate rather than prevent suicide. An implication from the present study is that a person who is autonomous is more likely to envision diverse options to a problem and, therefore their openness toward suicide as a phenomenon may not necessarily create a negative influence on suicidal individuals whom they may contact.

A significantly higher SOQ attitudinal mean score was found in the group of students who reported having seriously considered suicide at some earlier time in their lives than in the group of those who had never considered

suicide. A similar trend was observed for subjects who reported having attempted suicide, having known somebody who had committed suicide or seeing it probable they might commit suicide in the future. Future analyses might explore whether students who have been in closer contact with the suicide experience and who show positive attitudes toward suicide (high SOQ scores) have SIRI and CPI results comparable to those of students with high SOQ's and who have not had such close contact with the suicide phenomenon. This would be of interest because suicidal individuals have been reported to show considerable hopelessness and inability to project into the future (Hatton, Valente, and Rink, 1977c), which would not seem to agree with personality behaviors suggested by CPI scales like Flexibility and Achievement via independence.

Limitations

Some limitations that may have affected results in the present study may be found in the following areas. First, in this study only 46 of the 65 SOQ attitudinal items were employed because no classification among the favorable-unfavorable continuum was available for all 65 items. The use of all 65 items may have added more accuracy to the attitudinal profile of each subject. Second, the concept of SOQ attitudinal scores may be too heterogeneous in spite of its being separate from the

concept of factual knowledge. Within the group of 45 attitudinal items employed in this study, an item analysis might identify a cluster specifically correlated with SIRI scores. Third, to compare attitudes toward suicide with the ability to recognize facilitative interventions address only part of a broader issue of how attitudes toward suicide may relate to the production of therapeutic behaviors during intervention with suicidal persons . This remains for future research to clarify. Fourth, the correlation analyses performed in this study were linear analyses; analyses for curvilinear correlations may yield more substantial results. Fifth, some of the groups analyzed in this study contained very few subjects (e.g., 12), and this limits the power of the statistical tests performed. Sixth, results in this study may have been affected by limitations in the instruments employed; the SOQ and SIRI are still in experimental stages.

Implications for Future Research

The personality characteristics suggested by CPI regressions should be explored further, both among professionals and lay people so as to verify the validity and consistency of these results. This may offer support to the notion that flexibility and autonomy may be healthy personality qualities to foster as suicide primary prevention measures. Such explorations should be used to

clarify personality differences between those whose positive attitudes toward suicide run parallel to seeing suicide as an option for themselves and those whose attitudes do not.

The favorable-unfavorable continuum of SOQ attitudes should continue to be utilized and refined further so as to capitalize on its potential because in this study, that appeared to be a cohesive concept, predictable by the CPI scales. SOQ attitudinal scores should be used with a variety of other explorative measures--for example, with measures of actual production rather than recognition of therapeutic interventions by professionals and lay people--and with measures of knowledge about suicide, like the SOQ factual knowledge total score, so as to address other questions related to the broad issue of attitude expression and its influence upon the suicidal. These comparisons should throw light on areas where attitudes toward suicide should be influenced so as to contribute toward suicide prevention.

APPENDIX A

SUICIDE OPINION QUESTIONNAIRE

SUICIDE OPINION QUESTIONNAIRE

This is not a test, but a survey of your opinions; there are no right or wrong answers, only your honest opinion counts.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

1. Most persons who attempt suicide are lonely and depressed.
2. Almost everyone has at one time or another thought about suicide.
3. The suicide rate is higher for blacks than for whites.
4. The actual suicide rate in the U.S. is much greater than reflected by official statistics.
5. Suicide prevention centers actually infringe on a person's right to take his life.
6. Most suicides are triggered by arguments with a spouse.
7. The higher incidence of suicide is due to the lesser influence of religion.
8. Many suicide notes reveal substantial anger toward the world.
9. I would feel ashamed if a member of my family committed suicide.
10. Most suicide attempts are impulsive in nature.
11. Many suicides are the result of the desire of the victim to "get even" with someone.
12. In the U.S. suicide by shooting oneself is the most common method.
13. People with incurable diseases should be allowed to commit suicide in a dignified manner.
14. Those who threaten to commit suicide rarely do so.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

15. Suicide is more prevalent among the very rich and the very poor.
16. Individuals who kill themselves out of patriotism do so, not because they are courageous, but because they enjoy taking major risks.
17. Suicide is a leading cause of death in the U.S.
18. Suicide is an acceptable means to end an incurable illness.
19. People who commit suicide are usually mentally ill.
20. Some people commit suicide as an act of self-punishment.
21. The feeling of despair reflected in the act of suicide is contrary to the teachings of most major religions.
22. Suicide rates vary greatly from country to country.
23. I feel sorry for people who commit suicide.
24. John Doe, age 45, has just committed suicide. An investigation will probably reveal that he has considered suicide for quite a few years.
25. Suicide is acceptable for aged and infirm persons.
26. The suicide rate among physicians is substantially greater than for other occupational groups.
27. The Japanese Kamikaze pilots who destroyed themselves by flying their airplanes into a ship should not be considered suicide victims.
28. Different cultural child-rearing practices are probably unrelated to suicide rates.
29. Suicide is clear evidence that man has a basically aggressive and destructive nature.
30. Over the past ten years the suicide rate in this country has increased greatly.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

31. Most people who try to kill themselves don't really want to die.
32. Suicide happens without warning.
33. A business executive arrested for fraud or other illegal practices should face punishment like a man rather than seek suicide as an escape.
34. Most suicide victims are older persons with little to live for.
35. A person who tried to commit suicide is not really responsible for those actions.
36. About 75% of those who successfully commit suicide have attempted suicide at least once before.
37. It is rare for someone who is thinking about suicide to be dissuaded by a "friendly ear."
38. People who commit suicide must have a weak personality structure.
39. The method used in a given suicide probably reflects whether the action was impulsive or carefully and rationally planned.
40. Social variables such as overcrowding and increased noise can lead a person to be more suicide-prone.
41. A large percentage of suicide victims come from broken homes.
42. A rather frequent message in suicide notes is one of unreturned love.
43. People who set themselves on fire to call attention to some political or religious issue are mentally unbalanced.
44. The possibility of committing suicide is greater for older people (those 60 and over) than for younger people (20 to 30).
45. Most people who commit suicide do not believe in an afterlife.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

46. In times of war, for a captured soldier to commit suicide is an act of heroism.
47. Suicide attempters are typically trying to get even with someone.
48. Once a person is suicidal, he is suicidal forever.
49. There may be situations where the only reasonable solution is suicide.
50. People should be prevented from committing suicide since most are not acting rationally at the time.
51. The suicide rate is higher for minority groups such as Chicanos, American Indians, and Puerto Ricans than for whites.
52. Improvement following a suicidal crisis indicates that the risk is over.
53. People who engage in dangerous sports like automobile racing probably have an unconscious wish to die.
54. Prisoners in jail who attempt suicide are simply trying to get better living conditions.
55. Suicide among young people (e.g., college students) are particularly puzzling since they have everything to live for.
56. Once a person survives a suicide attempt, the probability of his trying again is minimal.
57. In general, suicide is an evil act not to be condoned.
58. People who attempt suicide and live should be required to undertake therapy to understand their inner motivation.
59. Suicide is a normal behavior.
60. Many victims of fatal automobile accidents are actually unconsciously motivated to commit suicide.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

61. If a culture were to allow the open expression of feelings like anger and shame, the suicide rate would decrease substantially.
62. From an evolutionary point of view, suicide is a natural means by which the less mentally fit are eliminated.
63. Suicide attempters who use public places (such as a bridge or tall building) are more interested in getting attention.
64. A person whose parent has committed suicide is a greater risk for suicide.
65. External factors, like lack of money, are a major reason for suicide.
66. Suicide rates are a good indicator of the stability of a nation; that is, the more suicides the more problems a nation is facing.
67. Sometimes suicide is the only escape from life's problems.
68. Suicide is a very serious moral transgression.
69. Some individuals have committed suicide to preserve their honor; these were victims of cultural values rather than disturbed personal attitudes.
70. If someone wants to commit suicide, it is their business and we should not interfere.
71. A suicide attempt is essentially a "cry for help."
72. Obese individuals are more likely to commit suicide than persons of normal weight.
73. Heroic suicides (e.g., the soldier in war throwing himself on a live grenade) should be viewed differently from other suicides (e.g., jumping off a bridge).
74. The most frequent message in suicide notes is of loneliness.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

75. Usually, relatives of a suicide victim had no idea of what was about to happen.
76. Long-term self-destructive behaviors, such as alcoholism, may represent unconscious suicide attempts.
77. Suicide attempts are typically preceded by feelings that life is no longer worth living.
78. Suicide goes against the laws of God and/or of nature.
79. We should have "suicide clinics" where people who want to die could do so in a painless and private manner.
80. Those people who attempt suicide are usually trying to get sympathy from others.
81. People who commit suicide lack solid religious convictions.
82. People with no roots or family ties are more likely to attempt suicide.
83. People who bungle suicide attempts really did not intend to die in the first place.
84. Passive suicide, such as an overdose of sleeping pills, is more acceptable than violent suicide such as by gunshot.
85. Potentially, every one of us can be a suicide victim.
86. Suicide occurs only in civilized countries.
87. People who die by suicide should not be buried in the same cemetery as those who die naturally.
88. Most people who commit suicide do not believe in God.
89. Children from larger families (i.e., three or more children) are less likely to commit suicide as adults than single or only children.
90. Suicide attempters are, as individuals, more rigid and less flexible than non-attempters.
91. The large majority of suicide attempts result in death.

For each item, indicate (on the answer sheet) whether you:
A. strongly agree B. agree C. are undecided
D. disagree E. strongly disagree

92. Some people are better off dead.
93. People who attempt suicide are, as a group, less religious.
94. As a group, people who commit suicide experienced disturbed family relationships when they were young.
95. People do not have the right to take their own lives.
96. Most people who attempt suicide fail in their attempts.
97. Those who commit suicide are cowards who cannot face life's challenges.
98. Individuals who are depressed are more likely to commit suicide.
99. Suicide is much more frequent in our world today than it was in early cultures such as Egypt, Greece, and the Roman Empire.
100. People who are high suicide risks can be easily identified.

Your responses are confidential and are being studied for research purposes only. It would be helpful to us if you would answer the following questions also (on the answer sheet).

101. Are you: A. Male B. Female
102. Your age: A. Below 18 B. 18-21 C. 22-25 D. 26-29 E. 30 or more
103. Have you ever taken a course on "death-and-dying" or on crisis intervention, or worked for a crisis center?
A. Yes B. No
104. Have you ever seriously considered suicide? A. Yes B. No.
105. Have you ever attempted suicide? A. Yes B. No

106. Have you personally known someone who committed suicide: A. Yes B. No
107. If yes to the above question, was the person: A. a member of your immediate family (e.g., parent, sibling) B. a relative (e.g., cousin) C. a close friend D. an acquaintance
108. If no to question 104, have you personally known someone who attempted suicide? A. Yes B. No
109. If yes to the above question, was the person: A. a member of your immediate family (e.g., parent, sibling) B. a relative (e.g., cousin) C. a close friend D. an acquaintance
110. What is the probability that at some point in your life you might attempt suicide? A. zero B. less than 10% C. 50-50 D. somewhat probable E. highly probable
111. In answering a questionnaire like this, there are many reasons why some people may not be able or wish to be fully honest. In looking over your responses, should we: A. accept them as fully honest B. accept them but with some reservation C. probably disregard them D. disregard them as not valid.

APPENDIX B

SUICIDE OPINION QUESTIONNAIRE SCORING KEY

SUICIDE OPINION QUESTIONNAIRE SCORING KEY

1. Favorable-Unfavorable
(46 items)

Higher Scores = more
favorable

Items scored as given

Scores reversed

7, 9, 16, 19, 21, 29, 33,
38, 41, 43, 45, 47, 50, 55,
57, 58, 62, 63, 68, 78, 80,
81, 82, 87, 88, 90, 93, 94,
95, 97

1, 2, 10, 13, 18, 23,
25, 35, 40, 46, 49, 59,
61, 67, 70, 85

2. Factual Items
(35 items)

Higher Scores = more
factual knowledge

Items scored as given

Scores reversed

6, 8, 14, 32, 34, 37, 41,
42, 44, 52, 56, 66, 72, 74
75, 86, 89, 91

3, 4, 12, 15, 17, 22,
24, 26, 28, 30, 36, 51,
64, 96, 98, 99, 100

APPENDIX C

SUICIDE INTERVENTION RESPONSE INVENTORY

SUICIDE INTERVENTION RESPONSE INVENTORY

The following items represent a series of excerpts from counseling sessions. Each excerpt begins with an expression by the client concerning some aspect of the situation he/she faces, followed by two possible helper responses to the client's remark. You are to select that response which you feel is the more appropriate reply to the client's comment, recording either "A" or "B" to the left of the item to indicate your preferred response. Be sure to select only one response per item, and try not to leave any item blank.

1. Client: I decided to call in tonight because I really feel like I might do something to myself . . . I've been thinking about suicide.

Helper A: You say you're suicidal, but what is it that's really bothering you?

Helper B: I'd like to hear more about your suicidal feelings.

2. Client: . . . And now my health is going downhill too, on top of all the rest. Without my husband around to care for me anymore, it just seems like the end of the world.

Helper A: Try not to worry so much about it. Everything will be alright.

Helper B: You must feel pretty lonely and afraid of what might happen.

3. Client: But my thoughts have been so terrible . . . I could never tell them to anybody.

Helper A: You can tell me. I'm a professional, and have been trained to be objective about these things.

Helper B: Some of our ideas seem so frightening to you, that you imagine other people would be shocked to know you are thinking such things.

4. Client: No one can understand the kind of pain I've been going through. Sometimes I just feel like I have to hurt myself, so I cut my wrists.
- Helper A: You've been suffering so much that cutting your wrists seems to be the only way you can make the pain go away.
- Helper B: But you're so young, you have so much to live for. How can you think of killing yourself?
5. Client: What are you anyway? Are you a doctor? How do you know what I've been going through? You've probably always had it pretty soft.
- Helper A: You're wondering if I can understand how you feel.
- Helper B: You're not even giving me a chance. I've had a pretty rough life too; you're not the only one who's seen hard times.
6. Client: My life has been meaningless ever since my wife, Emma, died four years ago. The kids are grown and married now, and I've been retired from my job at the railroad for some time. It just seems that I'd be better off dead.
- Helper A: But try to think of what Emma would want for you. She'd want you to continue leading a productive life, wouldn't she?
- Helper B: It sounds like everything just collapsed around you when Emma died . . . But what has happened recently to make things even worse, to make way out?
7. Client: I really need help . . . it's just . . . (voice breaks; silence).
- Helper A: It must be very difficult for you to talk about what's bothering you.
- Helper B: Go on. I'm here to listen to you talk.

8. Client: When you sum up my problem like that, it makes it seem less confusing and not so scary.
- Helper A: See, it really isn't so bad after all. It certainly isn't anything you would think of killing yourself over, is it?
- Helper B: Well, I think it's still pretty frightening, even though talking about it makes it a bit clearer. I think you realized how dangerous your suicidal feelings were, and that's why you decided to contact me.
9. Client: You were supposed to help me, but you've only made things worse.
- Helper A: I'm sorry. I was only trying to help.
- Helper B: You sound pretty angry.
10. Client: How could you ever help me? Have you ever wanted to kill yourself?
- Helper A: You're concerned about whether I can understand and help you.
- Helper B: Sure, I've thought about suicide sometimes. But I always found more realistic solutions to my problems.
11. Client: I don't know . . . this thing with my wife really gets to me. (Sobs.) I try so hard to keep from crying. . . .
- Helper A: Do you think that the reason it's hard for you to cry is because you're a man?
- Helper B: With all the hurt you're feeling, it must be impossible to hold those tears in.

12. Client: How can I believe in God anymore? No God would ever let this happen to me; I've never done anything to deserve what's happened.
- Helper A: Things have gotten so bad, that it's difficult to see any meaning in the things that have happened to you.
- Helper B: Well, God works in mysterious ways. Maybe this is His way of testing your faith.
13. Client: I don't know why I'm calling you. My family is financially well off, and my husband spends plenty of time with me, even though he has a successful law career. Even my kids have been doing well. They get good marks at school and have lots of free time activities with their friends. But nothing seems to interest me. Life is just a bore. . . .
- Helper A: Considering all you have going for you, your problems can't be all that serious. Try to focus more on the positive aspects of your situation.
- Helper B: So even though things seem to be going well at one level, life still seems pretty depressing, even if it's hard to say exactly why.
14. Client: I have to hang up now. My mother's coming home soon, and I don't want her to know I've been talking to you.
- Helper A: Okay, but if you keep feeling suicidal, remember you can always call back.
- Helper B: All right, but first I want you to promise me you won't do anything intentional or unintentional to hurt yourself, until you call and talk to me. Will you repeat that promise?

15. Client: Is it really true, that many people feel this way? I thought I was the only one who had such dreadful, sinful ideas.
- Helper A: No, there are many people who suffer from mental illness. But with appropriate treatment by a qualified physician, some of these patients can be cured.
- Helper B: It is true. You're not the only one who has suicidal thoughts. And you can be helped to get through this crisis, just as others have been.
16. Client: I'm so lonely, so tired (crying). There just isn't anywhere left to turn.
- Helper A: You seem so alone, so miserable . . .
. . . Have you been feeling suicidal?
- Helper B: Come on now. Things can't be all that bad.
17. Client: (Over telephone.) It's hard to talk here, with all these people. . . .
- Helper A: Would it help if I asked questions?
- Helper B: Why don't you call back some other time when you can talk more easily?
18. Client: I have a gun pointed at my head right now, and if you don't help me, I'm going to pull the trigger!
- Helper A: You seem to be somewhat upset.
- Helper B: I want you to put down the gun so we can talk.
19. Client: Why should you care about me, anyway?
- Helper A: I've been trained to care about people. That's my job.
- Helper B: Because I think your death would be a terrible waste, and it concerns me that things are so bad--that you are considering suicide. You need me to get through this critical period.

20. Client: I really hate my father! He's never shown any love for me, just complete disregard.
- Helper A: You must really be angry at him for not being there when you need him most.
- Helper B: You shouldn't feel that way. After all, he is your father, and he deserves some respect.
21. Client: I don't think there's really anyone now who cares whether I'm alive or dead. It just makes me feel so isolated.
- Helper A: No one seems concerned about you anymore, and that leaves you pretty alone. Can you tell me more about how that makes you feel to be so isolated?
- Helper B: Why do you think that no one cares about you anymore?
22. Client: I tried going to a therapist once before, but it didn't help . . . nothing I do now will change anything.
- Helper A: You've got to look on the bright side! There must be something you can do to make things better, isn't there?
- Helper B: You feel like nothing you do is important, and that a therapist can't help you. Hasn't anyone else been helpful to you before--maybe a friend, relative, teacher or clergyman?
23. Client: My psychiatrist tells me I have an anxiety neurosis. Do you think that's what's wrong with me?
- Helper A: I'd like to know what that means to you, in this present situation? How do you feel about your problem?
- Helper B: I'm not sure I agree with that diagnosis. Maybe you should seek out some psychological testing, just to be certain.

24. Client: I can't talk to anybody about my situation. Everyone is against me.

Helper A: That isn't true. There are probably lots of people who care about you, if you'd only give them a chance.

Helper B: It must be difficult to find help when it's so hard to trust people.

25. Client: (Voice slurred, unclear over telephone.)

Helper A: You sound tired. Why don't you get some sleep and call back in the morning?

Helper B: Your voice sounds so sleepy. Have you taken anything?

APPENDIX D

SIRI SCORING KEY:
LIST OF FACILITATIVE ALTERNATIVES

SIRI SCORING KEY:
LIST OF FACILITATIVE ALTERNATIVES

1.	B	14.	B
2.	B	15.	B
3.	B	16.	A
4.	A	17.	A
5.	A	18.	B
6.	B	19.	B
7.	A	20.	A
8.	B	21.	A
9.	B	22.	B
10.	A	23.	A
11.	B	24.	B
12.	A	25.	B
13.	B		

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