AN ABSTRACT OF THE THESIS OF

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Title: THE RECOGNITION OF SUICIDE LETHALITY FACTORS BY HEALTH AND MENTAL HEALTH PROFESSIONALS

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This study was an investigation of the ability of health and mental health professionals to recognize signs of suicide lethality. These professionals must often make evaluations of suicide potential in a short period of time with persons relatively unknown to them. Little evidence is available on the accuracy of professional evaluations of suicide lethality.

Signs of suicide lethality used in this study were ten factors comprising the Suicide Potential Rating Scale developed by the Los Angeles Suicide Prevention Center. The scale factors were empirically-derived, and non-theoretical variables were found to differentiate lethal from non-lethal attempters. This study was designed to investigate how recognition of Suicide Potential Rating Scale factors differed among: (a) health and mental health professionals, and (b) health and mental health professionals and controls.

Subjects in the investigation were 150 physicians, psychiatrists, psychologists, social workers, and clergymen. Controls were 30 college students. Subjects and controls were administered a 13-item multiple choice questionnaire covering the factors of the Suicide Potential Rating Scale.

Analyses of variance were used to test the relationships among professional groups and controls. Tukey's (a) Test was used to test the relationships between the means of specific professional groups and controls.

The findings of the study were:

1. Significant differences existed among professional groups on ability to recognize Suicide Potential Rating Scale factors.

2. Significant differences existed among professional groups and controls on ability to recognize Suicide Potential Rating Scale factors.

3. Treatment groups were significantly different from each other in the following order, from highest mean to lowest: physician/psychiatrist, psychologist, social worker, and clergyman/control.

4. Significant differences existed among four levels of experience across professional groups on ability to recognize Suicide Potential Rating Scale factors.

THE RECOGNITION OF SUICIDE LETHALITY FACTORS BY HEALTH AND MENTAL HEALTH PROFESSIONALS

A Thesis

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TABLE OF CONTENTS

Chapter Page

Chapter Page

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

The present study attempted to evaluate the ability of health and mental health professionals to recognize a set of valid behavioral criteria contained in the Suicide Prevention Rating Scale of suicide lethality characteristics. Results were compared between physicians, psychiatrists, psychologists, social workers, clergymen, and college undergraduate students.

THEORETICAL FORMULATION

The review of studies relating to the recognition of suicidal lethal signs in clients of health and mental health professionals is strongly indicative of a lack of information for decision-making. This lack of information appears due to the inability of mental health professionals to attend to various signs of lethality validated by a large number of research studies. No assessment has yet been made determining the extent of knowledge of lethal suicidal signs among these professionals. It has, therefore, been suggested that future investigation be made into the exact assessment of these distinct and measurable signs of suicide lethality as perceived by health and mental health professionals.

THE PROBLEM

Are there certain specific and measurable traits that are indicative of suicide in individuals? Are these characteristics recognized by health and mental health professionals? Is there any significant difference between different types of professionals in these fields in the ability to recognize these signs? Is there any significant difference between professionals and non-professional control groups in the ability to recognize these signs of suicide lethality? These are important and critical questions that must be answered with regard to the specific recognition of potentially-lethal suicidal individuals.

The evidence that currently exists indicates that very little actual practical knowledge of the characteristics of a truly lethal suicidal individual is present among those professionals in the health and mental health field who should be most highly trained in this area. It is on this premise that five groups of health and mental health professionals were tested to determine if there is a significant difference in the ability of the five professional groups, plus a non-professional college student control group, to recognize lethal suicidal signs in clients or patients that they come in contact with.

Statement of the Problem

Is there a significant relationship between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among physicians, psychiatrists, psychologists, social workers and clergymen who are among the principal professional gatekeepers for treatment and referral of suicidal patients or clients?

Is there a significant relationship between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among professionals and college undergraduate students?

Statement of the Hypotheses (Null Form)

There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among physicians, psychiatrists, psychologists, social workers and clergymen who are among the principal professional gatekeepers for treatment and referral of suicidal patients or clients.

There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among professionals and college undergraduate students.

Purpose of the Study

The purpose of the study was to ascertain if a significant relationship existed among the responses of several groups to a multiple-choice questionnaire on suicide lethality characteristics representing factors of the Suicide Prevention Rating Scale devised by the Los Angeles Suicide Prevention Center, Los Angeles, California. The instrument was self-administered by the subjects themselves without consultation or preparation. The means of the responses for the five professional groups and the control group were compared by analysis of variance to test for significant differences among the six treatment groups.

Significance of the Study

Several assumptions can be made depending on the results of the experimental study. If there is a significant difference between the means of the professional groups, assumptions could be made concerning superior or inferior training or experiential levels within each group. If there is no significant difference between the means of the professional groups, assumptions could be made concerning the seeming unimportance of training or experience of different professions with regard to the completion of this task. If there is no significant difference between the means of the professionals and non-professionals,

assumptions could be made about the lack or neglect of training in this particular task among professionals. Lastly, if the means of the professional groups and non-professional groups are both low, tentative assumptions can be made about the availability of cogent information on suicide lethality characteristics.

Results of the study would be applicable across all fields of health and mental health where interaction could occur between professionals and individuals with a high probability of suicide attempt. The study would help to ascertain the level of understanding of the criteria of lethal suicidal individuals by professionals and would serve as a guideline for education where weaknesses are shown. In addition, conclusions would be drawn, if necessary, to explain strengths within disciplines or within categories of lethal characteristics.

DEFINITIONS OF TERMS

The subject of suicide and lethal potentiality brings with it a number of terms that are relative to that topic. For that reason, the terms that have been related specifically to this study have been defined in this section.

Clergyman (Minister)

Any ordained member of the clergy of any faith who is currently heading an established church with a

congregation is defined as a clergyman.

Physician

Any licensed and practicing medical doctor who is not a psychiatrist is defined as a physician.

Professional

Any member of the disciplines of medicine, psychiatry, psychology, social work or the clergy who is currently practicing and dealing with clients or patients and meets the other criteria defined in this section is a professional.

Professional Group

Each experimental group of physicians, psychiatrists, psychologists, social workers, and clergymen is a professional group.

Psychiatrist

A person licensed to practice medicine who is engaged professionally in the prevention, diagnosis, treatment and care of individuals with mental illness is a psychiatrist.[1]

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[1]Horace B. English and Ava Champney English, A Comprehensive Dictionary of Psychological and Psycho-analytical Terms (New York: David McKay, 1958), p. 454.

Psychologist

Any person who is currently engaged in clinical or counseling work and has a Ph.D. in Psychology and two years of experience working with clients in supervised practice is a psychologist.

Social Worker

Any person who possesses a Master of Social Work degree and is currently engaged in client work of a case-work nature is a social worker.

Suicide

The act of killing oneself intentionally is suicide.[2]

Treatment Group

Each experimental group of physicians, psychiatrists, psychologists, social workers, clergymen, and controls is a treatment group.

LIMITATIONS OF THE STUDY

Limiting the number of groups of professionals was an obvious problem, since so many different types of

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[2]David B. Guralnik and Joseph H. Friend, Webster's New World Dictionary of the American Language--College Edition (Cleveland and New York: World Publishing, 1966), p. 1458.

professions can come in contact with potentially suicidal people. These groups were designated for their high rate of contact with such individuals and are certainly not meant to be the total representation of the helping disciplines.[3]

Problems were encountered in obtaining all of the questionnaires from personally-supervised sessions. In order to control for error equally among the five professional groups, six of the questionnaires in each professional group were received as replies from return-mail. Twenty questionnaires were sent to each of the five professional groups and six were drawn at random from the returned completed questionnaires.

Some questionnaires, therefore, were not given under direct supervision of the researcher. Some bias in scores could be in evidence here through preparation and consultation, but this level is considered to be small and not to seriously affect the significance of the scores or the study as a whole. In addition, some level of bias could be obtained due to the sampling of only those surveyed individuals who returned these questionnaires. Due to their interest and concern shown by returning the questionnaires, it is possible for biased response sets to have been given.

The restricted sampling area presents another limiting factor. Since the samples are small and

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[3]J. A. Snyder, "The Use of Gatekeepers in Crisis Management," Bulletin of Suicidology, VIII (1971) 39-44.

geographically centered in the midwestern area of the country for the most part, sampling bias and error in generalization to the whole professional population are certainly in evidence and acknowledged.

Lastly, the answers and opinions designated by the groups in question might not be indicative of the actual clinical decisions that would be made in the real client situation by the professional. This is both an assumption and a limitation to the implication of generalization from clinical to academic decision-making. Some discrepancies must be assumed to be present within some questionnaires.

Some error is assumed present from the extended period of five months over which the data were gathered. This error is considered to be negligible and no significant effect is assumed to be present.

Since this study is based on a fixed-effects type of independent variable, no generalization or inferences are to be made to any populations not specifically defined for each level of the independent variable. These levels are not intended to be representative of the entire health and mental health professional fields and are limited to the levels described in the study with attendant identifying criteria.[4]

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[4]William L. Hays, Statistics for the Social Sciences (New York: Holt, Rinehart and Winston, 1973), pp. 458-459; see also Donald T. Campbell and Julian C. Stanley, Experimental Designs for Research (Chicago: Rand McNally and Co., 1963), p. 31; see also Marigold Linton and Philip S. Gallo, Jr., The Practical Statistician: Simplified Handbook of Statistics (Monterey, California: Brooks/Cole Publishing Co., 1975), p. 128.

Chapter 2

REVIEW OF RELATED LITERATURE

Suicide, defined as the self-inflicted ending of one's own life, has plagued the health and mental health professions since their beginning. Practitioners in these fields have struggled with theories and hypotheses of how to identify potential suicidal individuals with only marginal success until very recent data-collection procedures have finally established some measurable and workable guidelines. Through the concerted efforts of researchers and clinicians of the Los Angeles Suicide Prevention Center, Los Angeles, California, a profile of the potentially-lethal suicide attempter has been assembled. This particular organization, established by federal grant in 1957, is the acknowledged pioneer in the field of suicide prevention and identification of potentially-lethal attempters. Through the processing of thousands of callers to the center and the investigation of actual suicides, ten factors or characteristics of lethality were factor-analyzed as significant in differentiating the degree of self-destructive danger in an individual.[1] These ten variables comprise the

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[1]Norman L. Farberow and Edwin S. Schneidman, The Cry for Help (New York: McGraw-Hill, 1965); see also James C. Coleman, Abnormal Psychology and Modern Life (Glenview, Ill.: Scott, Foresman and Company, 1976), pp. 605-606.

Suicide Potential Rating Scale. They are arranged as a checklist schedule that can be verbally administered in a very few minutes to an individual suspected of suicidal potential. When dealing with a potential suicidal person over a phone or in an interview, a quick assessment of lethality is often critical in the reaction taken to the person. Obviously, the more seriously-rated a person is, the more necessary a quick intervention becomes. It is, then, an enormous benefit to a health or mental health clinician to be able to quickly assess the lethality potential of a suspected suicidal person.

AGE, SEX AND MARITAL STATUS

The first items to be ascertained in the lethality scale are the age, sex and marital status of the person. Though females attempt to take their life in a ratio varying from five times to three times more than males, males are much more likely to succeed.[2] Data compiled on twenty-six thousand suicide prevention center patients showed that

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[2]J. Tuckman and W. F. Youngman, "Suicide Risk among Persons Attempting Suicide," Public Health Report, LXXVIII (1963), 585-587; see also F. B. Davis, "The Relationship between Suicide and Attempted Suicide," Psychiatric Quarterly, XLI (1967), 752-765; see also D. Lester, "Suicidal Behavior in Men and Women," Mental Hygiene, LIII (1969), 340-345; see also D. H. Rosen, "The Serious Suicide Attempt: Epidemiological and Follow-up Study of 886 Patients," American Journal of Psychiatry, CXXVII (1970), 764-770; see also J. P. Kehoe and A. P. Abbott, "Suicide and Attempted Suicide in the Yukon Territory," Canadian Psychiatric Association Journal, XX, No. 1 (1975), 15-23.

sixty-four percent of the successful suicides were men.[3] Litman[4] noted in his follow-up study of 238 randomly-selected suicide prevention center clients paired with the case histories of fifty committed suicides that sixty percent of the lethals were men. In a study of 193 hospitalized psychiatric suicide attempters, the degree of lethality was consistently greater in males than females.[5] Rosen[6] found males significantly greater in lethality in his study of 886 suicidal patients. In a corroborative London study of 409 suicides, his data were supported by the male-female ratio of two to one. Segal[7], Davis[8], and MacMahon, Johnson and Pugh[9] all concluded in their reviews of studies of

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[3]C. I. Wold, "Characteristics of 26,000 Suicide Prevention Patients," Bulletin of Suicidology, VI (1970), 24-28.

[4]R. Litman, "Suicide Prevention Center Patients: A Follow-up Study," Bulletin of Suicidology, VI (1970), 12-17.

[5]E. Cohen, J. Motto and R. Seiden, "An Instrument for Evaluating Suicide Potential," American Journal of Psychiatry, CXXII (1966), 886-891.

[6]Rosen, loc. cit.

[7]B. E. Segal, "Suicide and Middle Age," Sociological Symposium, III (1969), 131-140.

[8]Davis, loc. cit.

[9]B. MacMahon, S. Johnson and T. Pugh, "Relation of Suicide Rates to Social Conditions," Public Health Reports, LXXVIII (1963), 285-293.

suicide lethality that males were more likely to succeed at suicide by a ratio of two to one. The conclusion drawn from these studies indicates support for the first factor of more lethality in males than females.

Any age level approaching or in excess of fifty years old is considered more lethal than younger age groups. Farberow, Schneidman and Neuringer[10] conducted a study of the age levels of 218 suicides of patients who were still on hospital rolls and compared them with 220 psychiatric hospital controls. They found the average age of the suicidals was forty and varied significantly from the mean of the hospitalized controls. Pokorny's[11] follow-up study of 218 suicidal patients found an even greater mean of more than forty years of age among serious attempters. Cohen, Motto and Seiden[12] found the age level of forty-five and up was significantly more suicidal in their 193 hospitalized attempters. Davis[13] and Rosen[14] corroborated these findings, with Rosen getting results that were significant to

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[10]N. L. Farberow, E. S. Schneidman and C. Neuringer, "Case History and Hospitalization Factors in Suicides of Neuropsychiatric Patients," Journal of Nervous and Mental Disease, CXLII (1966), 32-44.

[11]A. D. Pokorny, "A Follow-up Study of 618 Suicidal Patients," American Journal of Psychiatry, CXXII (1966), 1109-1116.

[12]Cohen, Motto and Seiden, loc. cit.

[13]Davis, loc. cit.

[14]Rosen, loc. cit.

the level of $p<.001$ in his 886 patients. In a comparative study of eighteen suicides, eighteen matched controls and thirty random controls, Spalt and Weisbuch[15] found that the age group from forty-one to fifty marked a significant increase in lethal suicides. These findings were reinforced by the reviews of studies done by Tuckman and Youngman[16] and Segal[17] who found profound increases in successful attempts after the age of forty-five. MacMahon, Johnson and Pugh[18], in a similar review, found the significant increase after age fifty. In addition, it appears that the older the age after age fifty, the more likely for a suicide attempt to be successful.[19] The conclusion from these findings would appear to be that after age fifty the chance of lethal suicide increases significantly.

The chances of widowed, separated or divorced persons committing suicide is greater than that of married or single individuals. This factor appears related to a later factor of a loss or rejection involving a "significant

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[15]L. Spalt and J. B. Weisbuch, "Suicide: An Epidemiological Study," Diseases of the Nervous System, XXXIII, No. 1 (1972), 23-29.

[16]J. Tuckman and W. F. Youngman, "Identifying Suicide Risk Groups among Attempted Suicides," Public Health Report, LXXVIII (1963), 763-766.

[17]Segal, loc. cit.

[18]MacMahon, Johnson and Pugh, loc. cit.

[19]Rosen, loc. cit.

other" figure in the person's life. In a research study of 1,112 suicide attempts, Tuckman and Youngman[20] concluded that high risk attempts of great lethality were significantly associated with widowed, separated or divorced persons. Rosen[21] corroborated this data in his study to the $p<.01$ level of significance, as did Cohen, Motto and Seiden.[22] In Spalt and Weisbuch's[23] comparative study, married and single attempters were much less lethal than divorced or widowed attempters. No data were available on separated married individuals in this study. In reviews of the literature conducted by Modlin[24] and Segal[25], married and divorced people were considered more potentially lethal than their single counterparts.

SLEEP DISTURBANCE, HELPLESSNESS, ANXIETY AND DEPRESSION

The second major item on the checklist concerns the psychological variables of sleep disturbance, helplessness or hopelessness, anxiety and depression. Depression does

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[20]Tuckman and Youngman, loc. cit., pp. 763-766.

[21]Rosen, loc. cit.

[22]Cohen, Motto and Seiden, loc. cit.

[23]Spalt and Weisbuch, loc. cit.

[24]Herbert C. Modlin, "Cues and Clues to Suicide," Menninger Perspective, II, No. 2 (1971), 2-5.

[25]Segal, loc. cit.

appear to be the most correlated psychological disturbance with suicides, but not all suicides are depressed. In addition, alcoholism and homosexuality are evidenced in suicide to a significant degree.

Motto and Greene[26] conducted an extensive study of 175 suicides and 197 attempters who were admitted to a general medical hospital. When the attempters and the surviving relatives of the successful suicides were given a questionnaire, serious attempts and successful suicides correlated highly with respect to complaints of nervousness and depression. In addition, abdominal pains were prevalent along with headaches in many cases.

In a study of patients diagnosed as anxiety reaction in general and surgical hospitals, Farberow and McEvoy[27] found a number of significant differences between forty-three successful suicides and forty-three similarly-diagnosed controls. The successful suicides were characterized by a higher agitation, greater sleeplessness, tension and nervousness, and markedly higher levels of anxiety and depression. Heilig[28], in his review of recognition of

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[26]J. A. Motto and C. Greene, "Suicide and the Medical Community," Archives of Neurological Psychiatry, LXXX (1958), 776.

[27]N. L. Farberow and T. L. McEvoy, "Suicide of Patients with Diagnosis of Anxiety Reaction in General Medical and Surgical Hospitals," Journal of Abnormal Psychology, LXXI (1966), 287-299.

[28]S. M. Heilig, "Training in Suicide Prevention," Bulletin of Suicidology, VI (1970), 41-44.

successful suicidals by suicide prevention center personnel, found that expressions of helplessness and hopelessness were paramount in callers who were successful or serious suicide attempters. Wold[29] found ninety-two percent of his forty-two successful suicides exhibited marked depression. In his study of 886 patients, Rosen[30] found serious attempters to differ significantly from the controls and less serious attempters in the area of more levels of depression. This was found to be significant to the p .01 level. In another study of suicidal and non-suicidal groups of psychiatric inpatients, serious suicidals were found to be significantly higher in helplessness, hopelessness and depression.[31] These factors seem highly correlated with successful suicide attempts in all studies where they were considered and measured as variables.

Alcoholism also correlates highly with suicide. In Modlin's[32] review, he related alcoholism as a positive indicator of potential suicide along with insomnia,

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[29]C. I. Wold, "Characteristics of 26,000 Suicide Prevention Patients," Bulletin of Suicidology, VI (1970), 24-28.

[30]D. H. Rosen, "The Serious Suicide Attempt: Epidemiological and Follow-up Study of 886 Patients," American Journal of Psychiatry, CXXVII (1970), 764-770.

[31]H. R. Conte and R. Plutchik, "Personality and Background Characteristics of Suicidal Mental Patients," Journal of Psychiatric Research, X (1974), 181-188.

[32]Modlin, loc. cit.

helplessness and hopelessness. Cohen's[33] 193 hospitalized attempters also were higher in alcoholism as the lethality of the attempt approached success. Thirty-one percent of Wold's[34] suicides were alcoholics. Of the acompleted suicides in a follow-up on 618 suicidal patients, alcoholism was a significant variable in differentiating successful from attempted suicides.[35] In addition to finding depression in their reviews of completed suicides as compared to attempted suicides, Davis[36] and Motto[37] found alcoholism to correlate highly with the more serious attempts and successful suicides.

No data has yet been reviewed showing unequivocal association of homosexuality with suicide, though the symptomatology of depression would appear to be a common factor between the two. Information is still being researched on

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[33]E. Cohen, J. Motto and R. Seiden, "An Instrument for Evaluating Suicide Potential," American Journal of Psychiatry, CXXII (1966), 886-891.

[34]Wold, loc. cit.

[35]A. D. Pokorny, "A Follow-up Study of 618 Suicidal Patients," American Journal of Psychiatry, CXXII (1966), 1109-1116.

[36]F. B. Davis, "The Relationship between Suicide and Attempted Suicide," Psychiatric Quarterly, XLI (1967), 752-765.

[37]J. A. Motto, "Toward Suicide Prevention in Medical Practice," Journal of the American Medical Association, CCX, No. 7 (1969), 1229-1232.

this matter.

THE PRESENCE OF AN IMMEDIATE STRESS

The third factor considered critical in the quick assessment of serious suicide potential lethality is if the person is under an immediate stress. The death of a loved one, job loss, or other personal crisis would constitute such a stress. A great deal of data supporting this concept has been collected under research study conditions with evaluations of attempters as well as psychological and epidemiological autopsies of successful completers.

Farberow and Reynolds[38] conducted a study of the dyadic crises of fifty suicides compared to twenty normals. This study was done with mental hospital patients under several diagnoses. This particular dyadic crisis was defined as a reaction to a disruption of an emotional interpersonal relationship. It was found that these problems with a significant other person were immediately located prior to the suicide and considered a precipitating factor in the death.

The factor of a loss or death of a loved one occurring immediately prior to the successful suicide was also found significant in a study of two groups of psychiatric

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[38]N. L. Farberow and D. K. Reynolds, "Dyadic Crisis Suicides in Mental Hospital Patients," Journal of Abnormal Psychology, LXXVIII, No. 1 (1971), 77-85.

inpatients.[39] This factor increased with severity of the attempt among unsuccessful attempters. Wold[40] found such immediate stress in forty-four percent of the forty-two suicides studied. In the group of 193 San Francisco suicide attempters, the suffering of a loss in the last six months prior to a serious attempt was considered of prime significance whether the loss was real, threatened or even fantasized.[41] Rosen[42] concluded that recent separations or deaths involving marital partners correlated highly with serious attempts. Heilig[43], in his review of suicide prevention center assessment techniques, also concluded that immediate stress was a significant factor in precipitating suicide.

Paykel, Prusoff and Myers[44] conducted a recent controlled study comparing suicide attempts and recent life events. Taking fifty-three unsuccessful suicides, an immediate relationship was found between suicide attempts and

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[39]H. R. Conte and R. Plutchik, "Personality and Background Characteristics of Suicidal Mental Patients," Journal of Psychiatric Research, X (1974), 181-188.

[40]Wold, loc. cit.

[41]Cohen, Motto and Seiden, loc. cit.

[42]Rosen, loc. cit.

[43]S. M. Heilig, "Training in Suicide Prevention," Bulletin of Suicidology, VI (1970), 41-44.

[44]E. S. Paykel, B. A. Prusoff and J. K. Myers, "Suicide Attempts and Recent Life Events: A Controlled Comparison," Archives of General Psychiatry, XXXII, No. 3 (1975), 327-333.

life events preceding the attempt, especially recent stressful events within the time period of the last six months. Mikawa[45], in his analysis of suicidal behavior, considered the evidence to unequivocally associate coping styles and precipitating stress situations with suicidal behavior. Litman[46], in studying his 238 suicidal cases compared with fifty completed suicides, found fifty percent of the successfuls and serious attempters were under acute stress at the time. Spalt and Weisbuch[47] found similar results in their comparative study, citing the immediate loss of a loved one as a significant characteristic.

Pokorny[48] studied the characteristics of forty-four veterans who committed suicide and were former psychiatric patients. In viewing the results of this study, he concluded that impending divorce and the immediate danger of losing a love object were significant factors in the deaths. Occupational stress was cited as a significant factor in

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[45] J. K. Mikawa, "An Alternative to Current Analysis of Suicidal Behavior," Psychological Reports, III, No. 1 (1973), 323-330.

[46] R. Litman, "Suicide Prevention Center Patients: A Follow-up Study," Bulletin of Suicidology, VI (1970), 12-17.

[47] L. Spalt and J. B. Weisbuch, "Suicide: An Epidemiological Study," Diseases of the Nervous System, XXXIII, No. 1 (1972), 23-29.

[48] A. Pokorny, "Characteristics of Forty-four Patients Who Subsequently Committed Suicide," Archives of General Psychiatry, II (1960), 314-323.

precipitating suicide in the study of MacMahon, Johnson and Pugh.[49] In addition, the acuteness of onset of such stress was emphasized, leading to the next important variable.

ACUTENESS OF SYMPTOM ONSET

The acuteness of onset of the suicidal symptoms is considered to be especially correlated with immediate, serious attempts. The evidence for this appears to be overwhelming, with precautions taken for close analysis of chronic problems. The situation appears to be biphasic in its relation to suicide. The acute problem is immediately stressful and can lead to the most serious concern for a lethal attempt. The chronic problem can also be precipitating for an attempt if the individual has lost the long-term ability to cope with it as he has in the past. This eventual "wearing out" of the coping mechanism needs to be especially watched but does not appear to be as significant to lethality as the acute stress. Litman's[50] finding of acute stress in fifty percent of the lethal attempts is ominous evidence of this. Wold[51], in his large-scale study,

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[49] B. MacMahon, S. Johnson and T. Pugh, "Relation of Suicide Rates to Social Conditions," Public Health Reports, LXXVIII (1963), 285-293.

[50] R. Litman, loc. cit.

[51] C. I. Wold, "Characteristics of 26,000 Suicide Prevention Center Patients," Bulletin of Suicidology, VI (1970), 24-28.

found forty-four percent of the lethal attempts involved acute stress. In comparing suicidal behavior to the relationships with significant other persons, Peck[52] found the successful committers of suicide were noticeably non-chronic in their problems, encountering the significant upsets in their lives within a short time of the death of a significant other person in their immediate proximity.

DEFINITE PLAN OR METHOD OF COMMITTING SUICIDE

The fifth variable in the scale is whether an individual possesses a definite plan of effectiveness to commit suicide. In general, a specific choice of time, place and method for the proposed suicide is a serious indication of lethality.[53] Evidence for this is still being accumulated, but strong evidence supporting this thesis is becoming known from studies such as the assessment of suicide lethality done by Wollersheim.[54] She stated in this study that the indication of definite plans for a suicide are a definite positive indicator of lethality in a suicidal

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[52]M. C. Peck, "Relation of Suicidal Behavior to Characteristics of Significant Other" (unpublished Doctoral Dissertation, University of Portland, 1965).

[53]R. Litman and N. L. Farberow, "The Emergency Evaluation of Self-destructive Potentiality," The Cry for Help, ed. N. L. Farberow and E. S. Schneidman (New York: McGraw-Hill, 1965), pp. 48-59.

[54]J. P. Wollersheim, "The Assessment of Suicide Potential via Interview Methods," Psychotherapy: Theory, Research and Practice, XI, No. 3 (1974), 222-225.

prospect.

SOCIAL ISOLATION

The next variable in forecasting lethality is the presence of social isolation. If the individual has no friends or relatives to turn to for help, then the chance for a lethal attempt jumps considerably. Tuckman and Youngman[55] found an overwhelming seventy-one percent of the high risk attempters in their 1,112 total subjects to be alone and isolated from social contacts. Kehoe and Abbott[56] found similar figures in their review of suicides in the Yukon Territory. They concluded that isolated people were much more susceptible to success in a suicide attempt than socially gregarious people with more social contacts.

A review of the Los Angeles Suicide Prevention Center patients showed that low lethality was positively related to interpersonal manipulative motives in the attempters who did not succeed. The greater the involvement in an interpersonal relationship, the lower the lethality potential becomes.[57]

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[55]J. Tuckman and W. F. Youngman, "Identifying Suicide Risk Groups among Attempted Suicides," Public Health Report, LXXVIII (1963), 763-766.

[56]J. P. Kehoe and A. P. Abbott, "Suicide and Attempted Suicide in the Yukon Territory," Canadian Psychiatric Association Journal, XX, No. 1 (1975), 15-23.

[57]R. Litman, E. S. Schneidman and N. L. Farberow, "Los Angeles Suicide Prevention Center," American Journal of Psychiatry, CXVII (1961), 1084-1087.

Reinforcing the idea that increasing age is a co-variable with social isolation, Bock[58] studied 188 suicides in a retirement community over a nine-year period and found social isolation to be the major factor involved. Social ties among the elderly citizens of the community were seen to counteract the isolation of the elderly widowed and correlated inversely with a lethal suicide attempt.

The simple lack of a significant other person in the life of an individual is found to be a highly important factor in predicting the suicide lethality potential.[59] Having contact with just one person on an intimate interpersonal basis is seen to counteract the lethality potential. The lack of such is highly indicative of a successful suicide.

Isolation from any personal contacts of an intimate level is shown to be an important factor by Wold[60], who found fifty-one percent of his successful suicides were living alone. In their controlled study of forty-three suicides and forty-three controls, the researcher team of

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[58]E. W. Bock, "Aging and Suicide: The Significance of Marital, Kinship and Alternative Relations," Family Coordinator, XXI (1972), 71-79.

[59]S. M. Heilig, "Training in Suicide Prevention," Bulletin of Suicidology, VI (1970), 41-44; see also D. H. Miller, "Suicidal Careers: Case Analysis of Suicidal Mental Patients," Social Work, XV, No. 1 (1970), 27-36; see also Peck, loc. cit.

[60]Wold, loc. cit.

Farberow and McEvoy[61] found social isolation with no important relationships to be critical in determining successful attempts. Rosen[62] found supporting data significant to the $p<.05$ level in his 886 patients. Spalt and Weisbuch[63] found social isolation to be characteristic of lethals in their comparative study and Modlin[64], in his review of the literature, viewed social withdrawal and isolation as one of his six major predictive factors in forecasting suicides.

HISTORY OF PRIOR ATTEMPTS

The seventh variable on the scale involves probably the most significant indicator in predicting the lethality of an individual succeeding in a suicide attempt. This variable is the presence of prior attempts at suicide in the individual's past history, especially recent history. Once thought to be a non-indicator of lethality in potential suicidals, evidence now has become overwhelmingly indicative

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[61] N. L. Farberow and T. L. McEvoy, "Suicide of Patients with Diagnosis of Anxiety Reaction in General Medical and Surgical Hospitals," Journal of Abnormal Psychology, LXXI (1966), 287-299.

[62] D. H. Rosen, "The Serious Suicide Attempt: Epidemiological and Follow-up Study of 886 Patients," American Journal of Psychiatry, CSSVII (1970), 764-770.

[63] L. Spalt and J. B. Weisbuch, "Suicide: An Epidemiological Study," Diseases of the Nervous System, XXXIII, No. 1 (1972), 23-29.

[64] Herbert C. Modlin, "Cues and Clues to Suicide," Menninger Perspective, II, No. 2 (1971), 2-5.

that previous unsuccessful attempts are a very positive sign of a future lethal suicide.

Farberow and Schneidman[65] gave ample evidence of this fact in their study of four groups of thirty-two hospitalized patients each. These groups were separated as to degree of lethality in attempted, threatened and actually completed suicides with a control group of non-suicidals. Of the individuals who committed suicide, sixty-two percent had made actual previous attempts while seventy-five percent had attempted or threatened suicide. In a later study, Farberow, Schneidman and Neuringer[66] studied 218 actual suicides with 220 psychiatric controls. They found that previous attempts differentiated the two groups, the suicides being greater in previous attempts to the $p<.01$ level of significance.

Of the forty-two suicides in Wold's[67] study of random samples from 26,000 suicide prevention center patients, sixty percent had made previous attempts. In another study,

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[65]N. L. Farberow and E. S. Schneidman, "Attempted, Threatened and Completed Suicide," Journal of Abnormal Social Psychology, XX (1955), 230.

[66]N. L. Farberow, E. S. Schneidman and C. Neuringer, "Case History and Hospitalization Factors in Suicides of Neuropsychiatric Patients," Journal of Nervous and Mental Disease, CXLII (1966), 32-44.

[67]C. I. Wold, "Characteristics of 26,000 Suicide Prevention Center Patients," Bulletin of Suicidology, VI (1970), 24-28.

thirty percent of fifty lethal attempters were characterized by previous unsuccessful attempts.[68] Farberow and McEvoy[69] statistically differentiated forty-two successfuls from forty-three controls by the presence of suicidal attempt history. It was the most significant variable of all differentiating variables in identifying lethals. Corroborative data were obtained from two groups of psychiatric inpatients where recent suicide attempts differentiated the suicidal group from the control group.[70] Davis[71] reported that thirty-three percent of successful suicides studied in his review of suicide research were after previous unsuccessful attempts.

The indication of the importance of recent attempts in Conte and Plutchik's[72] study brings up a related item of considerable importance to the variable of previous attempts in determining potential lethality. Ample evidence indicates that the closer the previous attempt, the more chance for another, more serious attempt to take place.

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[68]R. Litman, "Suicide Prevention Center Patients: A Follow-up Study," Bulletin of Suicidology, VI (1970), 12-17.

[69]Farberow and McEvoy, loc. cit.

[70]H. R. Conte and R. Plutchik, "Personality and Background Characteristics of Suicidal Mental Patients," Journal of Psychiatric Research, X (1974), 181-188.

[71]F. B. Davis, "The Relationship between Suicide and Attempted Suicide," Psychiatric Quarterly, XLI (1967), 752-765.

[72]Conte and Plutchik, loc. cit.

Pokorny[73] found one percent of all suicide unsuccessful attempts were followed within three months by a successful one. He also concluded from his data that the risk of suicide within two years of an unsuccessful attempt was thirty-five times the normal rate, an alarming increase in lethality potential. In one review of studies of suicide attempters it was found that one to five percent of attempters are successful in a following attempt within five to ten years.[74] Cohen, Motto and Seiden[75] found that thirty percent of those unsuccessful released hospitalized attempters committed suicide within eight years following their release.

Even stronger evidence comes from the Farberow and Schneidman[76] study where it was found that sixty-nine percent of attempters and threateners committed suicide within one year of discharge and forty-nine percent within three months. The implications here for the mental health practitioner are obvious and will be elaborated upon further in

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[73]A. D. Pokorny, "A Follow-up Study of 618 Suicidal Patients," American Journal of Psychiatry, CXXII (1966), 1109-1116.

[74]E. Stengel, "The Complexity of Motivations to Suicide Attempts," Bulletin of Suicidology, (December, 1967), 35-40.

[75]E. Cohen, J. Motto and R. Seiden, "An Instrument for Evaluating Suicide Potential," American Journal of Psychiatry, CXXII (1966), 886-891.

[76]Farberow and Schneidman, loc. cit.

a later discussion.

The supportive evidence for implications of previous attempts seems universal in review of research studies.[77] The incidence and timing of a previous suicide attempt should be considered very critical to the potential of a lethal attempt.

PRESENCE OF ILLNESS OR UNSUCCESSFUL MEDICAL TREATMENT

The eighth variable in the scale is the presence of a long-term physical illness and/or unsuccessful medical treatment or relations with a medical doctor. One half of all successful suicides have had contact with a physician within the last six months preceding the death.[78] The implications for the medical profession will be discussed later. In terms of predictive value of lethality, however, long-term illness is obviously critical, as is contact with a physician. In a study of serious attempters by the team

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[77]E. S. Schneidman and N. L. Farberow, "Clues to Suicide," Clues to Suicide, ed. E. S. Schneidman and N. L. Farberow (New York: Blackiston, 1957), pp 3-9; see also J. A. Motto, "Suicide Attempts: A Longitudinal View," Archives of General Psychiatry, XIII (1965), 516-520; see also J. Tuckman and W. F. Youngman, "Identifying Suicide Risk Groups among Attempted Suicides," Public Health Report, LXXVIII (1963), 763-766.

[78]Herbert C. Modlin, "Cues and Clues to Suicide," Menninger Perspective, II, No. 2 (1971), 2-5; see also J. A. Motto and C. Greene, "Suicide and the Medical Community," Archives of Neurological Psychiatry, LXXX (1958), 776; see also Tuckman and Youngman, loc. cit.

of Tuckman and Youngman[79], fourteen percent of them were under medical care at the time of their suicide. They were characterized by chronic illness. In a study of 175 suicides and 197 attempters admitted to medical hospitals, it was found that chronic complaints had led to fifty percent of the suicidal victims seeing a physician within six months of death.[80] In addition, one out of six had seen a doctor within thirty days of the fatal attempt. In interviewing survivors of one hundred suicides in Great Britain, it was found that an astounding eighty percent of the victims had been seeing a doctor at the time of their death.[81] Whether the establishment of socialized medicine in Great Britain has influenced the data to some degree is not known, but the relationship is obvious. Pokorny[82] also found a high degree of relationship between physical health problems and completed suicides in his follow-up study of 618

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[79]Tuckman and Youngman, loc. cit.

[80]J. A. Motto and C. Greene, "Suicide and the Medical Community," Archives of Neurological Psychiatry, LXXX (1958), 776.

[81]B. Barraclough, J. Bunch, B. Nelson and P. Sainsbury, "A Hundred Cases of Suicide: Clinical Aspects," British Journal of Psychiatry, CXXV (1974), 355-373.

[82]A. D. Pokorny, "A Follow-up Study of 618 Suicidal Patients," American Journal of Psychiatry, CXXII (1966), 1109-1116.

suicidal patients, as did Spalt and Weisbuch[83] in their comparative study.

Evidence for unsuccessful treatment and relations with a physician as determining variables in lethality was found by Farberow and McEvoy[84] in their study of forty-three successfuls and controls. Long term physical illness was significant as well as negativistic attitudes toward doctors and lack of response to treatment of physical ailments. These items differentiated successfuls from controls significantly.

LACK OF COMMUNICATION WITH RELATIVES

The ninth factor seen as differentiating lethal from non-lethal attempters is the lack of communication with relatives, if they exist. In addition, the relatives' lack of communication with the potential suicidal is considered equally as important. Certain generalizations from the social isolation factors already discussed can be seen as being applicable here.[85] No communication with others

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[83]L. Spalt and J. B. Weisbuch, "Suicide: An Epidemiological Study," Diseases of the Nervous System, XXXIII, No. 1 (1972), 23-29.

[84]N. L. Farberow and T. L. McEvoy, "Suicide of Patients with Diagnosis of Anxiety Reaction in General Medical and Surgical Hospitals," Journal of Abnormal Psychology, LXXI (1966), 287-299.

[85]N. Tabachnick, "Creative Suicidal Crises," Archives of General Psychiatry, XXIX, No. 2 (1973), 258-263.

or a distortion of communication with close relatives was determined as a significant variable in the study of suicidal mental patients by Miller.[86] Farberow and McEvoy[87] determined that no communication or support from the family was prominent in determining significant differences between their forty-three suicides and forty-three controls. A lack of communication with others was emphasized by Heilig[88] in his review of suicide prevention center patients as being a definite indicator of lethality in a suicide attempt.

REJECTION BY A SIGNIFICANT OTHER PERSON

The tenth and last variable in the scale of suicide lethality is rejection by a significant other person. If the individual becomes rejected by this person, the chances of a lethal suicide attempt are markedly increased. This significant other person may be a friend, relative or marital partner who is important to the individual and can cause acute disruption of his life by this rejection. Generalizations from this variable can be made to that of the

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[86] D. H. Miller, "Suicidal Careers: Case Analysis of Suicidal Mental Patients," Social Work, XV, No. 1 (1970) 27-36.

[87] Farberow and McEvoy, loc. cit.

[88] S. M. Heilig, "Training in Suicide Prevention," Bulletin of Suicidology, VI (1970), 41-44.

marital status, since a separation, divorce or even the death connected with a marital partner can be interpreted by the remaining partner as a rejection.[89]

A close and revealing study of this rejection by a significant other person was made by Farberow and Reynolds[90] in their examination of dyadic crises in fifty suicides and twenty hospitalized controls. The results of the study showed significant increased degrees of disordered social relations, rejection or suppression by significant others. The suicides were preceded and considered precipitated by a disruption of an emotional and interpersonal relationship with a significant other person. This involved rejection to a significant degree in the cases. The examiners concluded that problems with significant other persons precipitated the suicides and the main characteristic of the problems was a rejected or strained relationship.

A lack or withdrawal of significant others was determined to be a major factor in lethality of attempts by Miller.[91] Review studies corroborating this conclusion

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[89]Spalt and Weisbuch, loc. cit.; see also H. R. Conte and R. Plutchik, "Personality and Background Characteristics of Suicidal Mental Patients," Journal of Psychiatric Research, X (1974), 181-188; see also D. H. Rosen, "The Serious Suicide Attempt: Epidemiological and Follow-up Study of 886 Patients," American Journal of Psychiatry, CXXVII (1970), 764-770.

[90]N. L. Farberow and D. K. Reynolds, "Dyadic Crisis Suicides in Mental Hospital Patients," Journal of Abnormal Psychology, LXXVIII, No. 1 (1971), 77-85.

[91]Miller, loc. cit.

were done by Peck[92] and Heilig.[93] To further reinforce this concept, Litman, Schneidman and Farberow[94] stated in their review of the Los Angeles Suicide Prevention Center patients and data that a low lethality potential was characterized by manipulative interpersonal motives and relationships. Any rejection by a member of the manipulated pair would raise the lethality potential.

To conclude, interpersonal relationships are known to be one of the fundamental sources of difficulty for suicidal acts. When stress comes about between a pair of individuals, one or the other member of a pair may be so affected as to engage in self-destructive behavior. This involves the loss, threatened loss or rejection by a loved one, sometimes called a dyadic crisis. A survey of committed suicide cases conducted by investigators using the V. A. Central Research Unit for the Study of Unpredicted Death (VACRU) has indicated ten percent of suicides involved acute dyadic crisis within one year prior to death.[95]

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[92]M. C. Peck, "Relation of Suicidal Behavior to Characteristics of Significant Other" (unpublished Doctoral Dissertation, University of Portland, 1965).

[93]Heilig, loc. cit.

[94]R. Litman, E. S. Schneidman and N. L. Farberow, "Los Angeles Suicide Prevention Center," American Journal of Psychiatry, CXVII (1961), 1084-1087.

[95]E. Stengel and N. G. Cook, Attempted Suicide. Its Social Significance and Effects (London: Chapman and Hill, 1958); see also N. L. Farberow, "Suicide: Psychological Aspects," International Encyclopedia of the Social Sciences (New York: MacMillan and Free Press, 1968).

These ten constellations of characteristics described above are steeped in research garnered from many varied professional sources. The evidence appears quite ample that each of the ten variables for the short assessment of suicide lethality in the Suicide Prevention Rating Scale has content validity. These characteristics or constellation of characteristics, with emphasis on high lethality, can be summarized as follows:

1. Male rather than female, over fifty years of age and widowed, separated or divorced.
2. Symptoms of anxiety and depression present, involving possible sleep disturbance, helplessness, hopelessness and high correlation with alcoholism.
3. Presence of immediate stressful situation.
4. Acute onset of symptoms as opposed to chronic.
5. Communication of effective plan of suicide.
6. Isolation from friends and relatives with no help coming from these sources.
7. History of prior attempts at suicide.
8. Chronic physical illness or complaints and/or unsuccessful relations with a physician.
9. Not in communication with relatives or communicated to by relatives.
10. Rejection or disruption of interpersonal

relationship with significant other person.[96]

PREDICTIVE VALIDITY OF THE LETHALITY SCALE

The effective use of the scale in determining the lethality of a suicidal attempt depends not only on the content validity of the various characteristics but also upon the predictive validity of the scale in identifying these persons in the clinical setting. Wold[97], in comparing forty-two suicides and 984 suicidal general patients collected at random from 26,000 suicide prevention center patients, rated these subjects with the Suicide Prevention Rating Scale. The results were quite conclusive. Of the 984 suicidal controls whose attempts had been non-lethal, only nineteen percent received a high rating on the scale by possessing at least seven of the ten lethal variables. Instead, thirty-eight percent received medium rating of lethality (four, five, or six) and forty-three were rated low (three or below). Markedly different results were obtained with the ratings of the successful suicides.

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[96]R. Litman and N. L. Farberow, "The Emergency Evaluation of Self-Destructive Potentiality," The Cry for Help, ed. N. L. Farberow and E. S. Schneidman (New York: McGraw-Hill, 1965), pp 48-59; see also N. D. Tabachnick and N. L. Farberow, "The Assessment of Self-Destructive Potentiality," The Cry for Help, ed. N. L. Farberow and E. S. Schneidman (New York: McGraw-Hill, 1965), pp 60-77; see also N. L. Farberow and E. S. Schneidman, The Cry for Help (New York: McGraw-Hill, 1965).

[97]C. I. Wold, "Characteristics of 26,000 Suicide Prevention Center Patients," Bulletin of Suicidology, VI (1970), 24-28.

Forty-five percent of the suicidal individuals who succeeded were rated high in lethality. An additional forty-five percent were rated medium and only ten percent were rated low. While not a completely foolproof or mistake-proof system, the short assessment checklist system of determining lethality is quite effective in predicting lethal attempts in suicide-prone individuals.

Litman[98] rated his 238 suicide prevention center patients along with fifty committed suicides on the same scale. His results were similarly conclusive, finding seriousness of attempts increased with increased ratings on the lethality scale. The highest ratings were obtained by the successful suicidals, showing a significant difference over less-lethal attempts. Kaplan and Litman[99] conducted the first such test with one hundred suicide emergency callers at the Los Angeles Suicide Prevention Center. In following up the callers after the assessment of lethality by the short schedule, the potential lethal intent forecasted by the scale was proven to be significantly valid in predicting the occurrence of a serious or lethal attempt in the random-selected callers.

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[98]R. Litman, "Suicide Prevention Center Patients: A Follow-up Study," Bulletin of Suicidology, VI (1970), 12-17.

[99]M. Kaplan and R. Litman, "Telephone Appraisal of 100 Suicidal Emergencies," American Journal of Psychiatry, XVI (1962), 591-599.

Though the aforementioned studies attest to the predictive validity of the Suicide Potential Rating Scale, the question remains to be answered as to whether the clinicians involved with suicide-prone individuals in the health and mental health fields actually recognize these characteristics and identify the lethality pattern. Why the recognition of suicide-prone individuals should be a major responsibility of people in these fields is emphasized by the sheer numbers that are contacted.

RATE OF SUICIDE IN THE POPULATION

The national rate for suicides is usually given as one in ten thousand. Recent investigations, however, have begun to bring to the fore a great deal of research that casts some doubt upon the accuracy of that figure. The incidence of suicide in the population appears to be much higher. A questionnaire concerned with reporting the occurrence of suicide was mailed to a random sample of Los Angeles residents. The results of this survey were indicative of the actual incidence of suicide as being four percent of the entire population.[100] Based on the completion-to-success ratio of suicides known to have been attempted, the suicide rate is actually nearer to six times the nationally advertised rate. The lack of a dependable

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[100] R. S. Mintz, "Prevalence of Persons in the City of Los Angeles Who Have Attempted Suicide: A Pilot Study," Bulletin of Suicidology, VII (1970), 9-16.

reporting system for suicide to accurately assess the actual number of suicides has been documented.[101] For a number of reasons such as sparing the feelings of surviving family members, lack of sufficient information, suspicion of homicide and similarity to accidents, the suicide rate would appear to be diminished in size in reports of incidence. Regarding the latter group, Tabachnick et al[102] conducted an intense survey of fifteen accidents and fifteen suicides where they were compared on a large number of matching significant variables. The conclusion reached by the researchers was that, based on the high degree of match on a significant number of variables, a great number of suicides are reported as accidents. This would tend to raise the estimate of the actual suicide rate across the United States from the presently-accepted figure.

PROFESSIONAL CONTACT WITH SUICIDE-PRONE INDIVIDUALS

With the actual rate of suicide postulated to be much higher than actually reported, more emphasis on the health and mental health professional's recognition of potential suicidals is indicated. This, however, is only

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[101] J. A. Motto, "Suicide Attempts: A Longitudinal View," Archives of General Psychiatry, XIII (1965), 516-520.

[102] N. Tabachnick et al, "Comparative Psychiatric Study of Accidental and Suicidal Death," Archives of General Psychiatry, XIV, No. 1 (1966), 60-68.

part of the reason for concern in this area. A great deal of data supports the statement that practitioners in these areas come into contact with a much higher percentage of suicidals than exists in the normal population. As reported by Silverman[103], the lack of interest by some clinicians is due to the supposed low national rate of suicide of one in 10,400 in the United States. However, this low baseline can be misleading, for the individuals that the practicing clinician comes in contact with have a much higher base rate of successful suicide. The rate of mental patient suicide is twice the above rate while the rate for former mental patients is five times as great. Thus, the population from which the individual comes and belongs to in the universal population is critical in assessing the potential lethality of suicide and the practicing clinician is likely to contact the high-risk group.

In an exhaustive study of referrals of suicides from high, medium and low socio-economic levels, identification of the sources of knowledge and contact with suicidal persons provides a revealing look at why clinicians are important in this sphere. Snyder[104] found in his study

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[103]C. Silverman, "The Epidemiology of Depression--A Review," American Journal of Psychiatry, XXIV (1968), 883-891.

[104]J. A. Snyder, "The Use of Gatekeepers in Crisis Management," Bulletin of Suicidology, VIII (1971), 39-44.

that the most frequent reporters of suicidal intent to authorities are family and friends. After this, in order, comes clergymen, physicians, psychiatrists/psychologists, and social workers. It is apparent that these groups of health and mental health professionals are deeply involved in the recognition and treatment of suicide-prone individuals. Research findings of studies in each field show marked increases of client/patient levels of suicidal behavior.

Clergymen were listed in Snyder's study as the third-highest source that people will turn to for help in a suicidal crisis. Seven percent of the lower class, sixteen percent of the middle and six percent of the upper class listed clergy as the individuals turned to for help. A study by Pretzel[105] reported that pastors were involved in a significant number of suicides. Also, it was concluded that a severe lack of information to correctly interpret suicide intent and lethality was evident in pastoral education. Corroborative findings were recorded by Anderson[106] in an analysis of suicidal behavior and recognition by pastors. Concluded here was that there existed a clear need

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[105]P. W. Pretzel, "The Role of the Clergyman in Suicide Prevention," Pastoral Psychology, XXI, No. 203 (1970), 47-52.

[106]D. A. Anderson, "A Resurrection Model for Suicide Prevention through the Church," Pastoral Psychology, XXIII (1972), 33-40.

for proper training in the area of suicide lethality.

Next most-used in Snyder's hierarchy were physicians. They were deemed significant in eight percent of the lower class, twenty-five percent of the middle class, and eighteen percent of the upper class. The presence of medical doctors in suicide-related cases has already been documented with the fact that a significant percentage of lethal suicidals have been under the care of a physician within the last six months, suffering a long-term illness or have had unsuccessful relations with a physician.[107] As a definitive analysis, Litman[108] concluded from his thorough research that seventy-five percent of lethal suicides have seen a physician in the last six months. In addition, the average physician sees six suicidal patients in a year's practice and will have ten to twelve suicides of patients during his medical career. That physicians are involved in

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[107]J. A. Motto and C. Greene, "Suicide and the Medical Community," Archives of Neurological Psychiatry, LXXX (1958), 776; see also J. Tuckman and W. F. Youngman, "Identifying Suicide Risk Groups among Attempted Suicides," Public Health Report, LXXVIII (1963), 763-766; see also J. A. Motto, "Toward Suicide Prevention in Medical Practice," Journal of the American Medical Association, CCX, No. 7 (1969), 1229-1232; see also N. L. Farberow and T. L. McEvoy, "Suicide of Patients with Diagnosis of Anxiety Reaction in General Medical and Surgical Hospitals," Journal of Abnormal Psychology, LXXI (1966), 287-299; see also Herbert C. Modlin, "Cues and Clues to Suicide," Menninger Perspective, II, No. 2 (1971), 2-5; see also Barraclough et al, "A Hundred Cases of Suicide: Clinical Aspects," British Journal of Psychiatry, CXXV (1974), 355-373.

[108]R. Litman, "Acutely Suicidal Patients: Management in General Medical Practice," California Medicine, CIV, No. 3 (1966), 168-174.

the field of mental health is obvious. In one study, the average doctor was reported to see six potential suicides in a year. The serious potentials are judged as being extremely similar in rating scale potential characteristics to lethals and are nearly as dangerous in self-destructiveness, so their identification and referral here is not alarmist thinking, but realistic assessment of self-danger.[109] Clearly, the medical profession is deeply involved with potential suicidals, often being the only professional person seen by some individuals. Lack of training in identification of suicide-prone individuals has been documented in the field in several studies.[110] In personal interviews of newly-graduated medical doctors by this author at the University of Kansas Medical Center, Kansas City, Kansas, it was reported that although some psychiatric classes had been given in suicide, very little attention to or actual remembrance of information given in them was alluded to by the new doctors. The reasons given were that more important activities and training were occupying their minds at the time and required more stringently-applied concentration

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[109] D. Lester, "Relations between Attempted Suicide and Completed Suicide," Psychological Reports, XXVII, No. 3 (1970), 719-722.

[110] Motto, loc. cit.; see also J. Fawcett, "Seeing the Skull beneath the Skin: Recognition and Management of the Suicidal Patient," Journal of Research and Training, I, No. 1 (1973), 5-8; see also T. Dorpat and H. S. Ripley, "Evaluation and Management of Suicidal Behavior," Journal of Family Practice, I (1974), 20-23.

since they were more crucial to the students' progress in medical school. One student did remark that the training given had led him to include suicidal questions in his routine interview of patients, but he was the sole member of the minority group in this regard. It seems apparent from this small-sampled study that actual training in recognition of suicidal patients is either not given or if given, not effective in at least one medical school. More research on the actual knowledge of physicians regarding suicidal potentialities in patients is clearly needed.

Snyder's remaining professional referrals were represented by the mental health fields of psychiatry, psychology and social work. Five percent of the lower class, three percent of the middle class and fourteen percent of the upper class listed these areas as the choice of referral. Previously-stated and documented association of suicide with the psychological traumata of anxiety and depression would provide an obvious concentration of suicide-prone individuals in this area. Research findings unequivocally support this tenet. Previous psychiatric hospitalizations provide a major indicator of past association with mental health professionals in suicide-prone individuals. In the four groups studied by Farberow and Schneidman[111] in

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[111] N. L. Farberow and E. S. Schneidman, "Attempted, Threatened and Completed Suicide," Journal of Abnormal Social Psychology, XX (1955), 230.

their comparative study, the actual committed suicides differed significantly from the threatened, attempted and control groups in previous hospitalization. Eighty-four percent of the suicidal victims had been hospitalized in psychiatric facilities previous to the suicide. Additionally, the proximity of hospitalization and psychiatric care seems significant as sixty-nine percent of the suicides studied died within one year of discharge from institutions. Forty-one percent died within three months and all were associated with diagnosed recovery from emotional stress and an assessment of mental status stabilization. From this data, it seems evident that previous psychiatric care is a very positive indicator of suicide and that a very dangerous period for such an act is when the individual is recovering from a crisis of some psychiatric sort. Litman[112] and Wold[113] found histories of either prior therapy or psychiatric care in forty-two percent of the completed suicides that they studied. Cohen, Motto and Seiden[114] not only found previous psychiatric hospitalizations to be a critical factor in serious attempts, but also recorded that

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[112]R. Litman, "Suicide Prevention Center Patients: A Follow-up Study," Bulletin of Suicidology, VI (1970), 12-17.

[113]C. I. Wold, "Characteristics of 26,000 Suicide Prevention Patients," Bulletin of Suicidology, VI (1970), 24-28.

[114]E. Cohen, J. Motto and R. Seiden, "An Instrument for Evaluating Suicide Potential," American Journal of Psychiatry, CXXII (1966), 886-891

thirty percent of the released attempters commit suicide in the eight years following the release. Of Rosen's[115] 886 serious attempters, previous psychiatric hospitalizations were found statistically significant in predicting seriousness of lethality to the .001 level of significance. Davis[116] corroborated these findings with respect to diagnoses of neurotic and psychotic disorders while Farberow, Schneidman and Neuringer[117] found previous hospitalizations significant to the .01 level. Conte and Plutchik[118] found in their study that indications point to a level of suicide equal to four times the national average (four in ten thousand) exists for psychiatric patients of all diagnoses based on their sampled data. This figure becomes quite conservative when dealing with clients showing some suicidal ideation or intent of any degree. Of persons calling the Chicago Suicide Prevention Clinic, it was found that among

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[115] D. H. Rosen, "The Serious Suicide Attempt: Epidemiological and Follow-up Study of 886 Patients," American Journal of Psychiatry, CXXVII (1970), 764-770.

[116] F. B. Davis, "The Relationship between Suicide and Attempted Suicide," Psychiatric Quarterly, XLI (1967), 752-765.

[117] N. L. Farberow, E. S. Schneidman and C. Neuringer, "Case History and Hospitalization Factors in Suicides of Neuropsychiatric Patients," Journal of Nervous and Mental Disease, CXLII (1966), 32-44.

[118] H. R. Conte and R. Plutchik, "Personality and Background Characteristics of Suicidal Mental Patients," Journal of Psychiatric Research, X (1974), 181-188.

callers who gave their names, one of four hundred killed themselves. It would certainly appear that professionals in the mental health field are exposed to a relatively large percentage of suicide-prone individuals and must be alert for signs of potential lethality in these individuals.

The question remains as to whether the signs of potential lethality, however well-documented and publicized, are known by practicing clinicians who must make decisions regarding danger of and intervention with potential suicidals. The little available evidence is not favorable. In a study by Pokorny[119] of forty-four patients who subsequently committed suicide, a questionnaire regarding characteristics of suicidals was administered to seventeen staff and resident psychiatrists, including the last physicians of thirty-four of the psychiatric cases. The question asked the psychiatrists was "What characteristics of a psychiatric patient would lead you to think of his as actually or potentially suicidal?". The answers given by seventeen staff and resident psychiatrists related to the Suicide Potential Rating Scale are as follows along with the number of psychiatrists who considered that item important:

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[119]A. Pokorny, "Characteristics of Forty-four Patients Who Subsequently Committed Suicide," Archives of General Psychiatry, II (1960), 314-323.

Characteristic	No. of Psychiatrists
Moderate or severe depression	12
Previous suicidal attempts	7
Ideas of worthlessness	4
Feelings of hopelessness	3
Insomnia	3
Inability to relate to others	1
Disillusion with significant other person	1
Isolation and loneliness	1
Any situation of chronic suffering	1
Remorseful withdrawal from alcoholic bout	1
Feelings of severe rejection	1
Sudden disruption of life situation	1
Irreplaceable loss of love object	1

Without elaboration, these data are very discouraging with regard to criteria for judgment of suicide lethality. The seventeen psychiatrists could not even agree on one factor as being important to assessing a potential suicidal patient. In spite of all the accumulated data peppering the literature, especially psychiatric literature, on the validation of the characteristics involved in the Suicide Potential Rating Scale, eight of the items on this scale were considered an important variable to suicide by only one of the seventeen psychiatrists in the study. While this small sample cannot speak statistically or unilaterally for all psychiatrists or mental health-related professions, the

implication is nonetheless ominous. There would seem to be a great gap between the research findings being published and the clinical implementation of these findings by practicing mental health clinicians. It is painfully obvious that further research into this area is needed.

A short anecdote would seem appropriately illustrative of the basic paradigm underlying this endeavor. The story is told that after completing the buildings for the University of Mexico, no walkways were paved. Rather, the entire grounds were planted in grass. The university was opened, the students came, and they subsequently made their way here and there across the campus. After several months, the major pathways became clear and the university moved in and paved those outlined walkways in the grass made by the students. This imaginative approach is in rather clear contrast to our American style of building universities, deciding where the walks should be, paving them, and then spending the rest of the time trying to get the students to stay on the walks "where they ought to be" and not make their own paths across our established lawns. In gathering cogent data concerning the characteristics of lethal suicidals, the first method has hopefully been used. Data have been collected stringently by a great many researchers that now provide a workable, predictively valid and proven scale for assessing lethality of suicidal individuals. In the same way, the established paths of these troubled

people taken to secure help has been mapped out. Professionals in the health and mental health fields have been shown as an important and frequent path taken for help by these individuals. The basic commitment that must be made by these chosen helpers is toward making these channels of help that exist more effective. The physicians, clergy and mental health clinicians are the gatekeepers for death with regard to suicidal individuals. It is imperative that an assessment of the ability of these people to recognize potentially-lethal suicidals be made. Based upon the accumulation of these data, a more knowledgeable approach can be made toward training these professionals, if needed, and securing the footing of potentially-suicidal persons on the established paths for help in this society.

Chapter 3

METHODS AND PROCEDURES

To determine if there was a significant difference in the means of the questionnaire instrument between groups of professionals and controls, this study selected samples of physicians, psychiatrists, psychologists, social workers, clergymen and college-student controls. Each subject participated in answering multiple-choice questions concerned with suicide lethality factors of the Suicide Prevention Rating Scale by selecting the most correct answer from four alternatives. There were thirteen questions on the questionnaire with a maximum score of thirteen and minimum score of zero. The data were subjected to analysis of variance to determine if there existed a significant difference between the group means.

The subjects were all required to answer the questionnaire without consultation or reference by circling the letter designating the most correct response. No immediate acknowledgement of accuracy was given to the subjects.

Eighty percent (twenty-four subjects) of each professional group were presented the instrument personally by the experimenter and completed the questionnaire in his presence. The remaining twenty percent (six subjects) of each professional group were mailed the questionnaire and

returned it upon completion by return mail. All members of the student control group were administered the instrument as a group in a single class session under the supervision of the class instructor.

POPULATION AND SAMPLE

The 180 subjects were of thirty each physicians, psychiatrists, psychologists, social workers, clergymen and controls. All the subjects were from the midwestern area of the United States. The subjects were grouped on occupational and professional status commensurate with the particular category of professional or public service as defined in Chapter One. All subjects had at least two years of professional experience in their respective fields. The subjects were selected on the basis of availability without specific criterion excepting the willingness to complete the questionnaire without consultation.

As many questionnaires as possible were filled out in the presence of the experimenter. Because of distances and time factors, twenty percent of the questionnaires in each professional group were mailed to and received from participants. This amounted to six of the thirty subjects in each professional group.

In a preliminary study conducted with groups of psychiatrists, psychologists, social workers and clergymen participating, a mean score of 8.34 was obtained for all

subjects. Due to the small level of respondence in each category and the absence of responses from the physician professional group, there was no test done for significant difference between the groups.

MATERIALS AND INSTRUMENTATION

The apparatus consisted of two single-spaced typewritten pages of 8-1/2 by 11 inches. On these pages were thirteen multiple-choice questions. Six questions were on the first page and seven on the second page. The first page also contained directions, space for occupational designation and four categories of years of experience in the designated occupation. Occupational experience categories were two to five years, five to ten years, ten to fifteen years, and over fifteen years. Thus, data were obtained not only on the occupation of the participant but also on the number of years experience in the field. The instrument is Appendix A.

The subjects were asked to respond to each and every question on the questionnaire by circling the most correct answer among the four alternatives given for each. The directions stated: "Please circle the letter indicating the answer that is most correct for each question." Each question had the four responses lettered from "A" through "D". Only one of the responses for each question corresponded to the correct Suicide Prevention Rating Scale factor. The

Answer Key for the questionnaire is Appendix B.

Each Suicide Prevention Rating Scale questionnaire that was mailed to possible subjects in each of the five professional groups was accompanied by a letter of introduction. This letter of introduction described the proposed research and gave instructions for completing the instrument and returning it to the researcher in an enclosed self-addressed and stamped envelope. The letter of introduction is Appendix C.

DESIGN OF THE STUDY

This experimental design consisted of one qualitative experimental independent variable and one quantitative dependent variable. The levels of the independent variable were fixed by the experimenter at five different professional health and mental health occupations along with a college student control group from an introductory psychology class. By using fixed effects on the independent variable, as opposed to random, inferences are to be made only about the specific populations described in the study as levels of the independent variable.[1] The dependent variable was the

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[1]William L. Hays. Statistics for the Social Sciences (New York: Holt, Rinehart and Winston, Inc., 1973), pp 458-459; see also Donald T. Campbell and Julian C. Stanley. Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally and Co., 1963), p. 31; see also M. Linton and P. Gallo, Jr., The Practical Statistician: Simplified Handbook of Statistics (Monterey, California: Brooks/Cole Publishing Co., 1975), p. 128.

numerical score of zero to thirteen obtained on a four-choice, thirteen-item multiple choice instrument.

This design assumed any functional relationship existing between the independent variable effects and the dependent variable was due to the fixed effects of the independent variable. This design allowed for each subject in the six groups of subjects comprising the independent variable to contribute one score in the dependent variable to the group total. No subject contributed more than one score. The six groups of scores representing the levels of the independent variable were then compared for significant differences between the groups. If such differences were found to exist, they were assumed to be due to the qualitative differences existing between the fixed effects of the independent variable.[2]

DATA COLLECTION

The subjects were selected according to availability and access. Whenever possible, the subjects were presented the instrument in the presence of the experimenter, often in groups. The subjects would complete the questionnaires at that time without time limit or consultation. The questionnaires were then collected by the experimenter. The collection of data took place over a five month period.

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[2]Roger E. Kirk, Experimental Design: Procedures for the Behavioral Sciences (Belmont, California: Brooks/Cole Publishing Company).

Where access and personal presentation of the instrument was not possible, the instrument was mailed to the subject and received by return mail. All of the data were collected in one of these two methods.

When an excess of the six required mailed questionnaires was received for any particular professional group, questionnaires were randomly omitted until the requisite number of six was reached. These questionnaires were then used for the twenty percent mail-out level for each professional group tested in the study.

DATA ANALYSIS

The statistical technique used for analysis of the data collected in the study was a between groups analysis of variance. This technique tested whether the means of any two groups were significantly different from a level expected by chance error.

Analysis of variance (ANOVA) is based on the integral relationship between the mean and variance. By performing a systematic analysis of the variances of two or more groups, conclusions can be drawn regarding the similarity of the means of two or more groups. In fixed-effects ANOVA, the primary interest is in mean differences rather than in variance differences.[3]

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[3]Linton and Gallo, op. cit., p. 125.

Several prerequisite assumptions must apply in order for the technique of analysis of variance to be used. The data used in the technique must be interval in nature and be drawn from independent samples. For each specific treatment population, the distribution must be assumed to be distributed normally. The respective variances of each population are assumed to be the same. Lastly, the errors associated with any two observations are assumed to be independent of one another. To summarize the above assumptions, the observations are regarded as independently drawn from normal treatment populations with each having the same variance, and with error components independent across all pairs of observations.[4]

In calculating ANOVA, the sum of squares for two different sources of variance, within groups and between groups, is determined. These two sums of squares add to the total sum of squares. Thus, the total sum of squares is partitioned into two pieces. The within groups part of this partition is equal to that part of the total variation due to chance variation within each different treatment group. The between groups part of this partition is equal to that part of the total variation reflecting the effect of the different levels of treatment or, in other words, the different groups.

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[4]Hays, op. cit., pp. 467-470.

The between groups variance is a systematic variance that is always present when the means of two or more groups differ. If all means found were equal, then there would be no value for between groups variance. On the other hand, within groups variance indicates the variability within the groups, or chance sampling error. This variance is thus due to chance and is sometimes referred to as error variance.[5]

The degrees of freedom for between groups and within groups (error) is determined. This value is equal to the total number of cases in each group that are free to vary. The total degrees of freedom are equal to the total number of subjects less one (N-1). This is because one of the numbers is assumed to equal zero and the others vary around that value (since the sum of all the variations must equal zero). The between groups degrees of freedom are equal to the number of groups less one (k-1). This value is obtained in the same manner. Generally, in obtaining the within groups degrees of freedom, the degrees of freedom of each member group are added. This value corresponds to the degrees of freedom of the total group minus the number of groups.

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[5]Linton and Gallo, op. cit., pp. 156-164.

Mean squares are then determined for each sample size of between groups and within groups. This value is the unbiased estimate of variance for each sample.[6] The mean square between groups is found by dividing the sum of squares for between groups by the degrees of freedom. This value is equal to the unbiased estimate of the error variance plus a quantity that can be zero only when there are no treatment effects at all (the within groups effect is zero). The mean square within groups is found by dividing the sum of squares within groups by the degrees of freedom. This value is equal to the unbiased estimate of the error variance. If these two values are equal, then no treatment effects are assumed to exist. If, however, the between groups mean square exceeds the within groups mean square, it is assumed that, since both estimates of the error variance are equal due to prior assumptions, the difference results from the quantity in the between groups value that estimates the treatment effect partition of the variance.

The value of F is then determined by dividing the two obtained mean square values. The general formula used for this purpose in an one-way analysis of variance is as follows:

$$F = \frac{\text{Between groups mean square}}{\text{Within groups mean square}}$$

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[6] Hays, op. cit., p. 469.

After this F-ratio value is obtained, it is compared to a tabled value for the distribution of F if an infinite number of tests of such common variance were made. If the value obtained from the quotient of the sample mean squares exceeds the tabled value at the .01 significance level, it can be said that, ninety-nine times out of one hundred, this value indicates a large enough effect of the treatment variable to make a real difference in the means of the groups. If the value does not exceed the tabled figure, the assumption is that the difference between the two estimates is due to chance error alone and not the effect of the treatment. Thus, the F-test accepts or rejects the original null hypothesis of no difference between the treatment groups other than chance sampling error. If such a difference does, in fact, exist, the difference is deemed statistically significant.

If statistical significance was found in the analysis of variance, two a posteriori tests were to be used: Tukey's (a) Test for Differential Main Effects and an Omega Squared. These procedures would be used to further analyze already significant results. In addition, the mean difference between the control and professional groups could be analyzed by the Tukey's (a) technique. This would test the second part of the null hypothesis.

Tukey's (a) Test for Differential Main Effects is a technique for computing significant differences between

specific means of the treatment levels. Thus, pairwise comparisons of means from the ANOVA can be made. The Tukey's (a) test is a conservative procedure that requires pairwise comparison at a level of significance which is at most equal to the alpha level for each test. Using the value of the within groups mean square (mean square error) divided by the number of observations per group, the square root is taken and multiplied by a constant value that is tabled. The result is the critical value used in the mean comparisons. If the difference between any two means exceeds this critical value at the specified level of significance, it is assumed that those means differ significantly.[7]

The Omega Squared test is designed to partition variation into percentage components so that it is apparent how much of actual variation was caused by error and how much was caused by the treatment. While the ANOVA F-test shows that at least one mean differs from another, it does not show which means differ significantly. The Tukey's (a) test shows which means differ significantly, but does not show actually how much of the variation is caused by error and how much by the levels of the treatment. This is what

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[7]Linton and Gallo, op. cit., pp. 316-319; see also R. E. Kirk, Experimental Design: Procedures for the Behavioral Sciences. Belmont, California: Brooks/Cole Publishing Company.

the Omega Squared technique can do. Due to levels of significance and effects by large numbers of subjects, significant F-test results can often represent very little actual effect of the treatment. Nearly any study can be made to show significant results if enough subjects are used, regardless of the content. Giving a geometric partitioning of the variation is how the Omega Squared test illustrates this relationship. The Omega Squared gives the proportion of the variance total accounted for by the treatment effect.

To calculate the Omega Squared, estimates of population variances are made using the mean square values from the original ANOVA computations. These estimates are corrected for sample use and a value for the effect of the treatment in the population is obtained as well as a value for the effect of chance sampling error in the population. These two derived values are then added (in this case only, since variance estimates are usually pooled) to give a total. By dividing each value in turn by the total, a percentage of total variation attributed to each effect is obtained. This shows the actual percentage of variation due to between groups (treatment) and within groups (error), allowing a more proportionate comparison of the two effects with respect to the total variance.[8]

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[8]Hays, op. cit., pp. 414-415.

Chapter 4

ANALYSIS OF DATA

The statistical data are presented in this chapter in relation to the hypotheses of this study. The null hypotheses were:

> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among physicians, psychiatrists, psychologists, social workers, and clergymen who are among the principal professional gatekeepers for treatment and referral of suicidal patients or clients.
>
> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among professionals and college undergraduate students.

A between groups analysis of variance was used to determine the differences between the six groups in the way they responded to a thirteen-question, four-alternative multiple choice questionnaire and ascertain if the differences in responding were significant.

Thirty subjects were tested within each of the six groups comprising the levels of treatment. The mean and standard deviation of each group were calculated. The raw data results and totals are Appendix D. The individual response patterns of all treatment group members are Appendices E-J. The six groups, along with their respective means and standard deviations, were then arranged in order of descending mean value as follows:

Group	Mean	S. D.
Physician	9.37	1.40
Psychiatrist	9.03	1.73
Psychologist	7.53	2.35
Social Worker	6.23	2.35
Clergyman	5.33	1.83
Control	5.23	0.81

A fixed effects, between groups analysis of variance was performed on the collected data. The results of the analysis of variance for the professional groups and controls are in Table 1. The obtained F-ratio was significant ($F = 29.32$; $df = 5/174$; $p<.01$). At this level of significance, the null hypothesis, that there existed no difference among the six groups, was rejected. A significant difference between at least two of the groups was found to be present. This, however, was not enough information to accept or reject the original two null hypotheses of 1) no difference among the professional levels, and 2) no difference between the professional levels and the control group.

In order to determine specific differences between group means in pairwise comparisons, Tukey's (a) Test for Differential Main Effects was done on the obtained group means and ANOVA results. This was done since statistical significance in the ANOVA was obtained and was an *a posteriori* or *post hoc* technique for pairwise comparisons. The ultimate purpose of the technique was to accept or reject the two null hypotheses of group differences. The results of the Tukey's (a) Test are summarized in Table 2.

Table 1

Analysis of Variance of Differences Between the Six Groups
On the Total Items
One Way Between Groups ANOVA

Source	df	SS = Sum of Squares	MS = Mean of Squares	F	p
Professions (A)	5	492.49	98.50	29.32*	.01
Error	174	583.82	3.36		
Total	179	1076.31			

*Indicates significance at the $p<.01$ level

Table 2

Means and Mean Differences of the Six Treatment Groups on the Total Items
Tukey's (a) Test for Differential Main Effects

	Physician (9.37)	Psychiatrist (9.03)	Psychologist (7.53)	Social Worker (6.23)	Clergyman (5.33)	Control (5.23)
Physician (9.37)	-	0.34	1.84*	3.14*	4.04*	4.14*
Psychiatrist (9.03)		-	1.50*	2.80*	3.70*	3.80*
Psychologist (7.53)			-	1.30*	2.20*	2.30*
Social Worker (6.23)				-	0.90*	1.00*
Clergyman (5.33)					-	0.10
Control (5.23)						-

*Indicates significance at the $p < .01$ level

Of the fifteen pair-by-pair comparisons possible among the six groups, thirteen of the pairs were found to be significantly different (Critical Value = 0.53; df = 174; $p<.01$). All mean differences of the treatment groups were shown to be significant except between the physician/psychiatrist and clergymen/control groups.

The Tukey's (a) Test for Differential Main Effects showed that the two parts of the original null hypothesis were both true as stated with one exception each. Each group of professionals differed from each other significantly except the physicians and psychiatrists in their mean response rate to the lethality scale questionnaire at the .01 level. The control group was found to differ significantly in its mean response rate from all the professional groups except clergymen at the .01 level of significance.

It can be concluded from the analysis of variance and Tukey's (a) Test for Differential Main Effects that there was a significant difference between the responses of recognition of the Suicide Prevention Rating Scale characteristics among physicians/psychiatrists, psychologists, social workers and clergymen who are among the principal professional gatekeepers for treatment and referral of suicidal patients. There was no significant difference between the responses of recognition of physicians and psychiatrists.

It can be concluded from the analysis of variance

and Tukey's (a) Test for Differential Main Effects that there was a significant difference between the responses of recognition of the Suicide Prevention Rating Scale characteristics among the professional groups of physician, psychiatrist, psychologist and social worker, and the control group of college undergraduate students. There was no significant difference between the responses of recognition of clergymen and college student controls.

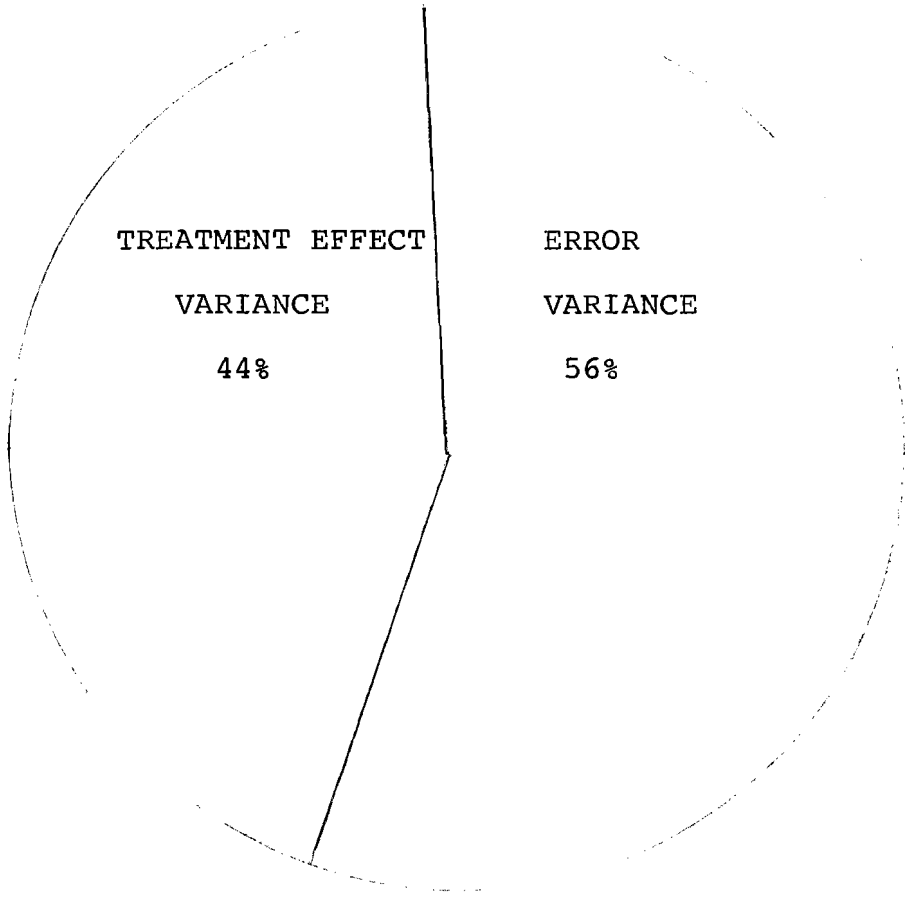
The Omega Squared test was used to determine the proportion of the effects of error and treatment in the total variance estimate. The results are shown by Figure 1 on page 70, with the calculations given as Appendix K. These results indicate that forty-four percent of the total variation among the scores in the study is due to the effect of the different professional groups while fifty-six percent is due to chance sampling error. Thus, approximately one-half of all the variation is due to the difference in the professional levels and control group (the treatment group differences).

Analysis of Items across Treatment Groups

Further post hoc analyses of the data were made in order to test hypotheses raised by examination of the significant one-way analysis of variance of the six treatment groups and subsequent Tukey's (a) Test results. A hypothesis was generated concerning the varying levels of

Figure 1

Partitioning of Total Variance Between Treatment Group Effect and Error



TOTAL VARIANCE

100%

item difficulty. The null hypothesis was:

> There is no significant difference between the response levels among the thirteen items comprising the Suicide Prevention Rating Scale.

A between groups analysis of variance was performed on the collected data. The analysis of variance results are in Table 3 on page 72. The raw data table is Appendix L. The obtained F-ratio was significant ($F = 9.62$; $df = 12.65$; $p<.01$). The null hypothesis was rejected, leading to the conclusion that there existed a significant difference between the response levels of the thirteen questions on the scale across all the treatment levels.

Tukey's (a) Test for Differential Main Effects was performed on the significant ANOVA results. The test was to determine which of the questionnaire items significantly differed from each other in degree of difficulty. The results of the Tukey's (a) Test for the items are in Table 4 on page 73. The Tukey's (a) Test differentiated the items into two distinct groups (Critical Value = 11.22; $df = 65$; $p<.01$). The items of each group did not differ significantly from each other within the group but did differ significantly from all the items in the other group or, in other words, between the groups. The mean values were in terms of average scores on each item for each treatment group. The groups were differentiated into an "easy" item group of seven questions whose means ranged from 17.83 to 24.67 and a "difficult" item group of six questions whose means ranged

Table 3

Analysis of Variance of Differences Between the Thirteen Items
One Way Between Groups ANOVA

Source	df	SS = Sum of Squares	MS = Mean of Squares	F	p
Items (a)	12	3680.85	306.74	9.62*	.01
Error	65	2072.33	31.88		
Total	77	5753.18			

*Indicates significance at the $p < .01$ level

Table 4

Means and Mean Differences of Total Items
Tukey's (a) Test for Differential Main Effects

Items and Means	Items and Means												
	6 (24.67)	9 (24.50)	7 (23.83)	12 (23.50)	2 (22.50)	4 (19.16)	10 (17.83)	3 (12.83)	11 (12.50)	8 (12.17)	5 (7.00)	13 (6.67)	1 (6.50)
6 (24.67)	-	0.17	0.84	1.17	2.17	5.51	6.84	11.84*	12.17*	12.50*	17.67*	18.00*	18.17*
9 (24.50)		-	0.67	1.00	2.00	5.34	6.67	11.67*	12.00*	12.33*	17.50*	17.83*	18.00*
7 (23.83)			-	0.33	1.33	4.67	6.00	11.00	11.33*	11.66*	16.83*	17.16*	17.33*
12 (23.50)				-	1.00	4.34	5.67	10.67	11.00	11.33*	16.51*	16.83*	17.00*
2 (22.50)					-	3.34	4.67	9.67	10.00	10.33	15.51*	15.83*	16.00*
4 (19.16)						-	1.33	6.33	6.66	6.99	12.16*	12.49*	12.66*
10 (17.83)							-	5.00	5.33	5.66	10.83	11.16	11.33*
3 (12.83)								-	0.33	0.66	5.83	6.16	6.33
11 (12.50)									-	0.33	5.50	5.83	6.00
8 (12.17)										-	5.17	5.50	5.67
5 (7.00)											-	0.33	0.50
13 (6.67)												-	0.17
1 (6.50)													-

*Indicates significance at the $p<.01$ level

from 6.50 to 12.83.

These two groups were subjected to between groups analysis of variance to determine if significant differences existed between the response means of the treatment groups on "easy" and "difficult" questionnaire items. The null hypotheses were:

> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among the treatment groups on the "easy" questionnaire items with high mean scores that were not significantly different.
>
> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among the treatment groups on the "difficult" questionnaire items with high mean scores that were not significantly different.

The results of the analysis of variance for the treatment groups on the "easy" item group are in Table 5 on page 75. The raw data table is Appendix M. The obtained F-ratio was significant ($F = 7.19$; $df = 5/36$; $p<.01$). The null hypothesis was then rejected, leading to the conclusion that there existed a significant difference between the means of the six treatment groups on the "easy" group of items.

The results of the analysis of variance for the treatment groups on the "difficult" item group are in Table 6 on page 76. The raw data table is Appendix N. The obtained F-ratio was significant ($F = 4.80$; $df = 5.30$; $p<.01$). The null hypothesis was then rejected, leading to

Table 5

Analysis of Variance of Differences Between the Six Treatment Groups on the Seven "Easy" Items
One Way Between Groups ANOVA

Source	df	SS = Sums of Squares	MS = Mean of Squares	F	p
Professions (A)	5	570.00	114.00	7.19*	.01
Error	36	570.57	15.85		
Total	41	1140.57			

*Indicates significance at the $p < .01$ level

Table 6

Analysis of Variance of Differences Between the Six Treatment Groups on the Six "Difficult" Items
One Way Between Groups ANOVA

Source	df	SS = Sum of Squares	MS - Mean of Squares	F	p
Professions (A)	5	666.24	133.25	4.80*	.01
Error	30	832.33	27.74		
Total	35	1498.56			

*Indicates significance at the $p < .01$ level

the conclusion that there existed a significant difference between the means of the six treatment groups on the "difficult" group of items.

Tukey's (a) Test for Differential Main Effects was performed on the significant ANOVA results for the treatment groups on the two groups of "easy" and "difficult" items. This test was to determine which of the professional or control groups differed significantly from each other in mean score on each of the "easy" and "difficult" item groups. The results of the Tukey's (a) Test for the treatment groups on the "easy" items are in Table 7 on page 78. The results of the test indicated that only three pair-by-pair mean differences of fifteen possible pairs were found to be significantly different (Critical Value = 7.67; df = 36; $p < .01$). The three pairs were physician/clergyman, physician/control, and psychiatrist/control. In order of descending mean value on the "easy" items, the six treatment groups were arranged exactly in the same order as on the total item pool. The results of the Tukey's (a) Test for the treatment groups on the "difficult" items are in Table 8 on page 79. The results of the test indicated that only one pair-by-pair comparison out of fifteen possible pairs was found to be significantly different in mean value (Critical Value = 11.17; df = 30; $p < .01$). This pair was the physician/clergyman combination, the most extreme of the treatment groups in mean values. The descending order of

Table 7

Means and Mean Differences of the Six Treatment Groups
on the Seven "Easy" Items
Tukey's (a) Test for Differential Main Effects

	Physician (26.71)	Psychiatrist (26.14)	Psychologist (23.57)	Social Worker (21.86)	Clergyman (19.00)	Control (16.43)
Physician (26.71)	-	0.57	3.14	4.85	7.71*	10.28*
Psychiatrist (26.14)		-	2.57	4.28	7.14	9.71*
Psychologist (23.57)			-	1.71	4.57	7.14
Social Worker (21.86)				-	2.86	5.43
Clergyman (19.00)					-	2.57
Control (16.43)						-

*Indicates significance at the $p < .01$ level

Table 8

Means and Mean Differences of the Six Treatment Groups
on the Six "Difficult" Items
Tukey's (a) Test for Differential Main Effects

	Physician (15.67)	Psychiatrist (14.67)	Psychologist (10.17)	Control (7.00)	Social Worker (5.67)	Clergyman (4.50)
Physician (15.67)	-	1.00	5.50	8.67	10.00	11.17*
Psychiatrist (14.67)		-	4.50	7.67	9.00	10.17
Psychologist (10.17)			-	3.17	4.50	5.67
Control (7.00)				-	1.33	2.50
Social Worker (5.67)					-	1.17
Clergyman (4.50)						-

*Indicates significance at the $p < .01$ level

treatment groups in terms of mean value was different on the "difficult" items, with the control, social worker and clergyman groups occupying the fourth, fifth and sixth spots in the hierarchy.

Analysis of Years of Experience of Professional Groups

Each returned questionnaire from subjects in the five professional groups was classified according to years of experience in the professional area, regardless of particular field. The groups are summarized below:

Group	Years Experience	Number in Group	Mean	Standard Deviation
1	2-5	39	6.46	2.02
2	5-10	31	6.61	2.28
3	10-15	30	7.30	2.35
4	Over 15	50	8.94	2.36

The four categories of experience in years were: Group One, two to five; Group Two, five to ten; Group Three, ten to fifteen; and Group Four, over fifteen. All professional questionnaires were categorized in these four levels without regard to profession. The null hypothesis was:

> There is no significance between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among health and mental health professionals with years of experience of two to five, five to ten, ten to fifteen, and over fifteen years.

A between groups analysis of variance for unequal

groups was performed on the collected data.[1] The results of the analysis of variance are in Table 9 on page 82. The raw data table is Appendix O. The obtained F-ratio was significant ($F = 11.20$; $df = 3,146$; $p < .01$). The null hypothesis was rejected, leading to the conclusion that there existed a significant difference among the means of the four levels of years of experience possessed by the professional groups. The mean values of each group increased directly proportional to corresponding increases in the level of years of experience in the four groups.

Analysis of Item Content among Treatment Groups

The items responded to by the treatment groups were placed in order of decreasing mean value as obtained from Table 4. The content of each item corresponding to the specific Suicide Prevention Rating Scale characteristic was recorded beside the item. The results are given in Table 10 on page 83. The results indicate that the "easy" group of items, with means ranging from 24.67 to 17.83, was composed of the following Suicide Prevention Rating Scale characteristics: effective plan of suicide, history of

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[1]M. Linton and P. Gallo, Jr., The Practical Statistician: Simplified Handbook of Statistics (monterey, California: Brooks/Cole Publishing Co., 1975), pp. 156-164; see also B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill, Inc., 1971), pp. 402-404.

Table 9

Analysis of Variance of Differences Between the Four Levels of Years of Experience on the Total Items
One Way Between Groups ANOVA

Source	df	SS = Sum of Squares	MS = Mean of Squares	F	p
Years Experience (A)	3	171.31	57.10	11.20*	.01
Error	146	744.16	5.10		
Total	149	915.47			

*Indicates significance at the $p < .01$ level

Table 10

Questionnaire Items in Order of Degree of Difficulty

Item No.	Mean	Suicide Prevention Rating Scale Characteristic
6	24.67	Communication of effective plan of suicide
9	24.50	History of prior attempts at suicide
7	23.83	Isolation from friends and relatives with no help coming from these sources
12	23.50	Rejection or disruption of interpersonal relationship with significant other person
2	22.50	Presence of anxiety and depression, involving possible sleep disturbance, helplessness and hopelessness
4	19.16	Presence of an immediate stressful situation
10	17.83	Chronic physical illness or complaints and/or unsuccessful relations with a physician
3	12.83	Marital status of widowed, separated or divorced
11	12.50	Not in communication with relatives or communicated to by relatives
8	12.17	High correlation with alcoholism and homosexuality
5	7.00	Acute onset of symptoms as opposed to chronic
13	6.67	Visit to a physician within the past six months
1	6.50	Male and over 50 years of age

prior attempts, social isolation, interpersonal rejection by a significant other, anxiety and depression symptoms, presence of an immediate stress, and history of physical problems with attendant unsuccessful relations with physicians. The "difficult" group of items, with means ranging from 12.83 to 6.50, was composed of the following Suicide Prevention Ratings Scale characteristics: marital status, lack of communication with relatives, alcoholism and homosexuality correlation, acute symptom onset, recent visit to physician, and over-fifty male.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

The literature reviewed in this study showed that there is valid and reliable evidence supporting the factors measured in the Suicide Prevention Rating Scale. The literature showed also that several groups of professionals are very likely to come in contact with persons who will commit suicide. The hypotheses formulated regarding these were:

> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among physicians, psychiatrists, psychologists, social workers and clergymen who are among the principal professional gatekeepers for treatment and referral of suicidal patients or clients.
>
> There is no significant difference between the written responses of recognition of the Suicide Prevention Rating Scale characteristics among professionals and college undergraduate students.

One hundred eighty persons were the subjects for this study, of which there were thirty in each of the six groups. The subjects were asked to answer the thirteen-question multiple choice questionnaire without consulation of any kind by selecting the most correct response of four alternatives.

Of the answered questionnaires, eighty percent were

completed with observation in each of the six groups. The remaining twenty percent were mailed in. A forty-two percent response rate from mailed-out questionnaires was obtained.

The psychiatrists measured in the study were largely from Kansas City, Missouri; University of Kansas Medical Center; University of Missouri Medical Center and School; Mid-Missouri Mental Health Center; Wichita, Kansas; Wichita State University, Wichita, Kansas; Dallas, Texas; and Emporia, Kansas. The limited availability of the psychiatrist group necessitated the maximum level of eighty percent personally-observed measures. This was the lowest of the six groups and was matched and controlled for by arranging for the other groups to have that same response percentage.

Psychologists, physicians, social workers, and clergymen were located in the metropolitan areas of Wichita, Kansas; Emporia, Kansas; Lawrence, Kanses; Topeka, Kansas; Kansas City, Kansas; and Kansas City, Missouri. They were affiliated with institutions, treatment centers, educational organizations, universities and in private practice of an appropriate nature.

The group of controls who composed the sixth group were students in Psychology 1 at the University of Missouri-Columbia. They were administered the instrument during a class session.

The analysis of variance done on the data showed that significant differences existed between the six groups in how they answered the questions concerning the Suicide Prevention Rating Scale.

Pair-by-pair comparisons of the six treatment group means showed thirteen of the fifteen pairs of means were significantly different from each other. Only the physician/psychiatrist and clergyman/control groups did not differ significantly in their response means. Based upon these results, the treatment groups were arranged in a hierarchy containing four levels, each of which differed significantly from the others. The hierarchy of groups, from highest to lowest mean value, was: physician/psychiatrist, psychologist, social worker, and clergyman/control. The significant variance due to the difference in the treatment groups was found to be forty-four percent of the total variance in the study.

Analysis of variance of the items across all levels of the treatment groups showed significant mean differences in the degree of difficulty of the items. Pair-by-pair comparisons of the thirteen items divided them into two groups whose items significantly differed between the groups, but whose items did not significantly differ within the groups. These groups were a six-item "difficult" group with the lower response means, and a seven-item "easy" group with the higher means.

Analysis of variance of the treatment groups on the "difficult" group of items showed significant differences existed among the six groups in how they answered this group of questions. Pair-by-pair comparisons of the treatment groups showed only three of the fifteen possible pairs to be significantly different from each other. The three pairs were physician/clergyman, physician/control, and psychiatrist/control. Analysis of variance of the treatment groups on the "easy" group of items showed significant differences existed among the six groups in how they answered this group of questions. Pair-by-pair comparisons of the treatment groups showed only one of the fifteen possible pairs to be significantly different from each other. This pair was the physician/clergyman combination.

Analysis of variance of the four levels of years of experience across all the five professional treatment groups showed significant differences existed among professionals in these levels of experience in how they answered the questions on the Suicide Prevention Rating Scale. The pair-by-pair comparisons of the four groups were not made due to unequal number of professionals in each group, but the mean response rate of each group increased with each increasing level of years of experience.

CONCLUSIONS

The results of this study indicated that significant differences existed between the treatment groups in their ability to recognize Suicide Prevention Rating Scale characteristics. The hierarchical arrangement that was found among the four levels of the six treatment groups indicated a significant difference in the amount of knowledge in this area shown by different levels of the helping professions and controls. The four groups, from highest level of recognition to lowest, were physician/psychiatrist, psychologist, social worker, and clergyman/control. Several factors may have contributed to these differences in responding.

The fact that the two medically-trained professions had the highest level of recognition of suicidal factors may be attributed to their comparable medical education. It is possible that more specific training in recognition of lethal signs of suicidality may have been afforded these professionals. Another factor contributing may be the longer period of time such professionals generally interact with patient contacts. These periods often stretch over years. Interestingly, though psychiatrists were given specialty training in pathological human behavior, the physicians without such training scored a higher mean response (9.37 to 9.03). This may possibly be attributed

to the long periods of observation of the physician of patient normal behavior. When pathological signs of suicidality are seen in the patient observed over a long period of time, they may make more of an impact.

The simple effect of the average level of training was apparent throughout the groups. Medically-trained physicians and psychiatrists scored the highest on the scale and are also, in years of formal education, the most educated of the four groups. Psychologists, with slightly less years of formal education, scored lower than the medically-trained professions. Social workers, with an average education of two to three years less than Ph.D. level psychologists, scored significantly lower than the psychologists. Finally, clergymen, usually trained at the lowest level of years of formal education, were significantly below the social workers in mean response rate.

Formal training in the behavioral sciences did appear to make a significant difference among the groups. Clergymen and controls, not specifically trained in health or mental health related fields, finished together at the bottom of the hierarchy of groups; significantly lower in response rate than health and mental health professionals.

The degree of difficulty of the items was a factor that did not seem to be significant in differentiating the groups. When the two groups of "easy" and "difficult" items were analyzed for the six treatment groups, the

differences were only slight. Though it was expected that the higher-scoring groups would be significantly different from the lower-scoring groups on the difficult items, this was not the case. The same was true for the easy items. The four-group hierarchy of significant differences was present only on the total constellation of thirteen scale items.

Years of experience in the field was shown to be a significant factor in the recognition of lethal suicidal signs. The direct relationship between years of experience and the Suicide Prevention Rating Scale indicates that experience plays a vital role in observing and evaluating signs of lethal suicide potential. When applied to each of the health and mental health related professions, the mean of the four years of experience categories was highest for physicians, with psychiatrists, psychologists and social workers following in descending order. This is the same order as that found in the original response levels on the Suicide Prevention Rating Scale. It can be concluded that years of experience helps differentiate these professional groups.

No significant or specific patterns were found among the six treatment groups on the kinds of question topics referring to characteristics of the Suicide Prevention Rating Scale. No group deviated in a significant manner from the rank-order of items answered correctly. The

rank-order of each of the six treatment groups on each of the thirteen items is shown in Table 11 on page 93.

The overall performance of the professional groups on the lethality characteristics of the Suicide Prevention Rating Scale is not seen to be proficient. This appears especially true for the non-medical professions. One glaring example of this state of knowledge concerning lethal suicide lies in the fact that the most difficult item on the scale for the total professional groups was the age and sex of the attempter. With the profundity and profusion of scientific articles giving testament to this most easily observed trait, an absence of knowledge here is indicative of need for more education of professionals in the characteristics of a lethally suicidal individual.

It has been shown that there are specific and measurable traits that are indicative of suicide in individuals. These characteristics do not seem to be recognized sufficiently by health and mental health professionals, and there are significant differences among the professions in their ability to recognize them. There were differences in ability between some professional groups and non-professional groups to recognize these factors, but not between other professional and non-professional groups. Levels and kinds of training and years of experience were found to be factors that seemingly contributed to the ability of the professional groups to show

Table 11

Item Rank Order for Each Treatment Group

	Rank, Item Number and Mean for the Total Groups												
	1 6 24.67	2 9 24.50	3 7 23.83	4 12 23.50	5 2 22.50	6 4 19.16	7 10 17.83	8 3 12.83	9 11 12.50	10 8 12.17	11 5 7.00	12 13 6.67	13 1 6.50
Psychiatrist	6.5	6.5	2	6.5	1	3.5	3.5	9	10	6.5	11	12	13
Physician	1.5	8	4.5	1.5	7	9	4.5	4.5	10	4.5	13	11	12
Psychologist	1.5	1.5	3	4	5	6.5	6.5	9	8	10	11.5	13	11.5
Social Worker	1.5	1.5	3.5	3.5	5	6	8	9	7	11.5	11.5	11.5	11.5
Clergyman	2.5	1	2.5	4	5	6	7	9	8	12.5	10.5	12.5	10.5
Control	3.5	2	6	3.5	1	5	7	12	8	12	9.5	12	9.5

recognition of Suicide Prevention Rating Scale characteristics.

RECOMMENDATIONS

According to the results of this study, the following suggestions may be recommended to individuals who might be interested in researching further in suicide lethality recognition by professionals:

1. Years experience in the field should be controlled for in order to eliminate a possible source of variance. This factor could be very significant.

2. All questionnaires should be answered in the presence of the researchers to eliminate chance of consultation.

3. Since there is a demonstrated sex differential in number of suicide attempts and number of successful suicides, sex of the professional could also be considered.

4. Studies done in the future should be controlled for geographical locality and not concentrated in one area where persons trained and educated at similar settings is more likely.

5. Future studies would hopefully be geared toward identifying any patterns of characteristics indicated by professional groups by the technique of factor analysis.

6. Based upon their low level of recognition of suicide lethality factors and high frequency of contact by

suicidal persons, clergymen appear to be in acute need of training in this area.

The importance of research in this area is as important as the value of a human life. It is hoped that by encouraging more investigation into this heretofore ignored area, a more consistent and accurate method of evaluating potentially lethal suicidal victims will become more prevalent across the helping professions. It is the conclusion of this researcher that more exacting data on the abilities of professionals to recognize the lethal factors are needed before any attempt to standardize needed knowledge across the helping professions can be mounted.

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APPENDICES

APPENDIX A

SUICIDE LETHALITY QUESTIONNAIRE

THIRTEEN QUESTIONS ON SUCCESSFUL SUICIDE

Your Profession: (Circle one)	Psychiatrist Physician Psychologist Social Worker Theologian	Years Experience: (Circle one)	2-5 Years 5-10 Years 10-15 Years Over 15 Years

INSTRUCTIONS: Please circle the letter indicating the answer that is most correct for each question.

1. Persons who are most likely to succeed in committing suicide are:
   A. female and under 50 years of age.
   B. female and over 50 years of age.
   C. male and under 50 years of age.
   D. male and over 50 years of age.

2. Successful suicidals are most often characterized by:
   A. depression, hopelessness and helplessness, but not anxiety symptoms such as sleep disturbance.
   B. depression, hopelessness and helplessness, as well as anxiety symptoms such as sleep disturbance.
   C. no visible signs of either depression or anxiety.
   D. anxiety symptoms, but very seldom showing signs of depression.

3. A great percentage of successful suicides involve persons who are:
   A. married.
   B. single.
   C. widowed, separated or divorced.
   D. any of the above categories, since there is no significant difference in marital relationships.

4. In regard to current pressures affecting persons at the time they make a suicide attempt:
   A. persons under the effects of an immediate stress are most likely to succeed.
   B. persons under an immediate stress are not likely at that time to succeed.
   C. the factor of immediate stress is not critical in determining the lethality of a suicide attempt.
   D. none of the above are correct.

5. Regarding the onset of suicidal symptoms in a person's behavior:
   A. a gradually-developing group of symptoms indicates that the person is more likely to commit suicide.
   B. a relatively quick onset of symptoms is the most dangerous sign of a successful suicide attempt.
   C. very little evidence has been found to indicate any correlation between onset of symptoms and suicide lethality.
   D. both gradual and quick onset of symptoms of suicide are equally dangerous for successful suicide.

6. A potentially-suicidal individual is more likely to succeed in the attempt if that person:
   A. has no idea how he or she will actually do it.
   B. is afraid to think of how the actual attempt will be made.
   C. has a definite plan of how it will be done.
   D. appears very confused about actually how it will be done when asked.

7. Likelihood of successful suicide is greatest when:
   A. a person continues social contacts as if nothing is wrong.
   B. a person is very gregarious with a variety of social contacts.
   C. a person is socially isolated from friends and relatives.
   D. a person keeps in contact with relatives but is isolated from friends and recent acquaintances.

8. With regard to alcoholics and homosexuals, the suicide rate is:
   A. higher than the national average.
   B. lower than the national average.
   C. the same as the national average.
   D. higher for alcoholics and lower for homosexuals compared to the national average.

9. A person has the highest potential for successful suicide if:
   A. there is no previous history of suicide attempts.
   B. there is a history of previous suicide attempts.
   C. there is no history of previous attempts but some suicidal thoughts have been present.
   D. the person has never contemplated suicide.

10. The most dangerously suicidal individual with regard to medical history is an individual who:
   A. has never had physical complaints or seen a doctor.
   B. has a long history of chronic illness but doesn't believe in doctors.
   C. has a long history of chronic illness and many visits to physicians during this period.
   D. has had no physical complaints but sees a doctor occasionally for checkups with rigid regularity.

11. If relatives exist, a dangerously suicidal person would likely:
   A. not be in communication with them.
   B. see them often, trying to communicate with them.
   C. keep in communication with them but only from a distance, like writing or calling them on the phone.
   D. none of the above, since there is no significant difference.

12. An individual would be more likely to be an imminent suicide victim if:
   A. there is a significant other person who was extremely important to that individual and who was trying in vain to help.
   B. there is a significant other person who rejects the individual.
   C. the month is February.
   D. none of the above is statistically significant.

13. A critical factor in determining the lethality of a potentially-suicidal person is if that person:
   A. has never seen a physician.
   B. is a member of the middle socioeconomic class.
   C. is a young, caucasion female.
   D. has seen a physician within the last six months.

APPENDIX B

ANSWER KEY FOR SUICIDE LETHALITY QUESTIONNAIRE

ANSWER KEY FOR
THIRTEEN QUESTIONS ON SUCCESSFUL SUICIDE

Your Profession: (Circle one)	Psychiatrist Physician Psychologist Social Worker Theologian	Years Experience: (Circle one)	2-5 Years 5-10 Years 10-15 Years Over 15 Years

INSTRUCTIONS: Please circle the letter indicating the answer that is most correct for each question.

1. Persons who are most likely to succeed in committing suicide are:
   - A. female and under 50 years of age.
   - B. female and over 50 years of age.
   - C. male and under 50 years of age.
   - (D.) male and over 50 years of age.

2. Successful suicidals are most often characterized by:
   - A. depression, hopelessness and helplessness, but not anxiety symptoms such as sleep disturbance.
   - (B.) depression, hopelessness and helplessness, as well as anxiety symptoms such as sleep disturbance.
   - C. no visible signs of either depression or anxiety.
   - D. anxiety symptoms, but very seldom showing signs of depression.

3. A great percentage of successful suicides involve persons who are:
   - A. married.
   - B. single.
   - (C.) widowed, separated or divorced.
   - D. any of the above categories, since there is no significant difference in marital relationships.

4. In regard to current pressures affecting persons at the time they make a suicide attempt:
   - (A.) persons under the effects of an immediate stress are most likely to succeed.
   - B. persons under an immediate stress are not likely at that time to succeed.
   - C. the factor of immediate stress is not critical in determining the lethality of a suicide attempt.
   - D. none of the above are correct.

5. Regarding the onset of suicidal symptoms in a person's behavior:
   - A. a gradually-developing group of symptoms indicates that the person is more likely to commit suicide.
   - (B.) a relatively quick onset of symptoms is the most dangerous sign of a successful suicide attempt.
   - C. very little evidence has been found to indicate any correlation between onset of symptoms and suicide lethality.
   - D. both gradual and quick onset of symptoms of suicide are equally dangerous for successful suicide.

6. A potentially-suicidal individual is more likely to succeed in the attempt if that person:
   - A. has no idea how he or she will actually do it.
   - B. is afraid to think of how the actual attempt will be made.
   - (C.) has a definite plan of how it will be done.
   - D. appears very confused about actually how it will be done when asked.

7. Likelihood of successful suicide is greatest when:
   A. a person continues social contacts as if nothing is wrong.
   B. a person is very gregarious with a variety of social contacts.
   C. a person is socially isolated from friends and relatives.
   D. a person keeps in contact with relatives but is isolated from friends and recent acquaintances.

8. With regard to alcoholics and homosexuals, the suicide rate is:
   A. higher than the national average.
   B. lower than the national average.
   C. the same as the national average.
   D. higher for alcoholics and lower for homosexuals compared to the national average.

9. A person has the highest potential for successful suicide if:
   A. there is no previous history of suicide attempts.
   B. there is a history of previous suicide attempts.
   C. there is no history of previous attempts but some suicidal thoughts have been present.
   D. the person has never contemplated suicide.

10. The most dangerously suicidal individual with regard to medical history is an individual who:
   A. has never had physical complaints or seen a doctor.
   B. has a long history of chronic illness but doesn't believe in doctors.
   C. has a long history of chronic illness and many visits to physicians during this period.
   D. has had no physical complaints but sees a doctor occasionally for checkups with rigid regularity.

11. If relatives exist, a dangerously suicidal person would likely:
   A. not be in communication with them.
   B. see them often, trying to communicate with them.
   C. keep in communication with them but only from a distance, like writing or calling them on the phone.
   D. none of the above, since there is no significant difference.

12. An individual would be more likely to be an imminent suicide victim if:
   A. there is a significant other person who was extremely important to that individual and who was trying in vain to help.
   B. there is a significant other person who rejects the individual.
   C. the month is February.
   D. none of the above is statistically significant.

13. A critical factor in determining the lethality of a potentially-suicidal person is if that person:
   A. has never seen a physician.
   B. is a member of the middle socioeconomic class.
   C. is a young, caucasion female.
   D. has seen a physician within the last six months.

APPENDIX C

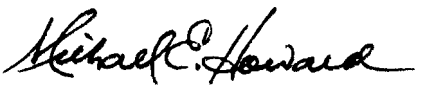
LETTER OF INTRODUCTION

Dear Health Professional, Mental Health Professional or Theologian:

In order to assist in a current research study, it would be greatfully appreciated if you would take a short period of time to answer the enclosed questionnaire without consultation. Your results will be anonymously added to the group of fellow professionals to which you have indicated and be processed as such. A self-addressed envelope is enclosed for your convenience with stamp affixed. Results of the study will be made available to you.

This study is being undertaken to ascertain clinical opinions on suicide lethality from professionals who come in contact with individuals who are prone to commit suicide. By collecting data on the judgement of professionals, directions for further work in this area can be more accurately charted. Your clinical judgements are needed for this.

Your assistance is appreciated,



Michael E. Howard
Project Coordinator
Alcoholism Consultation &
Treatment Services

APPENDIX D

OBTAINED SCORES AND SCORE TOTALS FOR THE SIX TREATMENT GROUPS ON TOTAL ITEMS

Obtained Scores and Score Totals for the Six Treatment Groups on Total Items

	Psychiatrist	Physician	Psychologist	Social Worker	Clergyman	Control
	9	11	10	9	4	7
	6	10	4	6	6	6
	10	9	9	5	4	5
	8	10	8	7	8	5
	11	11	9	6	6	6
	12	12	6	4	11	5
	9	9	7	9	4	4
	8	7	10	10	3	6
	6	8	8	4	5	3
	9	6	9	5	5	2
	11	9	6	6	4	9
	10	11	5	8	5	8
	11	10	11	7	6	6
	9	10	3	8	8	4
	8	8	9	8	3	6
	7	9	6	6	7	4
	8	9	5	7	5	7
	9	9	7	9	4	3
	11	10	10	10	9	4
	10	8	4	3	8	6
	10	11	6	4	6	3
	9	10	11	3	5	7
	12	11	5	6	4	3
	11	9	7	3	3	4
	8	7	8	8	3	8
	9	9	9	6	6	6
	7	8	4	5	5	4
	6	9	11	4	4	6
	7	10	10	7	3	7
	10	11	9	4	6	3
ΣX =	271	281	226	187	160	157
$(\Sigma X)^2$ =	73441	78961	51076	34969	25600	24649
ΣX^2 =	2535	2689	1864	1327	951	841
$\bar{X}$ =	9.03	9.37	7.53	6.23	5.33	5.23
s^2 =	3.00	1.96	5.57	5.56	3.37	0.67
s =	1.73	1.40	2.35	2.35	1.83	0.81

APPENDIX E

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE PSYCHIATRIST TREATMENT GROUP

Incorrect Responses and Response Totals for Questionnaires of the Psychiatrist Treatment Group

	Item Number and Correct Response														
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total	Years of Experience
1	C				A					B		C		9	3
2	A			C	A			C		B		A	B	6	2
3	A				A							C		10	4
4	A				C					B	C		B	8	3
5				C								C		11	4
6	C													12	4
7	A			B	C								B	9	1
8	C				C	B				B			B	8	3
9	C		B			B		D	A		D		C	6	1
10	C				C						B		C	9	3
11					A								B	11	2
12	C							D			C			10	1
13	A												C	11	4
14			B		A						B		C	9	1
15	C			C			A				C		C	8	4
16	A		B				A		A		C	C		7	1
17	C		B		D			D					B	8	1
18			A		A						C		C	9	3
19	C												C	11	4
20	A										C		C	10	3
21			A		A						C			10	2
22	C				A			C					C	9	4
23					A									12	4
24	C										D			11	3
25	A							C	C		B		C	8	1
26	B				A						C		A	9	3
27			D			B			C		B	D	C	7	2
28	C		A		D	B			C		B		C	6	1
29	C		B			A			C		C		A	7	4
30	C				A								C	10	4
# Right	7	30	21	26	13	25	28	24	24	26	14	24	9	271	80
# Wrong	23	0	9	4	17	5	2	6	6	4	16	6	21		$\bar{x}$:2.51
Mode A	8		3		11	1	2		2			1	2		
B	1		5	1		4				4	5		6		
C	14			3	4			3	4		9	4	13		
D			1		2			3			2	1			

APPENDIX F

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE PHYSICIAN TREATMENT GROUP

Incorrect Responses and Response Totals for Questionnaires of the Physician Treatment Group

	Item Number and Correct Response														
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total	Years of Experience
1	C	B	C	A	A	C							B	11	4
2	C	B	C	A	A						C			10	4
3	C			C	C						C			9	4
4	C				D									10	4
5				C	A									11	4
6	C													12	4
7				C	A						C		B	9	1
8	A			C	A			C			B		B	7	2
9	C				D				A		C		C	8	4
10		A	A		A		A		A		B		C	6	1
11	C				D				A	B				9	4
12		A			A									11	4
13	A										C		C	10	4
14	A				A								B	10	4
15	C				C			C			C		B	8	2
16	C	A								B	C			9	1
17	C				A					B			C	9	2
18		C					B				C	C		9	4
19	C				C								B	10	2
20	C				A		A		A		C			8	1
21					A								B	11	4
22	C				A						C			10	4
23					A						C			11	4
24	A				D	B							B	9	1
25	C		A	C					A		C		B	7	1
26	C			C	A			C						9	2
27	A		A		D						C		B	8	4
28	C				A						C		C	9	3
29	C				C								B	10	4
30					A								B	11	4
# Right	8	26	27	24	5	29	27	27	25	27	14	29	13	281	92
# Wrong	22	4	3	6	25	1	3	3	5	3	16	1	17		$\bar{x}$=3.06
Mode A	5	3	3		16		2		5						
B						1	1			3	2		12		
C	18	1		6	4			3			14	1	5		
D					5										

APPENDIX G

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE PSYCHOLOGIST TREATMENT GROUP

Incorrect Responses and Response Totals for Questionnaires of the Psychologist Treatment Group

	Item Number and Correct Response														
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total	Years of Experience
1				D				D					C	10	3
2	A	C	B		C			D	C	B	C		C	4	1
3		A		D	A								C	9	2
4				C	C			D				D	C	8	2
5			B		D			D					C	9	3
6	B	D	B					C		A	C		B	6	1
7	C		D	C	D			D					B	7	1
8	A		D		D									10	1
9				B	A			C				C	C	8	1
10	C		A		D						C			9	1
11	C		D		A	D	D	D			B			6	1
12	A		D	C	A			C			D	D	C	5	1
13								C					C	11	3
14	B	C		D	A		A	D	C	B	C		A	3	1
15	B				A					B			C	9	4
16	C	A	B	D						B	D		B	6	3
17	A	C	B	C	A			C		B			B	5	1
18	B		A		A			C			C		C	7	1
19				D						B			C	10	4
20	C	C	B		C			D		B	C	D	C	4	1
21	C		B		A		D	C			D		C	6	1
22					D								B	11	4
23	A		D		D	B		C		A		D	C	5	1
24	A	A						D		A	D		A	7	1
25	C		A		A					B			C	8	3
26	C		B	C							C			9	4
27	B		D	D	C			C		B	C	C	C	4	2
28	B							D						11	4
29			B		D								C	10	2
30	C		B					C					C	9	2
# Right	9	22	11	18	9	28	27	10	28	18	17	24	5	226	60
# Wrong	21	8	19	12	21	2	3	20	2	12	13	6	25		$\bar{x}$=2.00
Mode A	6	3	3		10		1			3			2		
B	6		10	1		1				9	1		5		
C	9	4		5	4			10	2		8	2	18		
D		1	6	6	7	1	2	10			4	4			

APPENDIX H

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE SOCIAL WORKER TREATMENT GROUP

Incorrect Responses and Response Totals for Questionnaires of the Social Worker Treatment Group

	Item Number and Correct Response														
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total	Years of Experience
1			B		D			D					C	9	4
2	C		B		A		D	C			D		C	6	2
3	C	A	B		A			C		B	C		B	5	1
4	C		D	C	D			D					C	7	3
5	C	C		D	A					B	C	D		6	3
6	B		B	C	D	D		C		D	D		B	4	1
7	C				A			D					C	9	3
8	A							D					C	10	4
9	A	A	B	C	A			C	C		C		C	4	1
10	C	A	B	D				D		B	C		C	5	2
11	A		D		A		D	D		B		C		6	1
12	B		B		C	B							B	8	4
13			B		A			C	C		B		A	7	1
14	A		D		D			C					C	8	3
15		C		D				D		D			C	8	3
16	A		B	D	A			B		B			B	6	2
17	A				A			D		D	B		C	7	4
18	A							D			B		C	9	2
19	A		D		D									10	4
20	C	C	B	C	D			D	C	B	C		C	3	1
21	C	C	B		A		B	C		D	B		C	4	2
22	C	A	D	C	A	B		C		B	C		B	3	1
23	A		B		A			D		D	C		C	6	2
24	C	C	A	C	A			D		D	C	C	B	3	3
25	B		B		D			C					C	8	4
26	C		B	D	A			C		B	C			6	2
27	B	A	B		D			D		D	B		C	5	1
28		B	A	B	C			B		A	C	D	A	4	2
29	C		B		A			C		D			C	7	2
30	A	A	B	C	A		D	D		B			C	4	1
# Right	4	18	6	17	4	27	26	3	27	12	13	26	4	187	69
# Wrong	26	12	24	13	26	3	4	27	3	18	17	4	26		
Mode A	10	6	2		16					1			6		
B	4		16	1		2	1	2		9	5		6		
C	12	5		7	2			11	3		10	2	18		
D		1	6	5	8	1	3	14		8	2	2			

APPENDIX I

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE CLERGYMAN TREATMENT GROUP

Incorrect Responses and Response Totals for Questionnaires of the Clergyman Treatment Group

	Item Number and Correct Response														
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total	Years of Experience
1	C	A	D	C	A			C		B	C		B	4	3
2	B		B		A	B		C			C		C	6	4
3		A	A	B	C			C		A	C	D	A	4	4
4	A		B		D			D					C	8	3
5	C		D	D	A				C			C	C	6	4
6	A							D						11	4
7	C		B	C	A		B	D		D	C		C	4	3
8	C		A		C	D		B	C	A	B	D	B	3	4
9	B	A	D		D			C		D	B		B	5	4
10	C	A	B		A			D		B	B		C	5	2
11	A	C		C	A		D	D		B	C		C	4	2
12			B	C	A	D	B	C			C		C	5	3
13	C	C	A		C			C		D			A	6	4
14				A	C			B			B		A	8	3
15	C	A	B		A		B	C		B	C	D	C	3	3
16	A		D		A			C			B		C	7	2
17	C		B	C	A		B		C	D	C			5	2
18	C	A		B	D	B		D		B	D		B	4	2
19	A			D				C					C	9	4
20	A		A		A					A			A	8	1
21	B		B	D	C			C			D		C	6	3
22	C		B		C			D		A	B	C	C	5	2
23	B	C	A	C	D			B	D	D	C			4	4
24	C	A	B	C	C			C		D	C	C	C	3	2
25	C	A	B	B	C	D		D		B	C		B	3	3
26	B			D	C		D	C			B		C	6	4
27		C	A			D		B	A	A		C	A	5	3
28	A		B		D	A	A	D	C		C		C	4	2
29	C		B	C	A	D		C		A	D	A	C	3	4
30	C		A				D	B			D	C	C	6	3
# Right	4	18	6	14	4	22	22	3	24	12	7	21	3	160	93
# Wrong	26	12	24	16	26	8	8	27	6	18	23	9	27		$\bar{x}$=3.10
Mode A	7	8	6		12	1	1		1	6		1	5		
B	5	4	13	3		2	4	5		6	7		6		
C	14			8	9			13	4		12	5	16		
D			5	5	5	5	3	9	1	6	4	3			

APPENDIX J

INCORRECT RESPONSES AND RESPONSE TOTALS FOR QUESTIONNAIRES OF THE CONTROL TREATMENT GROUP

Incorrect Responses and Response Totals For Questionnaires of the Control Treatment Group

	Item Number and Correct Response													
Number	1 D	2 B	3 C	4 A	5 B	6 C	7 C	8 A	9 B	10 C	11 A	12 B	13 D	Total
1	A		B		C			D		B			C	7
2		A	A		A			C		B	C		B	6
3	C		B	C		D	B			A		C	C	5
4	C			D	C		A	C	A		D		A	5
5	B		D		C		B	D			C		C	6
6	C	C	B		C	B	D			D		D		5
7	A		A	B	A	B		D		A	B		C	4
8	C		D	B	C			C		B		D		6
9	C	A	D		C		A	B	C	D		C	A	3
10	B		A	C	C		D	C	A	B	D	C	C	2
11				B		D		B			C			9
12	C		B		A			C					C	8
13		C		C			D		C	B	D		A	6
14	C		D		C		B	B		D	C	A	B	4
15	C		A		D	D		D			C		C	6
16		D		D	C	A	B	C		B	B	B		4
17	C		D		C			C		B			C	7
18	C	C	B	C			D	B	A		C	D	C	3
19	B		A		C	B	A	D	C		C		B	4
20			B	C		D	B			A	B		C	6
21		A		C	D	B	A	B	C		B	C	A	3
22	C		D		A		B			A		C		7
23	B	A	A		C			C	C	B	C	D	C	3
24	A		D	D		B	A	D		D	D	A		4
25	A		B		C			B					A	8
26	C		B		A			D	C		D		C	6
27		C		C		D	A	C		D	B	C	C	4
28	A		D		C	B		D	C				B	6
29	C		A		C	D					B		C	7
30	B		D	C	A		B	D	D	D	C		C	3
# Right	7	21	6	16	7	17	13	6	19	12	10	17	6	157
# Wrong	23	9	24	14	23	13	17	24	11	18	20	13	24	
Mode A	5	4	7		6	1	6		3	4		2	5	
B	5		8	3		6	7	6		8	6		4	
C	13	4		8	15			9	7		9	7	15	
D		1	9	3	2	6	4	9	1	6	5	4		

APPENDIX K

OMEGA SQUARED CALCULATIONS FOR VARIANCE PARTITIONING

Omega Squared Calculations for Variance Partitioning

$$\hat{\sigma}^2_{\text{effect(A)}} = \frac{df_{\text{effect}}\ (\text{Mean Square Effect} - \text{Mean Square Within})}{N}$$

($\hat{\sigma}^2$ = Variance Estimate)

$$= 5\ \frac{(98.50 - 3.36)}{180}$$

$$= 5\ \frac{(95.14)}{180}$$

$$= \frac{475.7}{180}$$

$$\hat{\sigma}_{A}^2 = 2.64$$

$$\hat{\sigma}_{\text{error}}^2 = \text{Mean Square Within}$$

$$\hat{\sigma}_{\text{error}}^2 = 3.36$$

$$\hat{\sigma}_{\text{total}}^2 = \hat{\sigma}_{\text{effect}}^2 + \hat{\sigma}_{\text{error}}^2$$

$$= 2.64 + 3.36$$

$$= 6.00$$

$$\text{Omega Squared}_{(A)} = \frac{\hat{\sigma}^2_{\text{effect (A)}}}{\hat{\sigma}^2_{\text{total}}}$$

$$= \frac{2.64}{6.00}$$

$$= 0.44$$ (44% of total variance due to treatment effect)

$$\text{Omega Squared}_{(E)} = \frac{\hat{\sigma}^2_{\text{error}}}{\hat{\sigma}^2_{\text{total}}}$$

$$= \frac{3.36}{6.00}$$

$$= 0.56$$ (56% of total variance due to treatment effect)

APPENDIX L

ITEM TOTALS CORRECT FOR THE SIX TREATMENT GROUPS

Item Totals Correct for the Six Treatment Groups

Treatment Group	Item Number 1	2	3	4	5	6	7	8	9	10	11	12	13	Treatment Totals
Psychiatrist	7	30	21	26	13	24	28	24	24	26	14	24	9	271
Physician	8	26	27	24	5	29	27	27	25	27	14	29	13	281
Psychologist	9	22	11	18	9	28	27	10	28	18	17	24	5	226
Social Worker	4	18	6	17	4	27	26	4	27	12	13	26	4	187
Clergyman	4	18	6	14	4	22	22	3	24	12	7	21	3	160
Control	7	21	6	16	7	17	13	6	19	12	10	17	6	157
ΣX (Total)	39	135	77	115	42	148	143	73	147	107	75	141	40	1282
ΣX^2	275	3149	1399	2317	356	3752	3571	1459	3651	2161	999	3399	336	
$\bar{X}$	6.50	22.50	12.83	19.16	7.00	24.67	23.83	12.17	24.50	17.83	12.50	23.50	6.67	
s^2	4.30	22.30	82.16	22.57	12.40	20.27	32.57	114.17	9.90	50.57	12.30	17.10	13.87	
s	2.07	4.72	9.06	4.75	3.52	4.50	5.71	10.68	3.15	7.11	3.50	4.14	3.72	

APPENDIX M

TOTAL SCORES OF THE SIX TREATMENT GROUPS ON THE SEVEN "EASY" ITEMS

Total Scores of the Six Treatment Groups
on the Seven "Easy" Items

Item Number	Treatment Group						
	Psychiatrist	Physician	Psychologist	Social Worker	Clergyman	Control	Total
6	25	29	28	27	22	17	148
9	24	25	28	27	24	19	147
7	28	27	27	26	22	13	143
12	24	29	24	26	21	17	141
2	30	26	22	18	18	21	135
4	26	24	18	17	14	16	115
10	26	27	18	12	12	12	107
ΣX (Total)	183	187	165	153	133	115	936
ΣX^2	4813	5017	4005	3567	2649	1949	
$\bar{X}$	26.14	26.71	23.57	21.86	19.00	16.43	
s^2	4.81	3.57	19.29	37.14	20.33	9.95	
s	2.19	1.89	4.39	6.09	4.51	3.15	

APPENDIX N

TOTAL SCORES OF THE SIX TREATMENT GROUPS ON THE SIX "DIFFICULT" ITEMS

Total Scores of the Six Treatment Groups
on the Six "Difficult" Items

Item Number	Treatment Group						
	Psychiatrist	Physician	Psychologist	Social Worker	Clergyman	Control	Total
3	21	27	11	6	6	6	77
11	14	14	17	13	7	10	75
8	24	27	10	3	3	6	73
5	13	5	9	4	4	7	42
13	9	13	5	4	3	6	40
1	7	8	9	4	4	7	39
ΣX (Total)	88	94	61	34	27	42	346
ΣX^2	1512	1912	697	262	135	306	
$\bar{X}$	14.67	15.67	10.17	5.67	4.50	7.00	
s^2	44.27	87.87	15.37	13.87	2.70	2.40	
s	6.65	9.37	3.92	3.72	1.64	1.55	

APPENDIX O

OBTAINED SCORES AND SCORE TOTALS FOR THE FOUR LEVELS OF YEARS OF EXPERIENCE

Obtained Scores and Score Totals
for the Four Levels of Years of Experience

Group 1 (2-5 Years)		Group 2 (5-10 Years		Group 3 (10-15 Years)		Group 4 (Over 15 Years)	
9	4	6	7	9	3	10	8
6	6	11	5	8	6	11	10
10	5	10	4	8	3	12	11
9	7	7	5	9	5	11	9
7	5	7	3	9	6	8	10
8	4	8	4	10		11	11
8	4	9		11		9	9
6	6	10		9		12	11
9	7	9		9		7	9
6	3	9		10		10	10
9	3	8		9		11	8
8	5	4		11		10	7
9	4	10		6		9	10
7	8	9		8		10	8
4		6		7		11	6
6		5		6		12	4
7		6		9		8	6
10		9		8		9	11
8		4		8		11	3
9		6		3		10	5
6		6		4		10	6
5		4		8		9	9
3		7		4		11	4
5		5		5		10	6
7		4		8		11	3
ΣX	252 (n=39)		205 (n=31)		219 (n=30)		447 (n=50)
ΣX^2	1784		1511		1759		4269
$\bar{X}$	6.46		6.61		7.30		8.94
s^2	4.10		5.18		5.53		5.57
s	2.02		2.28		2.35		2.36