A COMPARATIVE STUDY OF THE SELF-ACCEPTANCE OF
SUICIDAL AND NON-SUICIDAL YOUTHS

by

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B.ScN., University of Toronto, 1969

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING

In the Department of Nursing

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

JULY, 1976

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ABSTRACT

A COMPARATIVE STUDY OF THE SELF-ACCEPTANCE
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Youths who attempt suicide may have many negative feelings about themselves which are manifested in a low level of self-acceptance. This factor is often overlooked in specific assessment and intervention measures while socio-economic and situational variables are treated. Nurses, because of their location in schools, are in a unique position to recognize and intervene with the potentially suicidal youth. Nurses however may have difficulty in recognizing the youth with poor self-acceptance. This exploratory study was undertaken in order to answer the question: 'is a low level of self-acceptance in youths age sixteen to twenty-five correlated with suicide attempts?' The answer was sought from information obtained from youths' self-reports on the Berger Scale of Self-Acceptance and the California Psychological Inventory. These tests were administered to thirty youths divided into three groups. Group A were suicide attempters seen in the emergency ward of a large general hospital, group B were non-suicide attempters seen in the emergency ward and group C were chosen from the community.

An analysis of variance was carried out to discover if there was a significant difference in self-acceptance among the three groups.

The findings supported the overall conclusion: youths between ages sixteen and twenty-five who attempted suicide had a significantly lower
self-acceptance than control group youths. The variable of hospitalization did not affect self-acceptance.

(Thesis Chairman)
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ACKNOWLEDGEMENT

The writer wishes to express her thanks to the staff and patients at the Vancouver General Hospital, emergency ward for their cooperation in the study. Thanks also to Committee Chairman, B. McGuire for her patience and encouragement, to B. La Sor and H. Elfert for their advice and to J. Yensen for his consultation in the data analysis.

Most of all thanks to my husband Peter for his practical advice and unfailing patience without which this study would not have been finished.
CHAPTER I

INTRODUCTION

All professional health workers regardless of their discipline, if their work touches even peripherally on the area of mental health, are becoming increasingly concerned about the amount of emotional turmoil in youth. Not only is this age group increasing in actual numbers but they are also presenting an even greater challenge in regard to mental health. One of the important aspects of this problem is youthful suicide.\(^1\)

For the helping professional a suicide is an especially unhappy event.\(^2\) Although one can, in part, train and inure oneself to deal with the sick and dying patient, the abruptness and needlessness of a suicide leaves the nurse, the physician and other survivors with many unanswered questions, many troubled thoughts and feelings. Why do people try to kill themselves? How can we recognize a suicidal individual early enough to intervene?

It is fairly common knowledge that suicide in children is a comparatively rare occurrence but that the rate rises rapidly following

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\(^2\) S. M. Soreff, "The Impact of Staff Suicide on a Psychiatric Inpatient Unit," Journal of Nervous and Mental Disorders, 161:130, 1975.
puberty. This dramatic increase makes suicide the second leading cause of death in the ages from ten to twenty-nine.³

Most studies of suicide seem to focus on assessment and treatment of the possible suicide attempter while factors that may be important in early identification are often ignored.⁴

One of these factors with which the present study is concerned is self-acceptance. The feelings that a youth has about himself may have a central role in determining future behavior and is therefore an important area for study.

The Problem

The problem with which the present study is concerned is this:

Do youths between ages sixteen and twenty-five who have attempted suicide differ significantly in their level of self-acceptance as measured by the Berger Scale and the California Psychological Inventory.

The problem will be explored by administration of the Berger Scale of Self-Acceptance and the California Psychological Inventory to three groups of youths: one group seen in emergency following a suicide attempt; and


one group of non-suicide attempters in emergency; and, one group of non-suicide attempters, not in the emergency ward.

Definition of Terms Used

Suicide Attempter for the purpose of this study refers to any individual seen following a non-fatal self-inflicted injury.

Youth for the purpose of this study refers to any male or female between the ages of sixteen and twenty-five.

Self-Accepting Youth for the purpose of this study is defined as the person possessing the following characteristics:

1. has a sense of personal worth and has faith in his capacity to cope with life
2. relies primarily on internal values rather than external pressures as a guide to behavior
3. assumes responsibility for his own behavior and accepts praise or criticism objectively
4. is relatively free from self-doubt or disillusionment
5. considers himself a person of worth on an equal plane with others.\(^5\)

This definition was adapted from The California Psychological Inventory and the Berger Scale of Self-Acceptance.\(^6\)

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Nursing is defined as: the nurturing of man during critical periods in his life so that he may develop and utilize a range of coping behaviors which permit him to satisfy his basic human needs and thereby move toward optimal health.  

Assumptions of the Study

The study was based on the following assumptions:

1. that self-acceptance is a central part of the life of an adolescent significantly affecting his thoughts, feelings and behavior.

2. that attempted suicide is not merely a random response to uncontrollable forces and that altruistic suicides were not present in the sample.

3. that situational and socio-economic factors as causes of attempted suicide were random or non-operative.

4. that the self-inflicted injuries were made for the purpose of suicide.

Limitations of the Study

The following were recognized as limitations to the study:

1. the sample population was limited in that it drew only those seen in the emergency ward of a large urban general hospital and therefore should be generalized cautiously to other settings.

2. the youths in emergency answered the questionnaires in a high state of stress while those in the community did not.

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7 Model for Nursing, University of British Columbia, 1971.

Specific Objectives of the Study

The specific objectives of this study were:

1. to determine whether youths who had attempted suicide had a lower level of self-acceptance as measured by the Berger Scale, than youths who had not attempted suicide;

2. to determine whether youths who had attempted suicide had a lower level of self-acceptance as measured by the California Psychological Inventory (subscale, self-acceptance) than youths who had not attempted suicide.

Hypotheses Tested in the Study

The null hypotheses tested in this study were:

1. There is no significant difference in the self-acceptance of a group of suicidal youths compared to a group of non-suicidal youths as measured by the Berger Scale.

2. There is no significant difference in the self-acceptance of a group of suicidal youths compared to a group of non-suicidal youths as measured by the California Psychological Inventory, subscale self-acceptance.

Justification of the Problem

Twelve percent of all suicide attempts in the nation are made by adolescents.\textsuperscript{9} Estimates of the ratio of attempters who finally complete a suicide have varied from 7:1 to 50:1.\textsuperscript{10} The potentially lethal nature of the wide range of self-destructive behavior manifested in these attempts emphasizes the importance of early identification and immediate therapeutic

\textsuperscript{9} B. Corder, and W. Shorr, "A Study of Psychological Characteristics of Suicide Attempters," Adolescence, 9:1, Spring 74.

intervention with this high risk group of adolescents.

In recent years in the Province of British Columbia the problem of suicide, particularly among youths, has been of vital concern. It has prompted such editorials as, "If B.C. is paradise, why is the suicide rate the highest in Canada?"\(^{11}\)

In the City of Vancouver, the problem is again magnified. The City's rate of suicide is more than twice the national average and in all North America, only the City of San Francisco has a higher rate.\(^{12}\) Vancouver then is a ripe area for study.

Of note is the fact that these statistics are only the official rates based on coroner's reports, but it is known that because of under reporting the rate is much higher. Suicide is still very much a taboo subject and reflecting on rates is a totally inadequate measure of the extent of the real problem.\(^{13}\)

The real problem lies in the conditions under which a young person takes his own life. According to Jacobs in his book *Adolescent Suicide*:

> Adolescent suicide attempts result from the adolescent feeling that he has been subject to a progressive isolation from meaningful social relationships.\(^{14}\)

\(^{11}\) C. Cocking, "If B.C. is paradise, why is the suicide rate the highest in Canada?" *Saturday Night*, September 1973, p. 23.

\(^{12}\) Ibid., p. 24.


Jacobs interviewed fifty adolescent suicide attempters and came up with a list of common problems, however he did not explore the adolescents' feelings about himself. Most research studies also avoid this issue and for this reason the researcher has chosen to explore the self-acceptance of the youthful suicide attempter. As Termansen et al state in their study on suicide in Vancouver:

Suicide is not a simple phenomenon that can be correlated directly with one or several social characteristics. Suicide is an individual decision based on interpersonal and in the final analysis intrapsychic events.15

Snygg and Combs indicate from their studies and writings that how a person perceives himself plays a tremendous part in determining behavior.16 A self defined in negative terms lowers the individual's ability to deal with a stressful situation and may lead to suicide as a way out.

The writer's interest as a nurse in the area of youthful suicides was first stimulated from contacts with transient youths in a drop-in centre. These youths felt isolated and alone and made negative statements about themselves, such as "what's the use, I'm no good to myself or anyone else." When these youths were faced with crises situations often a suicide attempt was made ensuring help for the immediate situation but leaving the problem of low self-acceptance unresolved. The question that was left unanswered was, "did this low self-acceptance relate to subsequent suicide attempts?"

Nurses do have a role in suicide prevention, and an important

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aspect of this role is early detection of the potential suicider.\textsuperscript{17} Schneidman, writing in the \textit{American Journal of Nursing}, feels that because nurses come into contact with persons in numerous different settings at stressful periods of their lives, they are in a unique position to intervene with the potentially suicidal individual.\textsuperscript{18}

\textbf{Conclusion}

The purpose of this study then, is to compare a group of suicidal youths with a group of non-suicidal youths using the Berger Scale of Self-Acceptance, and the California Psychological Inventory to determine whether these tests will separate these suicidal youths from the non-suicidal youths.

If the Berger and California Scales do detect the suicidal youth nurses are in a unique position to administer these screening tests, thereby identifying and providing remediation for the suicidal youth.

\textbf{Overview of the Remainder of the Study}

Chapter II is a review of the literature. Two major areas are surveyed; suicide and self-theory. Chapter III is a discussion of the methodology used in carrying out the study. Chapter IV is an analysis of the data gathered. Chapter V contains the summary of the findings of the study, conclusions drawn and recommendation of areas for further investigation.


\textsuperscript{18} E. S. Schneidman, "Preventing Suicide," \textit{American Journal of Nursing}, 65:1114, 1965.
CHAPTER II

REVIEW OF THE LITERATURE

The Scope of the Review of Literature

The review of the literature will be divided into two major areas. These are: the nature of suicide and attempted suicide, and theory related to the "self."

To further delineate these areas, the literature concerning suicide will cover the historical development of suicide, and suicide as a scientific problem including sociological psychodynamic and clinical studies. The development of suicidal ideation and studies concerning suicide in adolescents and children will also be covered.

The topic of self-theory will be divided into a review of the writings of major theorists and clinical studies regarding self-acceptance.

Finally, the relationship between self-acceptance and adjustment problems such as suicide will be examined.

Historical Development of Suicide

Cultural approaches to suicide have differed from time to time and from place to place. Suicide has been described among both civilized and primitive people, with social attitudes towards it varying from formal institutionalized acceptance to rigid condemnation. It is well known that ritualized suicide such as hara-kiri in Japan was both widely practiced and an accepted and honourable way to die. In some countries the Buddhist
faith has encouraged voluntary death as a demonstration of its philosophy of resignation and despair.  

Modern revivals of these practices were seen in World War II, with the Japanese Kamikaze flights and can be seen more recently in the protests of self-immolations of the Vietnamese Buddhist monks.

Suicide has wavered between being the moral duty of a person and being a sin. St. Augustine was one of the first of the Christians to write against the act of suicide. In the modern world John Donne conceived of suicide as morally wrong because it was against the nature of man whose main aim is the preservation of life.

Although the 19th century saw a liberalization of these ideas and an interest was expressed at this time by the medical profession, suicide remained a criminal act, punishable by imprisonment. Many countries such as Spain, still enforce this law and recently a man was jailed for immolating himself to protest the political system. Great Britain removed suicide from its criminal code in 1961. The United States has never considered suicide a crime although the attempt is still a felony in six states. In Canada, suicide remains a criminal act but although punishment is not often enforced, the social stigma attached to suicide is very great.

Most scientific studies of suicide since the turn of the century have rejected the earlier moral concepts, adopting instead the humanistic

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assumption that suicide is a maladaptive act and therefore the person is seen as mentally ill. 20

Sociological Studies of Suicide

The first major work on suicide was Durkheim's "Le Suicide." 21 This treatise was significant not only for its study of suicide but also for the manner of sociological inquiry that has justified this pattern for similar inquiries for many years. Durkheim's book classified suicide according to the individual's integration with society.

Egoistic suicide was said to occur when the individual was sufficiently integrated with society, altruistic suicide when he was overly integrated with society and anomic suicide when the individual felt deserted by society. Social pressures were considered to be the most important factors causing self-destruction and the individual psychology of the suicide was not examined. 22

The work of Henry and Short is a contemporary example of Durkheim's approach to the study of suicide. However they, as Durkheim, were unsuccessful in reconciling psychological explanations of suicide with the aetiological approach. Their explanation is based on a frustration-aggression model. It is presumed that suicide and homicide emanate from


the same source, extreme forms of aggression stemming from frustration. It is suggested that aggression turned inward will result in suicide while aggression turned outward leads to homicide.  

Gibbs and Martin, however, unlike Durkheim, were able to define social integration in terms of stability of relationships and related it to suicide.  

Following Durkheim, numerous demographic studies have been done which have tried to link suicide rates in various areas to a wide variety of sociological variables. Some have attempted to correlate suicide rates with economic cycles, the weather, seasonal changes and even phases of the moon. Jackson has noted of these theories that the sociological data reported are selective and incomplete and that cause and effect relationships are almost impossible to sort out. In fact such constructs as the time of year do not seem nearly as important to the individual as his own perceptions, as in fact little can be done about the time of year.

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27 D. Jackson, in Clues to Suicide, N. L. Fareberow and E. S. Schneidman (eds.) (New York: Blakeston Division, 1957) p. 11.
Stengel, more recently, had also questioned the reliability of these sociological studies using statistics. He has concluded "research must be more critical in its use of statistics than it has been in the past." He cites differences in the reliability of registration procedures in various countries as one important example.

**Psychodynamic Studies of Suicide**

The psychodynamic contributions to the study of suicide mainly stem from Freud's description of one suicidal attempt and his paper on Mourning and Melancholia.29,30

According to this formulation the loss of a significant love object, whether real or fantasied, results in a turning inward of anger towards the introjected image of the love object and consequently towards oneself. This inwardly turned aggression results in depression, and, if the person has been excessively dependent or excessively ambivalent towards their love object, it may result in suicide.31

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31 Ibid., p. 207.
Lindemann has written extensively on grief and mourning. He feels that acute grief is a definite syndrome with both somatic and psychological symptoms. From his study of the relatives of victims of sudden death he concludes that the bereaved must realistically accept his new role, come to grips with his guilt feelings and accept the mourning process or his grief will be prolonged.  

In his article on "Grief: The Emotional Response to Suicide" he feels that the bereaved of a suicide are faced with a triple loss: death, rejection and disillusionment. All those factors operate to increase the potential of hostility in the mourner and the danger of his turning it upon himself as the only available or most appropriate target.

Zillborg, however, in 1936 pointed out that this psychodynamic constellation is not present in all suicides and conversely that suicide does not appear in all cases where it is present.

Menninger further emphasized the ubiquity of the suicidal impulse on the basis of the 'death instinct,' describing a wide variety of self-destructive behavior from alcoholism to multiple surgery in terms such as chronic suicide, focal suicide and organ suicide. He also describes three components of the behavior of suicide, the wish to kill, the wish to be killed and the wish to die.

Apart from recent disenchantment with "thanatos" or the death instinct Menninger has created confusion by his inclusion of all acts of self-destruction as a form of suicide. It would be difficult to analyse the statistics if all alcoholics who died were labelled as suicide. Writers and clinicians of today try to include intent in their concept of suicide, however, this is a very difficult fact to measure. The outcome and the lethality or seriousness of the method are other means to determine whether in fact it was an act of suicide. Most suicidologists agree that suicide is only suicide when the aim of the act is death.  

In *The End of Hope*, the authors deal with the question of lethality in the hospitalized patient. The authors state:

> For actual suicide to occur a necessary (although not sufficient) aspect of the field is the response characterized by helplessness and hopelessness. The helpless-hopeless response is communicated through an implicit or explicit expectation that the troubled person will kill himself.  

The expectation of the staff that a patient would commit suicide became for some patients a demand that they kill themselves. It is not just the expectation of suicide that is harmful but rather it is the fear and apprehension that may accompany the expectation.

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One excellent comprehensive study combining both sociological and psychoanalytic approach is *Suicide and Scandinavia*.\(^{38}\) Using as a starting point the consistently high suicide rate in the 1960's of twenty in one hundred thousand in Denmark and Sweden, and a consistently low rate of seven and one half in one hundred thousand in Norway, he compared groups of suicidal patients following a study of each culture. His conclusions were that all three groups seemed to suicide for different psychodynamic reasons. In Sweden he found a high degree of emotional involvement in occupational life and a lesser degree of involvement in personal relationships to be related to suicide. Such performance suicide was then precipitated by losses in the social and economic spheres. In Denmark where passivity and dependence on other persons in encouraged in childhood, suicide was found to be related to losses in personal relationships. The Norwegians, although tending to personal dependency like the Danes, were found less prone to suicide because of their characteristic use of paranoid projection to control anger associated with losses or threatened losses.\(^{39}\)

In Meerloo's book entitled *Suicide and Mass Suicide*, a wider view is taken.\(^{40}\) His main thesis is that there exists a very close relationship between personal suicidal feelings and the mass emotions in the

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39 Ibid., pp. 206-209.

world. Each individual, in the personal self-destructive feelings and habits of which he is usually unaware, contributes a grain of suicidal tendency to the collectivity. Moreover, because of one man's feelings of despair and final renunciation of life is often rooted in infantile experience shared by all men there can be a tremendous contagion between individual feelings and collective emotions. 41

In Hillman's *Suicide and the Soul*, another viewpoint is taken by this lay Jungian analyst. 42 Unlike Stengel, who views death as a physical state and suicide as a behavioral event, Hillman sees death as an experience, a transition from one reality into another reality, and suicide is only a symbol. He provides no case material and his view of suicide is seen to further Jungian psychology, but does not contribute much to a theory of suicide. 43

In general the numerous psychodynamic studies have failed to explain suicidal behavior in non-depressive illness, and have offered no explanation as to why certain psychodynamic states lead to suicide in some instances and not in others.

41 Ibid., pp. 306-320.
43 Ibid., pp. 25-37.
Clinical Studies of Suicide

The primary goal of clinical studies on suicide over recent years has been the discovery of reliable indicators for predicting intent in persons threatening or attempting suicide. The main method used has been that of the retrospective analysis of the factors and circumstances leading up to and surrounding the suicidal behavior. Most of the studies have been carried out on groups of patients who actually suicided with some studies comparing the attempter with the completer. Studies with control populations are rare. The findings have delineated certain 'high risk' groups who are felt to be prone to actual suicide. High risk has been found correlated with male sex, increasing age, widowhood, single and divorced state, childlessness, high density of population, residence in big towns, alcohol consumption, a history of a broken home in childhood and the presence of physical illness. Classification according to psychiatric categories has yielded high risk groups in severe depression, schizophrenia and organic brain disorder. Psychopathic and hysterical character disorders have a high frequency of suicidal attempts but are low in risk for actual suicide.


The methodological problems encountered in doing clinical research in suicide are formidable and have been well outlined by Neuringer. He notes the obvious difficulties involved in the choice of subjects for study, as the successful suicide is unavailable for study, and the use of substitute subjects such as suicide attempters or those who have threatened may not be giving the same results. Also the selection of a control group may contain those with latent tendencies.

Farberow and Schneidman were among the first to suggest that patients with suicidal thoughts, those attempting suicide and those completing suicide may have fundamental differences. In an early study using the Minnesota Multiphasic Personality Inventory, they found a group of patients threatening suicide to be more disturbed than a group attempting suicide. Further analysis of the records of a group of patients who had actually succeeded, revealed their MMPI data to resemble more closely a normal control population than the previous group attempting or threatening suicide.

The significance in this study lies in the fact that most suicidologists view attempted suicide not as an effort to die, but rather as a frantic plea for hope and help from others. Whether the individual


then actually commits suicide seems to depend in a large part on the nature of the responses by other people to his plea.  

The application of this to the writer's proposed study is seen in the significance of the attempter's feelings about himself that result in this cry for help.

Erwin Stengel, more recently has emphasized the differences between attempted and completed suicide, and feels that attempted suicide should not simply be regarded as suicide that has failed. This approach he states, has led to ignoring many important motivations in the suicidal attempt which should be regarded as a behavioral pattern in its own right. The assumption that suicidal thoughts, suicidal attempts and accomplished suicide can be placed on a simple continuum for purposes of study may therefore be incorrect. Thus, a study of suicide attempters seems to be a valid distinction to be carried out.

Many of the studies on attempted suicide deal with the identifying characteristics of the suicide attempter. Farber found that the attempter often is living in a state of social confusion characterized by disturbed

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family relationships and overcrowded living conditions. Often the attempter is impulsive and habituated to drink and drugs. 51

Motto found five characteristic patterns could be identified and related to the seriousness of the prior attempt and the status of the subject regarding subsequent suicide. One identifiable characteristic of the successful suicide was the absence of continuing contact with a psychiatric facility. 52

Pokarney was concerned with the indicators of future suicide and found suicidal behavior (attempts, threats, and ideas) to be a more reliable indicator than the psychiatric diagnostic grouping. 53 In the follow-up study, Grier and Lee devised a three-point scale assessing psychiatric symptoms (frequency, severity) of social adjustment in four areas: work; interpersonal relations; sexual adjustment; and marital relations. They utilized this scale in determining the psychosocial adjustment of the patient one to four and a half years after discharge. 54

In summary then, these numerous clinical studies seem to have offered the most valuable information thus far on the suicidal individual.


The Development of Suicidal Ideation

Although the literature is scarce on the development and function of suicidal ideation, a review of the material on suicide in adolescence and children reveals some data.

Some authors feel that the child's concept of death may originate as early as the first year of life. By the age of two to four, death fantasies are actively used in expressing anger towards offending persons. By school age, fantasies of death or dying are extremely common, being found in seventy percent of a group of children in one recent study. According to Toolan, in his article of suicide in children, "The child prefers to consider himself bad than admit his parents' badness." Actual suicide in childhood, although rare, seems to reflect such misconceptions as, "death is just sleep from which everyone returns." Suicidal acts in children increase in frequency with age, until in the fifteen to nineteen year old age group they are the second leading cause of death in the United States and Canada.

55 K. S. Adam, op. cit., p. 416.
There are several exceptions to the rule that youthful suicide rates parallel to those for the total population both generalized and relative to sex and race. In the last decade the suicide rate for non-white girls which had previously exceeded the adult rate has now dropped below the total non-white female rates. In more alarming contrast is the fact that in the last ten years there has been a striking increase in the rate for young non-white males, and that this rate currently exceeds the rate for adult males as a whole and even the rate for the total population. A final statistic is the fact that the rates for teenagers who marry are considerably higher than that for those who do not, and the trend continues though in diminishing fashion through age twenty-four. This is in marked contrast to the adult pattern, in which the suicide rates are lower for married than for single persons. According to Mintz, in his study, the sex ratio for attempters to completers is three females to one male, and for completers is the opposite, three males to one female. His study also suggests that the attempter was apt to be somewhat younger than the completer with a modal age range from fifteen to twenty-four years.

The high incidence of suicide in this group has been linked with the intensification of sexual urges and the identity crisis of the adolescent

60 M. King, op. cit., p. 346.

61 R. S. Mintz, A Pilot Study of the Prevalence of Persons in the City of Los Angeles who have Attempted Suicide (unpublished manuscript), University of California at Los Angeles, Neuro-Psychiatric Institute, 1964, p. 10.
period of development, although no explanation has been given for the act itself.\textsuperscript{62}

Jacobs in his doctoral dissertation studied adolescent suicide attempts to test whether or not the life histories of adolescent suicide attempters adhered to any sequential ordering that was not found in a control group.\textsuperscript{63} He has since published a book on adolescent suicide outlining the process which led to the adolescent suicide attempters progressive isolation from significant others and finally to the attempt.

This process is:\textsuperscript{64}

1. A long-standing history of problems in general (from childhood to the onset of adolescence).

2. A period of "escalation of problems" (since the onset of adolescence and in excess of those normally associated with adolescence).

3. The progressive failure of available adaptive techniques for coping with old and increasing new problems which leads to the adolescent to a progressive social isolation from meaningful social relationships.

4. The final phase characterized by the chain reaction dissolution of any remaining meaningful social relationships in the weeks and days preceding the suicide attempt.


\textsuperscript{64} J. Jacobs, \textit{Adolescent Suicide}, (Toronto: Wiley Inter-Science Books, 1971) p. 64.
In the special setting of the university, it has been shown that suicide is the second or third most common cause of death. Some crises that increase this rate according to Knight are: loss or modification of values, separation anxiety, identity confusion, excessive competitiveness, upheavals in love attachments, depressive episodes, and fears about masculinity or femininity.

Of extreme importance in adolescent suicide seems to be the role of so-called broken homes. A recent study by Dorpat et al. compared groups of actual and attempted suicides from this point of view and found that fifty percent of the actual suicides and sixty four percent of the attempted suicides had a definite history of separation from one or both parents in childhood. Of further interest was the finding that completed suicides had the highest incidence of loss of a parent through death, whereas attempted suicides had the highest incidence of loss through divorce or separation. In all these studies, the most common precipitating factor leading to the suicidal behavior was that of actual or threatened loss of some significant object or person in the environment.

Self-Theory - Major Theorists

Perhaps the most significant contribution to the topic of self-theory was made by George Herbert Mead. As a social philosopher he was concerned with the process by which the individual becomes a compatible and integrated member of his social group. Mead stated that the individual comes to respond to himself and develops self-attitudes consistent with those expressed by significant others in his world.\(^7\)

Coopersmith defined the self as:

an abstraction that an individual develops about the attributes, capacities, objects and activities which he possesses. This abstraction is represented by the symbol, 'me,' which is a person's idea of himself. It is an abstraction that is formed and elaborated in social intercourse, private reactions to himself, mastery in solving developmental tasks and competence in dealing with life situations.\(^7\)

Snygg and Combs, the phenomenologists, have been the most thorough in their writings concerning self-theory, self-esteem, and self-acceptance. According to them everyone has a need to possess an adequate self. These self-perceptions have a tremendous role in determining behavior. For them the phenomenal self is the self defined by the individuals as his own unique way of organizing and regarding his comments of self. It gives continuity

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and consistency to the person and provides the central core around which all other perceptions are organized.\textsuperscript{72}

Snygg and Combs see the person's conceptual field as having three component parts: the self-image, the self-demand, and the self-judgment. The self-judgment of the individual is the relationship between the self-image (what am I) and the self-demand (what should I be). If these two are congruent in the individual's perception then he is self-accepting. Self-acceptance may be measured empirically and is related to self-esteem.\textsuperscript{73}

A high degree of self-acceptance and self-esteem leads to a relationship between the self and society characterized by mutual enhancement with a minimum of friction, hostility or destructiveness.

A self-defined in negative terms is a poor instrument for dealing with life. The poorer self-esteem lowers the individual's ability to handle new situations and he is in constant danger from crises.\textsuperscript{74}

Three neo-Freudians, Sullivan, Horney and Adler, have also theorized on the origins of self-esteem. As clinicians, they have derived their formulations from the retrospective reports of patients in treatment. Sullivan accepts Mead's interpretation of the social origins

\begin{footnotesize}
\begin{tabular}{ll}
\textsuperscript{73} & Ibid., p. 240. \\
\textsuperscript{74} & Ibid., p. 124. \\
\end{tabular}
\end{footnotesize}
of personality and then proceeds to a more extended analysis of the interpersonal processes involved. The individual is continually guarding himself against a loss of self-esteem, for it is this loss that leads to anxiety. Anxiety is an interpersonal phenomenon that occurs when an individual expects to be or is rejected or demeaned by himself or others. Persons with low self-esteem usually have been devalued by significant others and expect or anticipate derogation in the present. The ability to minimize or avoid loss of self-esteem is important in maintaining a relatively high level of esteem.\(^75\)

Karen Horney also focuses on the interpersonal processes and on ways of warding off self-demeaning feelings. She lists a wide range of adverse factors that might produce feelings of helplessness and isolation. The common antecedent of these factors is a disturbance in the relationship between parent and child. Her major contribution is in the area of defences. She indicates that one method of coping with anxiety is the formulation of an idealized self-image. This ideal has the effect of bolstering self-esteem while at the same time leading to dissatisfaction when its unrealistic levels are not achieved.\(^76\)

Alfred Adler places greater stress on the importance of actual weakness and infirmities in producing low self-esteem than the other

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theorists do. Adler notes three antecedent conditions that may have unfortunate consequences on the development of self-esteem. The first are the organ inferiorities, differences in size and strength. These conditions are unavoidable and whether they effect the person depends on the support of significant others. These experiences represent the second major antecedent condition. Whereas Adler believes in the beneficial effect of support, he warns against the destructive effects of over-indulgence, the third antecedent. He believes that pampered children have an unrealistic concept of their esteem and are unable to engage in mature social relationships. 77

Fromm and Rogers also speak of self-esteem. Fromm emphasizes the possible debilitating effects of social isolation. If the child and adult gain freedom from others, he has the opportunity to pursue his own paths. By joining a group he gains shelter but is subject to their authority. 77

Carl Rogers discusses the conditions that facilitate self-acceptance and diminish conflict. Rogers proposes that all persons develop a self-image of themselves which serves to guide and maintain their adjustment to the external world. Since this image develops out of interaction with the environment, it reflects the judgements, and shortcomings


of the family and social setting. He feels the most important concern for growth is acceptance of the self.\(^{79}\)

In summary then, the major factors contributing to the development of self-esteem and self-acceptance, according to previous theorists, were:

1. the amount of respectful, accepting and concerned treatment that an individual receives from the significant other in his life,
2. a history of success,
3. experiences in accord with values and aspirations, and
4. the individual manner of responding to devaluation.

**Clinical Studies of Self-evaluation**

The following are some research studies concerning self-esteem, and self-acceptance.

The major empirical study of the antecedents of self-esteem related to the youth is that of Rosenberg. His investigation represents a significant step in explicating many of the social conditions associated with enhanced and diminished self-esteem.\(^{80}\)

Some of the findings related to self-esteem were: social class is


only weakly related and ethnic group affiliation is unrelated to self-esteem, thus it appears that the social context does not play an important role in interpreting one's own successes.  

In recent years psychiatrists and others have observed a relationship between the attitude toward the self and his attitude to others. Adler noted a depreciation of others in those who felt themselves inferior.  
Horney asserted that the person who does not love himself is incapable of loving others. Rogers said that the person who accepts himself will have better interpersonal relations with others.  

Berger's studies on self-acceptance, other acceptance have given definite guidelines for delineating the self-accepting individual and in demonstrating that there is a positive correlation between self-acceptance and other acceptances. Further to this, Omwake in her study, "The Relation Between Acceptance of Self and Acceptance of Others Shown by Three Personality Inventories," concluded that there is a marked relation between the way an individual sees himself and the way he sees others; those who accept themselves tend to be acceptant of others and feel others accept them. Those who reject themselves hold a correspondingly low opinion.

81 Ibid., p. 40.
82 A. Adler, op. cit., p. 29.
84 C. Rogers, op. cit., p. 302.
of others, and perceive others as being self-rejectant. 86

**Self-Acceptance and Adjustment Problems**

A number of clinical studies have positively correlated low self-acceptance with adjustment problems. 87, 88 A low self-concept has been one of the axiomatic assumptions of suicidologists. 89 Perry in 1961, in her doctoral dissertation found that those who showed the poorest adjustment patterns were also the lowest in self-acceptance. 90

In a study done by Farnham-Diggery in 1969, it was found that there was no simple relationship between self-evaluation and subjective life expectancy of suicidal and non-suicidal psychotic males; however it was found that the major value of the self is its utility or estimated

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goodness as a goal-achieving instrument. Self-concept was lowered by an inability to achieve a fixed goal and decreasing opportunity for goal achievement. 91

In her doctoral dissertation in 1967, concerning suicide and self-evaluation, Miller developed a symbolic interaction theory of suicide and then tested this framework using a tool she developed to measure attitude towards the self and others. She found that those who were suicidal, tended to be overcommitted to a hero-image that they could not attain, they felt they were to blame for their failures. She also found the suicidal person tended to be rigid and authoritarian in their thinking and prone to crises situations. 92

Two studies which relate directly to the investigators are those by Wilson in 1971, and Neuringer in 1973.

Wilson et al studied the severe suicide attempter and self-concept and concluded that there is a difference in self-concept between patients who attempt suicide and those who do not, and that an individual's concept of self, assessed prior to a suicidal act, is a highly effective predictor of that act. 93


In Neuringer's study, an attempt was made to gather data about self-appraisals from suicidal, psychosomatic and normal hospitalized patients and compare these to their appraisal of others. The investigator was interested in evaluating the common assumptions that:

a. a negative attitude toward oneself is a common condition for suicide, and that

b. these individuals view others more positively than themselves.

The results indicated that the suicidal individuals significantly rated themselves more negatively on the evaluative and potency factors than did the other subjects, including the other patients.94

These studies although concerned with self-concept and suicide did not specifically correlate self-acceptance with suicide and did not examine the age group fifteen to twenty-five years with which the present study is concerned.

In summary, self-theory indicates that within each individual there is a continual process of self-evaluation. Self-acceptance is one aspect of this valuing process which seems to be lower in suicidal individuals. The suicidal youth seems to perceive himself as 'one down' and when he compares himself to others, the possibility of closing the gap may seem to be impossible and suicide the only answer.

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Summary

The Literature reviewed in this chapter has shown that many factors contribute to the 'career' of a suicidal youth, not the least of which is how that youth feels about himself in relation to others.

Nurses are in a unique and envious position in the school, and the community to work with youths, at all stages of their lives. The researcher was interested in exploring these ideas further to add to the body of nursing knowledge concerning the youthful suicide attempter.
CHAPTER III

METHODOLOGY

Overview of Design

The problem that was addressed in this study was: do adolescents who attempt suicide have a level of self-acceptance that is different from other adolescents?

In order to answer this question two tests were used to measure self-acceptance. This measure was then obtained from a group of suicide attempters and from a matched group of non-suicide attempters. Since the suicide group was tested in the hospital emergency ward, a third group of youths was also tested from the population of medical emergency patients to control for the variable of hospitalization.

These tests results were then analyzed in order to determine whether there was a statistically significant difference in the levels of self-acceptance among the three groups.

Setting

The setting that was chosen for the study was the emergency ward of the Vancouver General Hospital. It was chosen because of the high number of suicide attempters who are admitted to the emergency ward.

The researcher wrote to the hospital's business and nursing administrators to request permission to use the hospital. Full details
of the study were given and after the medical committee examined the proposed study the researcher was appointed to the paramedical staff of the hospital for six months to collect the data. A copy of correspondence is found in Appendix A.

The data collection was carried out in the emergency ward in Vancouver General Hospital, between March 1973 and September 1973.

Group A (suicide attempters) and Group B (emergency) were administered the tests both while lying in bed and up in wheelchairs. Patients were often, because of lack of space, seen in corridors or large common waiting areas as the emergency ward was in the process of expansion and change. There were a number of distractive noises and activities surrounding the patients and tests were administered under less than ideal conditions.

As this hospital is a tertiary care facility patients may come from anywhere in the Province of British Columbia, however, most were from the Vancouver Metropolitan Area.

The Study Population

The total study population consisted of thirty-two youths. Twenty youths were drawn from the emergency ward, while twelve were chosen from visitors to the hospital. Two subjects in the third or control group failed to complete the Berger test which was administered second and so the final sample contained ten subjects in each group; five male and five female.

The sample was selected to meet the following criteria:
(i) ethical considerations (ii) physical capability, including orientation to time, place, and person (iii) between ages sixteen and twenty-five (iv) English speaking (v) consent of the patient's physician (vi) informed consent of the patient as defined by the Ad Hoc Committee on the Rights of Human Subjects.  

Most of the patients in the emergency unit were under a great deal of physical and emotional stress. This variable was uncontrollable and assumed to be a limitation to the study.

Tests

In this study self-report questionnaires were used to obtain information on the youths' feelings of acceptance of himself. The tests used were Berger's Scale of Self-Acceptance and the subscale of Self-Acceptance of the California Psychological Inventory. These tests were selected on the grounds that they seemed well suited to the purpose of the study; they offered a means of collecting data in a standardized way and valid comparisons could be made among groups. These tests were easy to administer and scoring was quickly accomplished.

The California Psychological Inventory

The first test given in this study was the California Psychological Inventory, developed by Gough in 1957 to devise brief, accurate and
dependable subscales for the identification and measurement of the variables chosen for inclusion in the inventory. The test is really made up of eighteen subscales each corresponding to one important facet of personality.

The test booklet contains 480 items. The eighteen subscales were addressed principally to personality characteristics important for social living. These subscales were:

dominance, capacity for status, sociability, social presence, self-acceptance, sense of well-being, responsibility, socialization, self-control, tolerance, good impression, communality, conforming, independence, intelligence, psychological-mindedness, flexibility and femininity.

For the purpose of this study only the self-acceptance subscale of thirty-four items was scored although the entire test was administered.

The California Psychological Inventory is essentially self-administering. Questions are printed in a twelve page reusable booklet. Answers were recorded on an answer sheet by the subject placing an "X" in the appropriate true or false box. Subjects also placed their code number on the answer sheet and filled in their sex and education level. Testing time was usually 45 minutes to one hour providing there were no interruptions.

Scoring of the special handscoring answer sheet was a straightforward task. The raw score for the self-acceptance scale was obtained by placing a scoring template on the answer sheet, and counting the X's that show through the holes. The California Psychological Inventory does

196 200 of these items originally appeared in the Minnesota Multiphasic Personality Inventory. (Copyright, 1943, by the University of Minnesota Press)

provide a profile sheet on which to plot all eighteen subscale raw scores but this procedure was not followed in this study.

Two reliability studies are reported with correlations of .72 or better. The validity of each scale is reported for this widely used test and further reinforced by a six page bibliography of studies using the California Psychological Inventory.

Berger's Self-Acceptance Scale

The second test administered was the Berger Scale of Self-Acceptance. The Berger scale of self-acceptance, other-acceptance is composed of two scales; one to measure attitude toward the self and one to measure attitude towards others, but it is administered as a single test. For the purpose of this study only the self-acceptance scale was scored. It was developed by Berger in 1952 using the Likert procedure. The self-acceptance scale is made up of thirty-six items and the acceptance of others scale of twenty-eight items. These items were selected from an initial pool of forty-seven statements on self-acceptance and forty statements on acceptance of others on the basis of an item analysis. The top and bottom twenty-five percent of a sample of two hundred were selected, and the difference between the mean scores of these criterion groups was used as an index of the discriminating power of the item.


All the items were based on Berger's definition of the self-accepting person which follows:

He defined the self-accepting person as:

1. One who relies primarily upon internalized values and standards rather than on external pressure as a guide for his behavior.

2. Has faith in his capacity to cope with life.

3. Assumes responsibility for and accepts the consequences of his own behavior.

4. Accepts praise or criticism from others objectively.

5. Does not attempt to deny or distract any feelings, motives, limitations, abilities or favourable qualities which he sees in himself, but rather accepts all without condemnation.

6. Considers himself a person of worth on an equal plane with others.

7. Does not expect others to reject him whether he gives them any reason to reject him or not.

8. Does not regard himself as totally different from others, "queer" or generally abnormal in his reactions.

9. Is not shy or self-conscious.¹⁰⁶

The response mode was a modified Likert type. The subject responds to each item by entering a one for "not at all true of myself," a two for "slightly true of myself," a three for "about half-way true of myself, a four for "mostly true of myself," and a five for "true of myself."

The score of any item ranges from one to five. For items expressing a favourable attitude toward self or others, a score of five is assigned

to a "true of myself" response, and down to a score of one for "not at all true of myself." The direction of the scoring is reversed for negatively worded items. After this adjustment has been made, the acceptance-of-self score is computed by summing the item scores for all items on the scale. A high score indicates a favourable attitude toward self or others.

Split-half reliabilities were obtained for five groups ranging in size from eighteen to 183. These were reported to be .894 or better by the Spearman-Brown formula.101

Several estimates of validity were reported at .897 or greater using the Pearson Product-moment correlation.102

According to Shaw et al this was the most carefully developed scale to measure attitudes towards the self found in the literature.103

Each subject had as much time as he wished to respond to a question. The following is a statement typical of an item on the questionnaire:

I realize that I'm not living very effectively but I just don't believe I've got it in me to use my energies in better ways.104

102 Ibid., p. 433.
103 Ibid., p. 433
104 A copy of the questionnaire is in Appendix C.
The test was mimeographed with no title so as not to bias results. Instructions were printed on the test which took approximately twenty minutes to complete.

**Administration of the Tests**

Three undergraduate nursing students were used to administer the questionnaires for the study. The researcher, by phone, would determine if there were suitable subjects for the study and if so would go to the hospital and approach the person directly. If the subject agreed to participate the research assistants would administer the tests and collect the completed questionnaires.

All subjects were introduced to the study by the researcher using the form in Appendix B. Care was taken not to mention suicide or self-acceptance so as not to influence the responses. Subjects were told that the study was concerned with attitudes people had towards themselves while in the emergency ward. All participating subjects signed a form consenting to complete the tests. Subjects were assured that they could discontinue participation at any time and that all answers would be strictly confidential. If subjects consented they were assigned a code corresponding to Group A, B, or C which they placed on the first test. The subject also filled in his sex, age and education level.

Completion of both tests usually took one hour or more depending on the person's reading ability and concentration span.
Analysis of the Data

A computer program was written using the Statistical Package for the Social Sciences on an I.B.M. computer. The parametric analysis of variance subprogram ONEWAY was selected to analyze the data.\(^\text{105}\) This ONEWAY technique is designed to test the premise that the several groups being compared actually do not differ and that all samples are from the same population.\(^\text{106}\)

The parametric F-test was chosen because it is more powerful than the non-parametric tests such as the Kruskal-Wallis and when it gives a high degree of significance the non-parametric test will also.\(^\text{107}\)

The parametric tests assume a normal population and approximately the same variance. This appeared to hold true for the data in this study.\(^\text{108}\) To validate this, Cochran's C and Bartlett's Box tests for homogeneity of variances gave a measure in excess of sixty-five percent (65%) probability.


In order to further probe the between group variance and test the null hypothesis, an extension of the ONEWAY F-test was used; the Scheffe method for multiple comparisons. This method has been termed the best by Turney et al to compute the necessary difference between group means to obtain significance.\(^{109}\) It provides an estimate of the size of the difference between groups and permits the testing of a series of comparative hypotheses at a standard level of confidence.

The Scheffe formula is as follows:

\[
d = \frac{2(K-1)(\text{tabled } F)(\text{MS}_{wg})}{N}
\]

where

- \(d\) = difference in group means required for significance
- \(K\) = number of groups
- \(\text{tabled } F\) = F-ratio from table F, using \(df=K-1, N_{+0+K}\)
- \(\text{MS}_{wg}\) = the size of each of the equal samples

\(^{109}\) Turney, op. cit. p. 133.
CHAPTER IV

DATA ANALYSIS AND RESULTS

The findings of the study will be examined independently in terms of the two hypotheses that were tested.

Sampling

Thirty-two subjects participated in the study, however, two subjects in Group C failed to complete the Berger test and so the final sample consisted of 30 subjects.

These subjects were divided into Group A (suicide attempters), Group B (emergency) and Group C (normal).

Demographic Data

Age

The age range of the sample was sixteen to twenty-five years. All three groups had a median age of twenty-one years.

Sex

Each group was made up of five male and five female subjects.

Education Level

The range of education level was from Grade 5 to four years University training. Table 1 presents a comparison of education level by groups.

Table 2 presents a summary of the raw scores obtained on the Berger and CPI tests by group, individual, sex and education.
TABLE 1

EDUCATION LEVEL OF SUBJECTS
BY GROUPS A, B, C.

<table>
<thead>
<tr>
<th>Degree Obtained</th>
<th>GROUP A</th>
<th>GROUP B</th>
<th>GROUP C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Secondary School</td>
<td>7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Post-Secondary</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Degree Obtained</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GROUP</td>
<td>AGE</td>
<td>SEX</td>
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<tr>
<td>A</td>
<td>22</td>
<td>M</td>
<td>Grade 12</td>
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<tr>
<td></td>
<td>18</td>
<td>M</td>
<td>Grade 10</td>
</tr>
<tr>
<td>Suicide</td>
<td>17</td>
<td>M</td>
<td>Grade 10</td>
</tr>
<tr>
<td>Attempters</td>
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<td>M</td>
<td>University</td>
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<tr>
<td></td>
<td>22</td>
<td>M</td>
<td>University</td>
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<tr>
<td></td>
<td>24</td>
<td>F</td>
<td>Grade 9</td>
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<tr>
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<td>25</td>
<td>F</td>
<td>Grade 12</td>
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<td>21</td>
<td>M</td>
<td>Grade 12</td>
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</tbody>
</table>
For the California Psychological Inventory as seen in Table 3, the group mean scores were as follows:

- Group A - mean score 14.8
- Group B - mean score 23.3
- Group C - mean score 24.8

As can be seen the suicidal group achieved overall a lower score on the self-acceptance subscale thereby indicating these individuals to possess a lower level of self-acceptance.

**TABLE 3**

**CALIFORNIA PSYCHOLOGICAL INVENTORY**

**COMPARISON OF MEAN AND STANDARD DEVIATION BY GROUP A, B, C.**

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>MINIMUM SCORE</th>
<th>MAXIMUM SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) SUICIDE</td>
<td>14.8000</td>
<td>3.1552</td>
<td>10.000</td>
<td>19.000</td>
</tr>
<tr>
<td>(B) EMERGENCY</td>
<td>23.3000</td>
<td>7.4543</td>
<td>9.000</td>
<td>32.000</td>
</tr>
<tr>
<td>(C) NORMAL</td>
<td>24.8000</td>
<td>4.8028</td>
<td>16.000</td>
<td>32.000</td>
</tr>
</tbody>
</table>
For the Berger scale of self-acceptance the mean scores by group as seen in Table 4 were as follows:

- Group A - mean = 74.6
- Group B - mean = 106.3
- Group C - mean = 111.5

As can be seen the mean score was much lower for the suicide attempters group than the two non-attempter groups, thereby indicating that Group A have a lower level of self-acceptance.

**TABLE 4**

BERGER SCALE OF SELF-ACCEPTANCE
COMPARISON OF MEAN AND STANDARD DEVIATION
BY GROUP A, B, C.

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>MINIMUM SCORE</th>
<th>MAXIMUM SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) SUICIDE</td>
<td>74.6000</td>
<td>30.3396</td>
<td>44.000</td>
<td>142.000</td>
</tr>
<tr>
<td>(B) EMERGENCY</td>
<td>106.3000</td>
<td>27.0311</td>
<td>64.000</td>
<td>149.000</td>
</tr>
<tr>
<td>(C) NORMAL</td>
<td>111.5000</td>
<td>26.4544</td>
<td>63.000</td>
<td>140.000</td>
</tr>
</tbody>
</table>
Data in Relation to Hypotheses

Hypothesis 1. There is no significant difference in the self-acceptance of a group of suicidal youths as compared to a group of non-suicidal youths, as measured by the Berger Scale.

The F ratio 5.090 as shown in Table 5 is greater than 3.35 which is the critical value of F at the 5 percent (0.05%) significance level for 2 degrees of freedom between groups and 27 degrees of freedom within groups.

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM OF SQUARES</th>
<th>DEGREES OF FREEDOM</th>
<th>MEAN SQUARES</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>7978.4375</td>
<td>2</td>
<td>3989.2187</td>
<td>5.090*</td>
</tr>
<tr>
<td>Within</td>
<td>21159.0625</td>
<td>27</td>
<td>783.6689</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29137.5000</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Statistically significant, $F_{.05}(2,27) = 3.35$
The F ratio of 5.090 for the above degrees of freedom is significant at 1.3 per cent. This means that there is more than one in a hundred chances that these samples were from the same population.

This analysis rejects the null hypothesis number one and shows that there is a significant difference among groups in self-acceptance as measured by the Berger Scale.

The data was further analyzed using the Scheffe method for multiple comparisons. Table 6 shows that:

1. When Group A (suicide) was compared with B (emergency) there was significance at the 1.7 percent level (1.7%) thereby showing it was unlikely these two samples came from the same population.

2. When Group A (suicide) was compared with Group C (normal) there was significance at the 0.7 percent (0.7%) level thereby showing it was unlikely that these two samples came from the same population.

3. When Group A (suicide) was compared with both Group B (emergency) and Group C (normal) there was significance at the 0.4 percent (0.4%) level thereby showing there was little chance that the suiciders and non-suiciders came from the same population.

4. When Group B (emergency) was compared with Group C (normal) there was significance at the 68.1 percent (68.1%) level thereby showing it was likely they came from the same population.

These conclusions further support rejection of the null hypothesis number one and suggest there is a significant difference in self-acceptance between suicide attempters and non-suicide attempters as measured by the
It is of interest to note item 4 which indicates as anticipated that the setting of Group B in emergency for a non-psychiatric problem does not significantly effect the Berger Self-Acceptance Score.

**TABLE 6**

**SCHEFFE TEST FOR GROUPS A, B, C ON BERGER SCALE**

<table>
<thead>
<tr>
<th>GROUPS COMPARED</th>
<th>T VALUE</th>
<th>DEGREES OF FREEDOM</th>
<th>T PROBABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A vs B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>suicide vs emergency</td>
<td>-2.532</td>
<td>27</td>
<td>0.017</td>
</tr>
<tr>
<td>A vs C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>suicide vs normal</td>
<td>-2.947</td>
<td>27</td>
<td>0.007</td>
</tr>
<tr>
<td>A vs B, C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>suicide vs emergency, normal</td>
<td>-3.164</td>
<td>27</td>
<td>0.004</td>
</tr>
<tr>
<td>B vs C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>emergency vs normal</td>
<td>-0.415</td>
<td>27</td>
<td>0.681</td>
</tr>
</tbody>
</table>
Hypothesis 2. There is no significant difference in the self-acceptance of a group of suicidal youths as compared to a group of non-suicidal youths, as measured by the California Psychological Inventory, subscale of self-acceptance.

The F ratio 9.849 as shown in Table 7 is greater than 3.34 which is the critical value of F at the 5 percent (5%) significance level for 2 degrees of freedom between groups and 27 degrees of freedom within groups. The F ratio for the above degrees of freedom is actually significant at (0.01%). This means there is less than one in one thousand chance that the above samples were from the same population.

This analysis rejects the null hypothesis number 2 and shows that there is a significant difference among groups in self-acceptance as measured by the California Psychological Inventory.

### TABLE 7

ANALYSIS OF VARIANCE OF GROUPS A, B, C. ON CALIFORNIA PSYCHOLOGICAL INVENTORY

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM OF SQUARES</th>
<th>DEGREES OF FREEDOM</th>
<th>MEAN SQUARES</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>581.6602</td>
<td>2</td>
<td>290.8301</td>
<td>9.849*</td>
</tr>
<tr>
<td>Within</td>
<td>797.3125</td>
<td>27</td>
<td>29.5301</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1378.9727</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Statistically significant F.95 (2,27) = 3.35.

The data was further analyzed using the Scheffe method for multiple comparisons.

Table 8 shows that:

1. When Group A (suicide) was compared with Group B (emergency) there was significance at the 0.2 percent (0.2% level thereby showing it was unlikely these two samples came from the same population.
TABLE 8
SCHENFTE TEST FOR GROUPS A, B, C.
ON CALIFORNIA PSYCHOLOGICAL INVENTORY

<table>
<thead>
<tr>
<th>GROUPS COMPARED</th>
<th>T VALUE</th>
<th>DEGREES OF FREEDOM</th>
<th>T PROBABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A vs B</td>
<td>-3.498</td>
<td>27</td>
<td>0.002</td>
</tr>
<tr>
<td>suicide vs emergency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A vs C</td>
<td>-4.115</td>
<td>27</td>
<td>0.000</td>
</tr>
<tr>
<td>suicide vs normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A vs B,C</td>
<td>-4.395</td>
<td>27</td>
<td>0.000</td>
</tr>
<tr>
<td>suicide vs emergency, normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B vs C</td>
<td>-0.617</td>
<td>27</td>
<td>0.542</td>
</tr>
<tr>
<td>emergency vs normal</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. when Group A (suicide) was compared with Group C (normal) there was significance at the 0.00 percent level (0.0%) thereby showing those two samples would not come from the same population.

3. when Group A (suicide) was compared with both B (emergency) and C (normal) there was significance at the 0.00 percent (0.0%) level thereby indicating there was no chance these two samples came from the same population.

4. when Group B (emergency) was compared to Group C (normal there was significance at the 54.2 percent level (54.2%) thereby indicating it was likely these two samples came from the same population.

These conclusions further support rejection of null hypothesis number two and suggest that there is a significant difference in
self-acceptance between suicidal youths and non-suicidal youths as measured by the California Psychological Inventory.

It is of interest to note as seen in item 4 that as anticipated the setting of emergency Group B had no significant effect on the subjects self-acceptance score on the California Psychological Inventory.

Conclusion

The findings of this study suggest that self-acceptance is highly correlated with the youthful suicide attempter and distinguishes him from all other youths by his low level of self-acceptance.
Summary

Youths who attempt suicide may have particularly low levels of self-acceptance. This factor is often overlooked in specific assessment and intervention measures to treat the suicidal youth. Nurses are in a unique position to intervene with the potentially suicidal youth as they are in close contact with them, both in the school and the community. Nurses, however, may have difficulty in recognizing the youth with poor self-acceptance. This exploratory study was undertaken in order to show that self-acceptance was a factor in the youth's suicide attempt by means of a simple screening procedure. The specific purpose of the study was to answer the question, 'Do youths between the ages of fifteen and twenty-five who have attempted suicide differ significantly in their level of self-acceptance as measured by the Berger Scale and the California Psychological Inventory?'

In order to answer this question two null hypotheses were posed:

1. There is no significant difference in the self-acceptance of a group of suicidal youths as compared to a group of non-suicidal youths as measured by the Berger Scale;

2. There is no significant difference in the self-acceptance of a group of suicidal youths as compared to a group of non-suicidal youths as measured by the California Psychological Inventory.
The problem was explored by administering the Berger Scale of Self-Acceptance and the California Psychological Inventory to three groups of youths: Group A consisted of youths seen in the emergency ward of a general hospital following a suicide attempt, Group B consisted of youths admitted to the hospital's emergency department for problems other than a suicide attempt and group C consisted of visitors to the emergency unit who met the study criteria.

Both tests were administered to each subject taking a total of one hour. On the basis of raw scores received an analysis of variance was done to determine if there was a difference in self-acceptance among the groups. It was found that the youthful suicide attempters had a significantly lower level of self-acceptance than the other two groups of non-suicide attempters.

Therefore, the null hypotheses were rejected.

Conclusions

On the basis of the findings of this study the following conclusions were made:

1. youthful suicide attempters do have a significantly lower level of self-acceptance than non-suicide attempters.

2. hospitalization for non-psychiatric problems does not significantly effect a youth's level of self-acceptance.

3. the stressful situation of the emergency unit does not seem to effect the youths' capabilities for completing a demanding task.
4. The Berger Scale of Self-Acceptance and the California Psychological Inventory subscale self-acceptance are useful tools in screening for low levels of self-acceptance which are positively correlated to suicide.

5. The Berger Scale is recommended for use as a screening measure as it is much shorter in length than the California Psychological Inventory and it provides reliable results.

**Implications and Recommendations**

The findings of this study imply that the majority of youthful suicide attempters have a low level of self-acceptance. Nurses and others who are in contact with youth should be alerted to watch for the youth who expresses negative feelings about himself.

The significant findings of this study suggest that further research be carried out to discover the following:

1. A longitudinal study should be carried out to ascertain how indicative this low level of self-acceptance is of a subsequent suicide attempt.

2. A future study might also determine whether there is some empirically measurable cut-off point in the level of self-acceptance that could be determined to be necessary before a suicide attempt is made.

3. How are the youths with low levels of self-acceptance who do not attempt suicide accounted for?
4. Does this low self-acceptance relate to other behavior adjustment problems such as drug addiction.

5. What specific intervention therapy might be used to raise the youths level of self-acceptance.  

6. Although other factors are present in the youth's desire to take his own life negative feelings about himself such as a low level of self-acceptance seems to be a major factor in the suicide attempt.

7. Therapy aimed at raising the level of self-concept and self-acceptance seems of vital importance in working with youths.

If further research supports the findings of this study a screening tool for nurses could be developed. The Berger Scale of Self-Acceptance adequately screens out the youth who is rejecting of himself, however, it does not determine why a suicide attempt is made. It is therefore recommended that an experimental study be undertaken in youths to discover if the level of self-acceptance can be specifically increased if they receive therapy subsequent to the suicide attempt. In this way prevention of further suicide attempts may be accomplished.


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BIBLIOGRAPHY

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APPENDICES
APPENDIX A

CORRESPONDENCE WITH

THE VANCOUVER GENERAL HOSPITAL
(Mrs.) C. Ann Westwood  
c/o University of British Columbia  
School of Nursing  
Wesbrook Building, #236  
Vancouver 8, B.C.  
December 1, 1972.

(Mrs.) Mary McBean  
Director of Nursing  
Vancouver General Hospital  
10th and Heather  
Vancouver, B.C.

Dear Mrs. McBean:

I am writing to you to request permission to use the patients of 
Vancouver General Hospital in an investigation which is an integral part 
of my education at the University of British Columbia.

I received a Bachelor of Science in Nursing degree from the 
University of Toronto in 1969 and am currently in the second year of the 
Masters of Science in Nursing program at the University of British Columbia.

The purpose and method of this investigation are attached. Specif-
ically the study will require access to 10 male and 10 female patients 
between the ages of 15 and 24. These patients will be seen within 48 
hours following contact with the Vancouver General Emergency department 
after a suicide attempt has been made.

The patients will be seen by the investigator, for the purpose of 
administering two psychological tests requiring approximately one hour. 
The investigator will also examine the patients chart. Permission will be 
sought from the private physician of the patient when necessary. The data 
collection period will extend from December to January 31, 1973.

Dr. Sleigh has given his written permission.

Your signature on the tear sheet below will indicate your favourable 
response to my request. If you require further information please 
suggest what information you need before making your decision. If per-
mission cannot be granted and you care to make the reasons explicit, it 
would be most helpful to me to know why.

Thanking you again, I remain,

Sincerely,

(Mrs.) C. Ann Westwood  
Graduate Student.
TO: Name
   Address

FROM: TITLE OF STUDY:

Permission is granted to conduct this study at ____________________________

________________________
Signature

The following information is needed to reach a decision: ____________________

Permission cannot be given because: ________________________________
TITLE OF INVESTIGATION:
A Comparative Study of the Self-Evaluation of Suicidal and Non-Suicidal Youth.

INVESTIGATOR:
(Ms) C. Ann Westwood, BScN (Toronto)

THESIS COMMITTEE
(Ms) Jaye Horrocks, S of N MS (California, S.F.)
(Ms) Barbara Lee, S of N MN (California, L.A.)
(Mr) John O'Connor, Ph.D. (Michigan) (Sociology)

THE PURPOSE AND METHOD OF INVESTIGATION ARE:

1. Purpose:
The general aim of the study is to compare a group of suicidal youths with a group of non-suicidal youths on measures related to their self-acceptance. This will be accomplished by using selected scales of the 'California Psychological Inventory' and the 'Berger Scale of Self-Acceptance': Other Acceptance.

It is felt that such a comparison will yield data of importance to the health professions.

It is also felt that the nurse with her unique position in relation to the patient will gain some knowledge from this study and then use this to aid her in the detection and prevention of youthful suicide.

2. Methodology:
1. The investigator will be in V.G.H. emergency department 2 days a week to select patients.

2. Written consent will be obtained from the patient or guardian. Private physicians will be notified. Staff physician and nurses will be notified.

3. The tests will be administered to the patient at his bedside.

4. The patient's chart will be examined for admission data, age, and sex.

5. All information will be confidential.
APPENDIX B

CONSENT FORM
My name is ANN WESTWOOD and I am a graduate nurse taking my masters in nursing science at the University of British Columbia. I am doing some research here in the emergency department on how people feel about themselves. This information will be useful to nurses working with patients and others. I would like you to complete two tests for me. This will take about one hour. You will be free to stop at any time, but I will be unable to use your answers unless you complete all the questions. Do not sign your name on the answer sheet. If you wish to participate I will give you a code number. Are you willing to participate? Do you have any questions?
APPENDIX C

BERGER SCALE

OF SELF-ACCEPTANCE
QUESTIONNAIRE

This is a study of some of your attitudes. Of course, there is no right answer for any statement. The best answer is what you feel is true of yourself.

You are to respond to each question by circling one of the numbers on the answer sheet that best describes how you feel.

1  2  3  4  5
Not at all true of myself  Slightly true of myself  About half-way true of myself  Mostly true of myself  True of myself

Remember, the best answer is the one which applies to you.

QUESTION  ANSWER

EXAMPLE: 1.

1. I'd like it if I could find someone who would tell me how to solve my personal problems.  
( 1, 2, 3, 4, 5 )

2. I don't question my worth as a person, even if I think others do.  
( 1, 2, 3, 4, 5 )

3. I can be friendly with people who do things which I consider wrong.  
( 1, 2, 3, 4, 5 )

4. I can become absorbed in the work I'm doing that it doesn't bother me not to have any intimate friends  
( 1, 2, 3, 4, 5 )
5. I don't approve of spending time and energy in doing things for other people. I believe in looking to my family and myself more and letting others shift for themselves.

(1, 2, 3, 4, 5)

6. When people say nice things about me, I find it difficult to believe they really mean it. I think maybe they're kidding me or just aren't being sincere.

(1, 2, 3, 4, 5)

7. If there is any criticism or anyone says anything about me, I just can't take it.

(1, 2, 3, 4, 5)

8. I don't say much at social affairs because I'm afraid that people will criticize me or laugh if I say the wrong things.

(1, 2, 3, 4, 5)

9. I realize that I'm not living very effectively but I just don't believe I've got it in me to use my energies in better ways.

(1, 2, 3, 4, 5)

10. I don't approve of doing favors for people. If you're too agreeable they'll take advantage of you.

(1, 2, 3, 4, 5)

11. I look on most of the feelings and impulses I have toward people as being quite natural and acceptable.

(1, 2, 3, 4, 5)

12. Something inside me just won't let me be satisfied with any job I've done—if it turns out well, I get a very smug feeling that this is beneath me, I shouldn't be satisfied with this, that this isn't a fair test.

(1, 2, 3, 4, 5)

13. I feel different from other people. I'd like to have the feeling of security that comes from knowing I'm too different from others.

(1, 2, 3, 4, 5)

14. I'm afraid for people that I like to find out what I'm really like, for fear they's be disappointed in me.
<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ANSWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. I am frequently bothered by feelings of inferiority.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>16. Because of other people, I haven't been able to achieve as much as I should have.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>17. I am quite shy and self-conscious in social situations.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>18. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>19. I usually ignore the feelings of others when I'm accomplishing some important end.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>20. I seem to have a real inner strength in handling things. I'm on a pretty solid foundation and it makes me pretty sure of myself.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>21. There's no sense in compromising. When people have values I don't like, I just don't care to have much to do with them.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>22. The person you marry may not be perfect, but I believe in trying to get him (or her) to change along desirable lines.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>23. I see no objection to stepping on other people's toes a little if it'll help me get what I want in life.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>24. I feel self-conscious when I'm with people who have a superior position to mine in business or at school.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>25. I try to get people to do what I want them to do, in one way or another.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>26. I often tell people what they should do when they're having trouble in making a decision.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>27. I enjoy myself most when I'm alone, away from other people.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
</tbody>
</table>
28. I think I'm neurotic or something. (1, 2, 3, 4, 5)
29. I feel neither above nor below the people I meet. (1, 2, 3, 4, 5)
30. Sometimes people misunderstand me when I try to keep them from making mistakes that could have an important effect on their lives. (1, 2, 3, 4, 5)
31. Very often I don't try to be friendly with people because I think they won't like me. (1, 2, 3, 4, 5)
32. There are very few times when I compliment people for their talents or jobs they've done. (1, 2, 3, 4, 5)
33. I enjoy doing little favors for people even if I don't know them well. (1, 2, 3, 4, 5)
34. I feel that I'm a person of worth, on an equal place with others. (1, 2, 3, 4, 5)
35. I can't avoid feeling guilty about the way I feel toward certain people in my life. (1, 2, 3, 4, 5)
36. I prefer to be alone rather than have close friendships with any of the people around me. (1, 2, 3, 4, 5)
37. I'm not afraid of meeting new people. I feel that I'm a worthwhile person and there's no reason they should dislike me. (1, 2, 3, 4, 5)
38. I sort of only half-believe in myself. (1, 2, 3, 4, 5)
39. I seldom worry about other people. I'm really pretty self-centered. (1, 2, 3, 4, 5)
40. I'm very sensitive. People say things and I have a tendency to think they're criticizing me or insulting me in some way and later when I think of it, they may not have meant anything like that at all. (1, 2, 3, 4, 5)
QUESTIONS

41. I think I have certain abilities and other people say so too, but I wonder if I'm not giving them an importance way beyond what they deserve.

42. I feel confident that I can do something about the problems that may arise in the future.

43. I believe that people should get credit for their accomplishments, but I very seldom come across work that deserves praise.

44. When someone asks for advice about some personal problem, I'm most likely to say "It's up to you to decide," rather than tell him what he should do.

45. I guess I put on a show to impress people. I know I'm not the person I pretend to be.

46. I feel that for the most part one has to fight his way through life. That means that people who stand in the way will be hurt.

47. I can't help feeling superior (or inferior) to most of the people I know.

48. I do not worry or condemn myself if other people pass judgement against me.

49. I don't hesitate to urge people to live by the same high set of values which I have for myself.

50. I can be friendly with people who do things which I consider wrong.

51. I don't feel very normal, but I want to feel normal.

52. When I'm in a group I usually don't say much for fear of saying the wrong thing.

53. I have a tendency to sidestep my problems.

54. If people are weak and inefficient I'm inclined to take advantage of them. I believe you must be strong to achieve your goals.

ANSWERS

(1, 2, 3, 4, 5)
<table>
<thead>
<tr>
<th>QUESTION</th>
<th>ANSWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 I'm easily irritated by people who argue with me.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>56. When I'm dealing with younger persons, I expect them to do what I tell them.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>57. I don't see much point of doing things for others unless they can do you some good later on.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>58. Even when people do think well of me, I feel sort of guilty because I know I must be fooling them-- that if I were really to be myself, they wouldn't think well of me.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>59. I feel that I'm on the same level as other people and that helps to establish good relations with them.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>60. If someone I know is having difficulty in working things out for himself, I like to tell him what to do.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>61. I feel that people are apt to react differently to me than they would normally react to other people.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>62. I live too much by other people's standards.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>63. When I have to address a group, I get self-conscious and have difficulty in saying things well.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>64. If I didn't always have such hard luck, I'd accomplish much more than I have.</td>
<td>(1, 2, 3, 4, 5)</td>
</tr>
</tbody>
</table>
APPENDIX D

COMPUTER PRINT-OUT
### CONTRAST COEFFICIENT MATRIX

<table>
<thead>
<tr>
<th>CONTRAST</th>
<th>SUICIDES</th>
<th>NORMAL</th>
<th>EMERGENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTRAST 1</td>
<td>1.0</td>
<td>-1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>CONTRAST 2</td>
<td>1.0</td>
<td>0.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>CONTRAST 3</td>
<td>1.0</td>
<td>-0.5</td>
<td>-0.5</td>
</tr>
<tr>
<td>CONTRAST 4</td>
<td>0.0</td>
<td>1.0</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

### POOLED VARIANCE ESTIMATE

<table>
<thead>
<tr>
<th>CONTRAST</th>
<th>VALUE</th>
<th>S. ERROR</th>
<th>POOLED VARIANCE ESTIMATE</th>
<th>T VALUE</th>
<th>D.F.</th>
<th>T PROB.</th>
<th>S. ERROR</th>
<th>SEPARATE VARIANCE ESTIMATE</th>
<th>T VALUE</th>
<th>D.F.</th>
<th>T PROB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTRAST 1</td>
<td>-8.5000</td>
<td>2.4302</td>
<td>-3.498</td>
<td>27.0</td>
<td>0.002</td>
<td>2.5597</td>
<td>-3.321</td>
<td>12.1</td>
<td>0.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 2</td>
<td>-10.0000</td>
<td>2.4302</td>
<td>-4.115</td>
<td>27.0</td>
<td>0.000</td>
<td>1.6172</td>
<td>-5.503</td>
<td>15.5</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 3</td>
<td>-9.2500</td>
<td>2.1046</td>
<td>-4.395</td>
<td>27.0</td>
<td>0.000</td>
<td>1.7209</td>
<td>-5.375</td>
<td>19.0</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 4</td>
<td>-1.5000</td>
<td>2.4302</td>
<td>-0.617</td>
<td>27.0</td>
<td>0.002</td>
<td>2.8042</td>
<td>-0.535</td>
<td>15.4</td>
<td>0.601</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TESTS FOR HOMOGENEITY OF VARIANCES

Cochran's C = MAX. VARIANCE/SUM(VARIANCES) = 0.6272, P = 0.027 (APPROX.)

BARTLETT-BOX F = MAXIMUM VARIANCE / MINIMUM VARIANCE = 3.016, P = 0.048 (APPROX.)
### One-Way Analysis of Variance

**Source**

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>581.6602</td>
<td>290.8301</td>
<td>9.849</td>
<td>0.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>29</td>
<td>797.3125</td>
<td>29.5301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>1378.9727</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>Minimum</th>
<th>Maximum</th>
<th>95 Pct Conf Int for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicides</td>
<td>10</td>
<td>14.8000</td>
<td>3.1552</td>
<td>0.9927</td>
<td>10.0000</td>
<td>19.0000</td>
<td>12.5429 TO 17.0571</td>
</tr>
<tr>
<td>Emergenc</td>
<td>10</td>
<td>23.3000</td>
<td>7.4543</td>
<td>2.3573</td>
<td>9.0000</td>
<td>32.0000</td>
<td>17.3675 TO 28.6325</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>20.9667</td>
<td>6.8957</td>
<td>1.2590</td>
<td>9.0000</td>
<td>32.0000</td>
<td>18.3918 TO 23.5415</td>
</tr>
</tbody>
</table>

#### Fixed Effects Model

| Fixed Effects Model | 5.4342 | 0.9921 | 18.9310 TO 23.0023 |

#### Random Effects Model

| Random Effects Model | 5.3929 | 3.1136 | 7.5698 TO 34.3635 |
**VARIABLE BERGER**

**CONTRAST COEFFICIENT MATRIX**

<table>
<thead>
<tr>
<th>CONTRAST</th>
<th>VALUE</th>
<th>S. ERROR</th>
<th>POOLED VARIANCE</th>
<th>ESTIMATE</th>
<th>T VALUE</th>
<th>D.F.</th>
<th>T PROB.</th>
<th>S. ERROR</th>
<th>SEPARATE VARIANCE</th>
<th>ESTIMATE</th>
<th>T VALUE</th>
<th>D.F.</th>
<th>T PROB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTRAST 1</td>
<td>-31.7000</td>
<td>12.5193</td>
<td>-2.532</td>
<td>27.0</td>
<td>0.017</td>
<td>12.4948</td>
<td>-2.467</td>
<td>17.8</td>
<td>0.024</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 2</td>
<td>-36.9000</td>
<td>12.5193</td>
<td>-2.947</td>
<td>27.0</td>
<td>0.007</td>
<td>12.7292</td>
<td>-2.899</td>
<td>17.7</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 3</td>
<td>-34.3000</td>
<td>10.8421</td>
<td>-3.164</td>
<td>27.0</td>
<td>0.004</td>
<td>11.3054</td>
<td>-3.034</td>
<td>26.6</td>
<td>0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTRAST 4</td>
<td>-5.2000</td>
<td>12.5193</td>
<td>-0.415</td>
<td>27.0</td>
<td>0.681</td>
<td>11.9604</td>
<td>-0.435</td>
<td>18.0</td>
<td>0.669</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TESTS FOR HOMOGENEITY OF VARIANCES**

\[ \text{Cochran's } C = \text{MAX. VARIANCE/SUM(VARIANCES)} = 0.3915, \ P = 0.618 \ (\text{APPROX.}) \]

\[ \text{Bartlett-Box } P = 0.0951, \ P = 0.903 \]

\[ \text{MAXIMUM VARIANCE} / \text{MINIMUM VARIANCE} = 1.315 \]
VARIABLE BERGEN

ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>D.F.</th>
<th>SUM OF SQUARES</th>
<th>MEAN SQUARES</th>
<th>F RATIO</th>
<th>F PROB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETWEEN GROUPS</td>
<td>2</td>
<td>7978.4375</td>
<td>3989.2187</td>
<td>5.040</td>
<td>0.013</td>
</tr>
<tr>
<td>WITHIN GROUPS</td>
<td>27</td>
<td>21159.0625</td>
<td>783.6689</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>29137.5000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GROUP               COUNT | MEAN   | STANDARD DEVIATION | STANDARD ERROR | MINIMUM | MAXIMUM | 95 PCT CONF INT FOR MEAN |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SUICIDES              10</td>
<td>74.6000</td>
<td>30.3396</td>
<td>9.5942</td>
<td>44.0000</td>
<td>142.0000</td>
<td>52.8964 TO 96.3036</td>
</tr>
<tr>
<td>EMERGENC              10</td>
<td>106.3000</td>
<td>27.0311</td>
<td>8.5480</td>
<td>64.0000</td>
<td>149.0000</td>
<td>86.9631 TO 125.6368</td>
</tr>
<tr>
<td>NORMAL                10</td>
<td>111.5000</td>
<td>26.4544</td>
<td>8.3656</td>
<td>63.0000</td>
<td>140.0000</td>
<td>92.5757 TO 130.4243</td>
</tr>
<tr>
<td>TOTAL                 30</td>
<td>97.4667</td>
<td>31.6976</td>
<td>5.7872</td>
<td>44.0000</td>
<td>149.0000</td>
<td>85.6306 TO 109.3027</td>
</tr>
</tbody>
</table>

FIXED EFFECTS MODEL

<table>
<thead>
<tr>
<th></th>
<th>COUNT</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>STANDARD ERROR</th>
<th>MINIMUM</th>
<th>MAXIMUM</th>
<th>95 PCT CONF INT FOR MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27</td>
<td>99.941</td>
<td>5.1110</td>
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</tr>
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</table>

RANDOM EFFECTS MODEL

<table>
<thead>
<tr>
<th></th>
<th>COUNT</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
<th>STANDARD ERROR</th>
<th>MINIMUM</th>
<th>MAXIMUM</th>
<th>95 PCT CONF INT FOR MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19</td>
<td>97.311</td>
<td>11.5315</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>