RISK FACTORS FOR SUICIDE IN ADOLESCENTS AND YOUNG ADULTS

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In Partial Fulfillment of the Requirements for the Degree Masters of Science in Counseling

By
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Suicide among adolescents and young adults has tripled over the last 30 years. The majority of research which has been conducted on this population has focused on suicide attempts rather than completed suicide. The determination of risk factors for completed suicide is essential in identifying adolescents and young adults at high risk for suicide, for purposes of clinical intervention. The present study compared information obtained in face-to-face interviews with parents of 15 young people aged 14-22 who committed suicide, to information gathered from interviews with parents of young people 14-22 who had never attempted suicide. The obtained information covered the following nine potential risk factor areas: 1) demographic information; 2) life events and precipitating factors; 3) depression and acting out behaviors; 4) family circumstances; 5) family history; 6) drug and alcohol history; 7) suicide history 8) social support; 9) personality traits. Suicide completers were found to be significantly different from controls on investigated characteristics in each of the nine risk factor categories. A combination of variables was selected by linear discriminant analysis as being the optimal set of variables for predicting
membership in the suicide group. The observed predictive equation included: 1) loss of a parent before age 12 to death or divorce; 2) change in the parental relationship including separation, divorce, or moving in with someone in the two years preceding the suicide; 3) no death of a close family member in the two years preceding the suicide; 4) no physical or sexual abuse in the two years preceding the suicide; 5) rejected by a family member in the week preceding the suicide; 6) presence of acting out behaviors; 7) being unassertive or unable to say no; 8) not being described as outgoing. It was concluded that the predictive equation needed to be cross validated on a larger population to test its usefulness in predicting completed suicide. Further investigation of the reverse direction of the predictor variable physical or sexual assault was suggested for further research.
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[Signatures]

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This thesis is dedicated to all of the young people in this study who took their own lives. My hope is that this research will provide information which will be useful in preventing other young people like them from dying before they have a had a chance to live.
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CHAPTER I.
INTRODUCTION

Background and Significance

The rising suicide rate among adolescents and young adults is a major problem and one which must be faced head-on by our society. Suicide among adolescents and young adults has tripled over the last 30 yrs (Nieger & Hopkins, 1988). Young people aged 15-24 are the only age group which has not had a decrease in mortality rate. Death by suicide accounts for the majority of the increase in adolescent mortality (Berman, 1985).

The suicide of even one person so young is especially tragic. Teenagers and young adults are our hope for the future, the bearers of the next generation. As stated by Kushner, "They each hold the possibility of life to all of the children they might one day give birth to, and to all of their future children to the end of all generations" (Klagburn, 1985, p. 13). It follows that the suicide of a person in his or her teens or early twenties means that in many crucial ways they have never really lived - never married, had a child, graduated from high school or college, or developed a career. Suicide is sometimes called the leading cause of unnecessary death (Maris, 1985). Nowhere is this
more true than with adolescents who do not really want to die, but are unable to see any other way out of an intolerable situation (Berman, 1985). For these young people, death by suicide is seen as an escape or a way to influence others who have not responded to their needs, the majority of the time without the realization that this is a permanent, irreversible "solution".

Five thousand young people between the ages of 15-24 die by suicide in the U.S. every year. Among this age group suicide is second only to accidents as the leading cause of death (Neiger & Hopkins, 1988). The number of deaths by suicide is undoubtedly underestimated, given the fact that the social stigma attached to suicide creates reluctance to categorize a death as a suicide unless there is no doubt about the surrounding circumstances. The coroner may wish to save the family the embarrassment and humiliation which accompanies death by suicide and this results in an underreporting or underclassification of suicide. The Suicide Prevention Center of Los Angeles estimates that up to 50% of all suicides are disguised as accidents (Toclan, 1975).

The determination of factors preceding suicide in young people is essential for determining lethality and preventing future suicides. The vast majority of studies which have investigated suicide in youth have focused on attempters rather than completers (Allen,
These studies have been useful in identifying many predictors for suicidal behavior in youth. However, the obtained results are not always generalizable to young people who complete suicide. The question of generalizability is further complicated by the fact that the majority of studies on young attempters are derived from institutionalized psychiatric populations and we do not know to what extent inferences can be made from these studies to the noninstitutionalized teen population (Sanborn, Sanborn, & Cimbolic, 1973). Studies on completed suicides among adolescents and young people are few, and the need for more data on this population has been well documented (Allen, 1987; Blumenthal & Kupfer, 1988; Neiger & Hopkins, 1988; Rotheram, 1987). Although various predictors and high risk traits have been identified, there is no one typical adolescent personality who kills him/herself (Berman, 1988) and a risk profile for adolescents has not yet been agreed upon (Bettes & Walker, 1986).

A single agreed upon risk profile for suicide in young adults and adolescents is probably too much to hope for. Suicide is an intensely personal act, which is complex and multidetermined (Berman, 1985). The complex nature of the act is further complicated and harder to pinpoint in the adolescent population whose suicides are often highly impulsive, spur of the moment.
acts, which are not as often thought out and prepared for as in the adult population (Sanborn et al., 1973). Current research on completed suicide is needed to determine the combinations of risk factors which characterize adolescents and young adults who succeed in taking their own lives. The impulsive nature of the act in this population makes it even more crucial that we identify any possible precursors, symptoms, and combinations thereof that lead to suicide. These combinations can be thought of as suicidal "lifestyles" (Maris, 1985) which counselors, teachers, and parents can be aware of or red flags that indicate suicidal intent.

Research undertaken to ascertain risk factors for suicide is difficult at best. The relative low incidence of events often leads to false positives in attempts to predict those at high risk for suicide. Additionally, the taboo nature of the subject results in reluctance on the part of researchers to question the surviving relatives of completed suicides. Although studies have shown that survivors of adult suicide may welcome research interviews and inquiries, the same assumption cannot be made in the case of adolescent suicide (Shaffer, 1974).

Psychological autopsy, which involves interviewing the families and friends of survivors, has been used recently in studies of adolescent and young
adult suicide (Shafi, Carrigan, Whittinghill, & Derrick, 1985). Shafi et al. (1985) noted that obtaining parental cooperation is known to be difficult but reported that 83% of the families contacted agreed to participate in their study. Survivors of a young adult or adolescent suicide need to talk about it and relive the details long after it happens and often exhaust those around them (Wolfle, 1986). An interview which is conducted sensitively and supportively may be a welcome chance to talk about a subject no one else wants to listen to anymore.

Statement of the Problem

The present study is designed to identify and describe teens at high risk for completed suicide by comparing and contrasting them with teens who have never attempted suicide. As suggested by Maris (1985) the focus is on examining the particular individual and situational factors which make some young people kill themselves. Information for known risk factors will be obtained from parents of young people aged 13-22 who committed suicide and will be compared to the same information gathered from parents of young adults who have never attempted suicide. The focus is on examining combinations of these risk factors in an effort to identify suicidal lifestyles which differentiate youths who kill themselves from those do not.
CHAPTER II.
LITERATURE REVIEW

Risk Factors

The available research on attempted and completed suicide in young adults and adolescents has determined risk factors or predictors of suicide which can be summarized using the following categories: precipitating events; personality traits; psychiatric symptoms or disorders (most notably depression); alcohol and drug abuse; family circumstances; family history; suicidal history including attempts, threats, and ideation; access to firearms; and demographic variables (Allen, 1987; Berman, 1985; Blumenthal & Kupfer, 1988; Neiger & Hopkins, 1988). Each risk factor will be covered with regard to available research as well as the implications for the present study.

Precipitating Events

Precipitating events are the crises or stressful circumstances which directly precede the suicide and are seen as "triggering" the act. The breakup of a love relationship has been found to be a strikingly common precipitating factor which distinguishes youth suicides from adult suicides (Greuling & DeBlassie, 1980; Holden, 1986). In a study comparing young people under age 30 to those over age 30 who had committed suicide, it was found that recent separation from or rejection by a loved one was significantly more common among the young
suicides (Rich et al., 1987). This loved one could be a boyfriend, girlfriend, peer, or a parent. Similarly, Brent et al. (1988) found that an argument with a parent differentiated suicide victims from suicide attempters who were psychiatric inpatients in their study of risk factors in adolescent suicide. Another common precipitating event in adolescent and young adult suicide is a disciplinary crisis, such as truancy, expulsion from school, recent arrest, or any other antisocial act for which the young person fears the consequences of shame, anger, or humiliation (Blumenthal & Kupfer, 1988; Holden, 1986; Neiger & Hopkins, 1988; Shaffer, 1974). Additional events which have found to be immediate precursors of suicide in the young are an unwanted pregnancy, and an experience of being raped, assaulted, or beaten (Holden, 1986).

In the present study, the immediate precipitating events of the suicide will be investigated as well as any major life changes which occurred in the young person's life in the two years before he or she committed suicide. These changes which occurred in the two years before the suicide have been called stressors (Rich et al., 1986) or negative life events (Blumenthal & Kupfer, 1988). Research on suicidal behavior in young people has supported the idea these stressors or negative life events such as a divorce or separation, a death in the family, a move to a new neighborhood, a
loss of a relative or friend to death or a change in location, a lowering of socioeconomic status, or a sudden onset of physical illness may all work to increase stress to an unmanageable level for a young person, which may eventually lead to suicide (Allen, 1987; Blumenthal & Kupfer, 1988; Neiger & Hopkins, 1988; Rich et al., 1986; Wodarski, 1987).

**Personality Traits**

Personality traits which have been found to be related to suicide in young people are aggression, impulsivity, and hopelessness (Blumenthal & Kupfer, 1988). Shafi et al. (1985) found that antisocial behavior (defined as fire setting, constant physical fights, shoplifting, and other aggressively impulsive acts) was significantly more prevalent among suicide victims age 12-19 years than among matched controls who were friends of the victims. Several studies also report that suicidal adolescents displayed increased rage or outward destructiveness towards others (Berman, 1985; Garfinkel, Froese, & Hood, 1982; Shafi et al., 1985).

The assessment of personality as a predictor of suicide has also been researched with regard to personality disorders as diagnosed by the DSM III-R. Antisocial personality has been shown to differentiate suicide victims under age 30 from those over age 30 (Rich, Young, & Fowler, 1986). Borderline personality
(Berman, 1985, Wade, 1987) or a combination of depressive disorder and a conduct disorder is seen as a highly significant predictor of suicide in young adults (Blumenthal, 1988, Berman, 1985) and adolescents (Shaffer, 1985). Inhibited personality was defined by Shafi et al. (1985) as: not sharing problems, extreme quietness, lack of close friends, loneliness, introversion and extreme sensitivy; and was found to be predictive of completed suicide in adolescents. The present study will determine whether the youth ever received a psychiatric diagnosis of personality disorder and what it was. It will also investigate the social aspects of what Shafi et al. (1985) called "inhibited personality", with regard to number of close friends, membership in social or school groups, and number of close family members. Additionally, information will be gathered on personality traits in an informal fashion by having parents give a general description of their son or daughter's personality and temperament.

**Psychiatric Symptoms**

The category of personality overlaps to some degree with psychiatric disorder/symptomatology. As noted above, borderline personality, antisocial personality, conduct disorder and affective disorder have been shown to be related to adolescent suicide. Affective disorder or depression has been studied at great length with regard to youth (Glaser, 1981; Maris, 1985; Miller et
al., 1982; Toolan, 1974). It is commonly thought that depression in adolescence, especially early adolescence, is masked by acting out tendencies like delinquency and truancy (Glaser, 1981; Toolan, 1974). A drop in school performance is often one of the earliest signs of depression among adolescents. In older teens and young adults, increase in use of drugs and alcohol, or sexual acting out may be symptoms of painful depression. These older adolescents and young adults may also exhibit classical "adult" symptoms of depression like changes in eating habits, sleep patterns, hygiene, and somatic symptoms such as fatigue, headache, and gastrointestinal disturbances (Toolan, 1974; Wodarski & Harris, 1987). Depression is also often accompanied by increased withdrawal, moodiness, and aggressive behavior in adolescents and young adults (Berman, 1985).

Depression occurs frequently in adolescence (Glaser, 1981). It is estimated by some experts that as many as half of all teenagers suffer from regular bouts of depression in varying degrees of severity (Neiger & Hopkins, 1988). Perhaps because of the varied symptomatology and frequent aggressive presentation of depression in young people, diagnoses may often be missed because the depression is "masked" by symptoms not commonly associated with clinical depression. This confusion over diagnoses and high base rate of depression in adolescents and young adults has resulted
in mixed findings on depression as a major risk factor for suicide in this group. Miller et al. (1982) found that depression accounted for only 5.7% of the variance in suicide attempts among a delinquent inpatient population. They also found that females were more likely to attempt suicide when depressed than males. Similarly, Bettes & Walker (1986) found that depression was more strongly related to suicidal behavior in girls than it was in boys.

Brent et al. (1988) found that suicide attempters in an adolescent inpatient population were significantly more depressed than completers. Rich et al. (1986) found that completed suicides in people over age 30 were associated with depression much more frequently than completed suicides in people younger than 30. Conversely, Maris (1985) did not find any difference in depression in comparing completed suicide in young people (13-29) to completed suicide in older ones (30+).

Despite the mixed findings in the body of research, there is widespread agreement that intense depression is a highly prevalent characteristic of suicidal youths (Wodarski & Harris, 1987). Neiger and Hopkins (1988) note that according to the American College of Emergency Physicians, the diagnosis of depression represents a major risk factor for the completion of teenage suicide. The present study will
investigate whether each young person was ever in the care of a counselor, whether he or she ever had an official psychiatric diagnosis of depression or was hospitalized for depression, the presence of acting out behaviors and impulsive or aggressive acts, and the presence of "classic" depressive symptomatology such as changes in sleeping and eating habits.

**Drug and alcohol abuse**

Frequent drug and alcohol abuse has repeatedly been shown to be a predictor of completed suicide in adolescents and young people (Maris, 1985; Rich et al., 1986; Shaffer, 1986; Shafi et al., 1985). Rich et al. (1986) reported that a major diagnostic finding in their study of completed suicide in people under 30 was the occurrence of more drug abuse than had been currently reported, significantly more often than it occurred in people over age 30. The authors agree with Miles (1977) who concluded that drug and alcohol use may be "the most important single factor in the increased suicide rate in the U.S" (p. 581). Similarly, Maris (1985) noted that drug and alcohol abuse differentiated completed suicide in persons in their teens and twenties from those over 30. Shafi et al. (1985) reported frequent use of alcohol or nonprescribed drugs in 70% of suicide victims, compared to 29% of matched controls (p <.02). Rotherman (1987) lists frequent drug and alcohol use as one of ten risk factors to be totaled in scoring
suicide potential for youths in imminent danger of suicide (a score of 5 or more indicates imminent danger of completed suicide). The present study will investigate drug and alcohol problems in the young people as a risk factor for completed suicide.

Family Circumstances

Family circumstances which have been found to be related to suicidal behavior in youth are: lack of communication within the family (Allen, 1987; Wodarski & Harris, 1987); intense marital discord and conflict (Garfinkel et al., 1982; Sanborn et al., 1982; Stanley & Barter, 1970); loss of a parent by death, separation, or divorce particularly before age 12 (Blumenthal & Kupfer, 1988, Stanley & Barter, 1970); and physical, sexual, or emotional abuse (Miller et al., 1972; Shafi et al., 1985). The present study will explore family constellation with regard to divorce, remarriage, blended family, loss of a parent before age 12, and nature of contact with parent after divorce.

Family History

A family history which includes attempted or completed suicide by a family member has also been shown to be highly predictive of suicidal behavior in youth (Blumenthal & Kupfer, 1988; Garfinkel et al., 1982; Holden, 1986; Maris, 1985; Shafi et al. 1985). Alcohol and drug abuse by parents is also an important risk factor (Garfinkel et al., 1982; Mckenry et al., 1983).
Allen (1985) reviewed the literature on youth suicide for young people ages 15-24 from the years 1980-1985 and states that "the review of all papers for the targeted period seems to indicate that alcoholism among parents may be an even more important factor in youth suicide than alcohol abuse by young people themselves" (p. 272). Lastly, a family history including medical problems and psychiatric illness has been found to be associated with youthful suicide (Garfinkel et al., 1982).

**Suicide History**

A history of suicide attempts, threats, and ideation are all commonly cited as risk factors for suicide in youth (Allen, 1987; Berman, 1985; Blumenthal & Kupfer, 1988). Sanborn et al. (1973) found that only 40% of adolescents aged 10-19 had made verbal threats prior to committing suicide and nine out of ten victims had no history of previous attempts. Conversely, Shafi et al. (1985) found that 85% of suicide victims 12-19 years has expressed suicidal ideation, 55% had made a suicide threat, and 40% had at least one previous suicide attempt. These findings are similar to those of Shaffer (1974) who found that 46% of children aged 10-14 had previously discussed, threatened, or attempted suicide. Maris (1985) reported that suicide victims in their teens and twenties were significantly more likely to have made multiple suicide attempts than victims over age 30. Research has been pointing more and more
frequently to suicide being on a continuum for youth from ideation and threats to attempt to completion, just as it is in adults (Brent et al., 1988; Garfinkel et al., 1982; Shafi et al., 1985). Rotherman (1987) counts more than one suicide attempt as a point in her suggested scoring of youths in imminent danger of suicide. This study will investigate suicidal history with regard to presence of ideation, threats, and previous attempts.

**Access to firearms**

Access to firearms has been found to be a predictor of suicide in young people (Boyd et al., 1986; Brent, 1988). Brent (1988) found that firearms were more likely to have been present in the homes of adolescents aged 19 or younger who completed suicide than the homes of adolescent attempters. Firearms were also the most common method of completed suicide and accounted for 55.6% of them. This result is borne out by the work of Rich et al. (1986) which reported that the use of firearms predominated in all the suicide victims in their study regardless of whether they were in their teens or twenties or over 40. Boyd and Mosciki (1986) studied suicide rates by five year age groups from 1933-1980 and found that the firearm suicide rate has climbed three times faster than the suicide rate for all other methods for 15-19 year olds and 10 times faster for 20-24 year olds. They concluded that
suicide by firearms accounts for the majority of the increase in the overall suicide rate for this age group. Holden (1986) notes that there has been a change among female suicide victims, they are using firearms more frequently as a means of suicide rather than a drug overdose. She quotes a study by the state of California conducted by Litman (1986) which estimated that one third of female and two thirds of male suicide victims shot themselves. The present study will report on the use of firearms by sex, but will not compare access to firearms in the home among completers and controls because of the personal nature of the question and the possible guilt feelings the issue could raise for the parents of completers.

Demographic Variables

Demographic variables known to be associated with youthful suicide are age, sex, and race (Nieger & Hopkins, 1988; Shaffer, 1973; Shafi et al., 1985). Shafi et al. (1985) found a ratio of 9 boys to 1 girl in their sample of suicide victims. Ninety five percent of victims were white and five percent were black. Sanborn et al. (1973) also found a ratio of 9 boys to 1 girl in suicide victims. Nieger and Hopkins (1988) noted that the risk of suicide increases from age 13-24.

Methodological Implications

The present study will not encompass all of the
potential risk factors for suicide because of the constraints which are imposed by the use of face-to-face interviews with parents who have survived a teenage suicide. The number of questions will be limited so that completion of the interview will take two or three hours and will not exhaust the subject. Parents will not be asked extensively about their own individual problems regarding alcohol and drug use, psychiatric history, medical problems, physical and sexual abuse, or having a gun in the house. This will be done in order to minimize the feelings of self-blame which might be generated through participation in the interview.
CHAPTER III
METHOD

Statement of the Problem

The present study addressed two problems. The first was the identification of predictors of completed suicide in persons aged 13-22. The second was the construction of a risk profile consisting of combinations of these predictors which characterized young people at high risk for completed suicide. This risk profile was created for use in clinical practice in the assessment of youths who are suicidal.

Hypotheses

Young people who have completed suicide will differ significantly from young people who have never attempted suicide on a number of factors. The factors assumed to be predictive will be encompassed by the following areas: 1) demographic variables; 2) depressive symptoms including classical symptoms and acting out behaviors; 3) family circumstances; 4) drug and alcohol use; 5) family history of suicide and counseling; 6) availability of social support; 7) life events in the last two years of life such as: moving out of the home, the family relocating, a death in the family, job change, or the breakup of a relationship, which also includes precipitating events which were defined as changes which took place in the week preceding the suicide such as being arrested, being
rejected, or being hospitalized because of physical or mental illness; 8) suicidal history and ideation of the young person; and 9) personality traits and counseling history including psychiatric diagnoses and hospitalization. Please see Instrumentation for a complete breakdown of each risk factor category and the items from the questionnaire which were included in them. An additional hypothesis was that the risk factors could be combined into an index which predicted completed suicide at a greater than chance rate. These research hypotheses were tested in null form as indicated in Chapter IV.

Subjects

The primary source of the sample of completed suicides was a population of present or former clients of the grief counseling programs of several Suicide Prevention Centers in the Bay Area. All parents who had a teenager or young adult aged 13-22 that committed suicide in the years 1982-1988 inclusive and had received grief counseling were contacted by mail and asked to participate. Thirty four families were contacted through the agencies; 5 had moved; 12 responded yes; 2 responded no; the remaining 14 did not respond. Three of the potential subjects who responded yes did not participate in the study. Two of them decided not to participate after being contacted by the author and scheduling an interview, at which time
they found themselves becoming very emotional in anticipation of the interview and decided to cancel. The third respondent could not be located at any of the numbers listed on the response sheet and was also dropped from the study. Six additional subjects participated in the study. Two were located through newspaper articles in which they gave in-depth information about their sons who had committed suicide, and four were referred by another subject who had participated in a suicide survivors support group.

The total number of parents in the completed suicide sample was 15. The subjects interviewed as controls were contacted through knowledgeable sources in the community. These subjects were parents of teenagers who had never attempted suicide. Parents of never attempters who were the same sex as a case, within 18 months of a case's age, and living in the same city or a bordering city, were located by contact people and asked to participate as controls. Interviews were immediately scheduled following consent to participate. There were 15 parents in the control sample.

Instrumentation

A structured interview covering the following information was conducted in a face-to-face interview with each subject:

1) demographic information
   a) age
   b) sex
c) city of residence

d) method of suicide

2) life events in the two years before the suicide including immediate precipitating events which occurred in the week preceding the suicide

a) family moved or youth moved out

b) separation divorce or other change in parental relationship such as moving in with someone

c) job change by parent

d) job loss by young person

e) switching schools, including graduating from high school and going on to college

f) sexual identity crises, having trouble coming to terms with homosexuality or forming much wanted heterosexual relationships

g) rejection by significant other

h) rejection by a family member

i) trouble with the law

j) release from medical or psychiatric hospital

note: a-j all have the possibility of being defined as precipitating events, if they occurred within one week of the suicide (for example g, h, i, and j in the present study).

3) depression as evidenced by:

a) hospitalization for depression

b) clinical manifestations

1. overeating

2. not eating at all

3. trouble sleeping

4. sleeping all the time

5. lack of hygiene

c) acting out behaviors

1. cutting school

2. suspended or expelled from school

3. having friends in the "wrong crowd"

4. running away from home

5. disappearing for long periods of time or staying out all night without calling

6. age-inappropriate sexual activity

7. shoplifting or stealing from family members

8. outward anger or violence towards others

9. reckless driving or car accidents

4) family circumstances including:

a) divorce

b) remarriage

c) nature of contact with parents

d) living with a stepparent

e) siblings and birth order

5) family history
a) suicide
b) counseling

6) drug and alcohol history of adolescent
   a) ever had a problem with alcohol
   b) ever in treatment for alcohol problem
   c) ever had a problem with drugs
   d) ever in treatment for drug problem

7) suicide history of teen including:
   a) attempts
   b) threats
   c) preoccupation
   d) knowledge of suicidal behavior in family
      or friends

8) social supports including
   a) number of friends
   b) number of close extended family members
   c) number of group memberships

9) personality traits of adolescent
   a) psychiatric diagnoses
   b) description of personality and temperament by
      parents

The information was recorded in written form on the
structured questionnaire. Please see Appendix A for
exact coding and construction of variables. There was
additional information gathered for purposes of rapport
building which was not addressed in the present study
(items 2, 13, 35, 39, 40, and 41).

Procedures

Several months were spent obtaining agreement
from the Suicide Prevention Centers to execute the
study through their agencies. The questionnaire was
reviewed, revised, and approved by both agencies.
Clearance concerning the ethics of the study was
obtained from the Institutional Review Board at
California State University, Hayward on January 30, 1989.

Letters were mailed by the grief counseling program in each of the agencies to all clients who were parents of young adults in the age range 13-22 who committed suicide in the yrs 1982-1988 inclusive, provided it had been at least one year since the death of their son or daughter. The letter explained the purpose of the study and the nature of some of the questions which would be asked. Subjects were asked to respond yes or no with regard to participating in the study and to return the response sheet to the Center in a stamped, addressed envelope which was provided. All parents who responded positively were contacted by the author and an interview was scheduled. The majority of the interviews were performed in the home of the parents (66%), with the remainder taking place at the author's home, or the grief counseling offices. Written informed consent was obtained prior to the interviews according to the requirements of the Institutional Review Board at the University. The interview consisted of 43 questions and took from one and a half to three hours. Subjects were informed they would be immediately considered for reentry into the grief counseling program, if not presently attending, if they felt the need at any time following the interview. Subjects were also asked if they had a private therapist they could
see should the need arise. The six subjects contacted by means other than involvement with grief counseling all had had extensive counseling and fell within the criteria for length of time since the suicide.

The interviews with the controls were scheduled immediately after effecting a match on age, sex, and family city of residence and were conducted similarly to the interviews in the completed suicide sample. There was one case in which an exact match could not be effected with regard to city of residence. A match was taken from a bordering county and was similar to the case in that the family had moved around a lot from city to city. The questions which were asked as precipitating events in the completed suicide sample were asked in the control sample as any events which happened to the subject's son or daughter in the week preceding the interview which were visibly upsetting to the young person. Questions about number of attempts, and method of suicide were omitted because they were not applicable in the control sample.

Analyses

Descriptive statistics were performed and are presented for completers. Controls did not differ from completers with regard to age, sex, or city of residence, due to the matching procedure. A chi-square test was performed to determine differences in cases and controls on all of the predictor variables which were
dichotomous. Means were tested for significance of
difference for all variables measured in interval form.
Linear discriminant analysis was performed to find the
best possible linear combination of variables to predict
membership in the completed suicide group. The DISCRIM
procedure available in SPSSPC+ version 3.0 was utilized
to perform stepwise linear discriminant analysis for all
variables which were found to be significantly
different ($p < .10$) for cases and controls (see Tables 2
and 3).
CHAPTER IV.
RESULTS

Descriptive Information

Age at suicide ranged from 14-22. Mean age at suicide was 18.10 for males and 19.20 for females.
There were five females who completed suicide, comprising 33.3% of the sample, and ten males (66.7%).
The ratio of males to females was 2:1 and is substantially lower than the male to female ratio of 9:1 found by Shafi (1985) and Shaffer (1974). The available literature suggests conflicting findings with regard to the ratio of males to females for completed suicide in the young adult population and reports male to female ratios from 2:1 to 8:1 (Holden, 1986). Rich et al. (1986) studied suicide victims under age 30 in San Diego County and reported a male to female ratio of 2.9:1. Shaffer (1974) reported a ratio of 2.3:1 in his study of suicide victims aged 12-14. It is possible that in the present study that a bias was introduced by those parents of suicide victims who agreed to be in the study. Two of the parents who had initially agreed to participate in the study and then decided against it, had sons. It is possible that if everyone had responded yes, the ratio of males to females would be higher, although it is unlikely it would be as high as 9:1.

There were five cases from Marin County, one from San Francisco County, one from Contra Costa County,
and the remaining eight were from Alameda County. Table 1 shows the percentage of males and females by method of suicide, presence of past suicide attempt, and number of past suicide attempts. Males and females were not shown to be significantly different using a chi-square test on any of the variables in Table 1. This may be due to the small sample size, especially for females. It is clear from Table 1, that the preferred method for males was firearms, and for females was drug overdose or drug overdose in combination with alcohol. The tendency for males to use guns and females to use an overdose has been widely reported (Shaffer, 1974; Wodarski, 1987). However, there is some suggestion in the body of literature that this trend is changing, that females are turning to guns more and more often (Holden, 1986). The present study points to the traditional view that males use violent, foolproof methods more often than females. However, the small sample size does not allow for more than speculation.

Table 1 shows that 50% of the males and 60% percent of the females who completed suicide had attempted to kill themselves before. This percentage is consistent with that of Shafi et al. (1985) who reported past suicide attempts in 40% of suicide victims aged 12-19. Psychiatric diagnosis is reported in Table 1 because there were no controls who had ever received a psychiatric diagnosis. It appears from Table 1 that
females were much more likely to be diagnosed as depressed and expressing suicidal ideation than males. This is consistent with findings that suicidal females exhibit "classic" or pure depressive symptoms more often than suicidal males (Holden, 1986). The total percentage of completers who had had psychiatric treatment was 46.7%. This is remarkably similar to the percentage of completers (45%) who had received psychiatric treatment in the study by Shafi et al. (1985). Table 1 also shows that males were much more likely to leave a suicide note than females. This is not consistent with the way male suicide is usually thought of in the literature, which is as an impulsive, unplanned act. The difference in presence of a note among males and females is not statistically significant and may be a result of the small sample size for females. The overall percentage of completers who left a suicide note was 46.7% and this is comparable to other reports (Rich et al., 1986; Shaffer, 1974;).

Differences on all Hypothesized Risk Factors

All proposed risk factors were tested with a chi-square analysis or analysis of variance to determine if they occurred more often in completers at a greater than chance level. All p values below .10 are shown in Tables 2 and 3. The rule of p < .10 was used to allow for the small sample size and the possibility that p < .05 would be reached with a larger N. The following
discussion will cover all risk factor categories and will refer to Tables 2 and 3.

**Family Circumstances**

As shown in Table 2 living with a stepparent at any time and losing a parent to death or divorce before age 12 was found to be much more common among completers. The other variables pertaining to family circumstances were number of marriages of the parent interviewed, living in a home broken by death or divorce, and nature of contact with the parent not in the home - which was defined as: 1) sporadic or nonexistent 2) continuous and regular. These variables were not found to be statistically significant but completers did have substantially more parents with 2 marriages, broken homes, and sporadic or nonexistent contact with the parent not living in the home.

Stanley and Barter (1970) found that parental loss to death or divorce before age 12 differentiated suicide attempters from never attempters in adolescents. They also found that threats of divorce or separation were more frequent among parents of the suicide attempting group. Since the work done by Stanley & Barter on discord in the parental relationship and early loss of a parent, these variables have been repeatedly posed as risk factors for suicide in young people. Shafi et al. (1985) did not find any category of divorce, separation, or stepparenting to be predictive of
completed suicide. Sanborn et al. (1973) found that in 10 suicide victims, 8 of the 10 families reported an atmosphere of discord and unhappiness prior to the suicide, however they did not define the nature of the familial discord. Holden (1986) also notes that divorce per se has not been consistently found to be a predictor but that family strife contributes. The finding that stepparents are more often present in the homes of completers may be a reflection of marital discord or turmoil, especially given the difficulty of raising adolescents in a blended family situation. The fact that early loss of a parent is significantly more common in completers in the present study may mean that early loss in combination with other factors predisposes adolescents to depression and eventually suicide as suggested by the literature (Sanborn et al., 1973).

**Family History**

A surprising finding in the present study was that the presence of suicidal behavior in family or friends was not found significantly more often in completers. This finding is in conflict with much of the research that has been done which points to suicide victims having much more history of suicide in their families and other important role models in their lives (Garfinkel et al. 1982; Maris, 1985; Shafi et al., 1985). There are two possible explanations for the lack
of a significant difference in the present study. The first is that parents of controls knew in advance that they were going to be interviewed about their son or daughter for a study of adolescent suicide. They had at least one day to think about all the adults and teenagers they knew who committed suicide. The question was asked in 2 parts: 1) was there anyone in their immediate family who had ever tried to kill themselves 2) was there anyone else close to the family or to the teenager who had ever tried to kill themselves (this could be friends or family members). There were 3 cases and 1 control family who reported a suicide or suicide attempt in their immediate family. However, a surprisingly high percentage (46.7%) of controls responded yes to the second part of the question. As proposed earlier, this may be due to anticipating this topical area of the interview. The second explanation offered is that a selection bias was introduced because those families with suicide histories of immediate family or close friends may have chosen not to participate in the study.

Alcohol and Drug Use

As shown in Table 2 completers were significantly more likely to have had a problem with alcohol and a problem with drugs. There were 2 completers and 1 control who had been in treatment for a drug problem. There was no one in either sample who had
received treatment for an alcohol problem. There is little discrepancy about the presence of drug and alcohol problems among suicidal teenagers in the body of research, both have been repeatedly found to be risk factors for completed suicide (Brent et al., 1988; Shafi et al., 1985; Rich et al., 1988).

School problems

School problems addressed were dropping out of high school and failing courses at school. Failing courses was originally considered as an acting out behavior. However, in conducting interviews, a pattern emerged wherein the youth was reported as having had increasing difficulty functioning at school, and often times ended up dropping out all together. This was largely due to depression, or overall unhappiness and inability to function, rather than acting out in an angry or impulsive manner. Dropping out was more common among the suicide victims - there were no controls who dropped out of school. Glaser (1981) points out in his discussion of depression in adolescents that difficulties in school are an early sign of depression in young people, especially males. This is borne out by the present study, especially since all 3 subjects who dropped out of high school were male. Although failing courses was not found to be significantly more frequent among completers, they were two times more likely to be failing courses than
Suicidal History/Ideation

Preoccupation with suicide was reported by parents for over 50% of the completers, and threats for 47% of them. There were no parental reports of either suicidal preoccupation or threats by parents for any of the young people in the control sample. This supports the contention by Shafi et al. (1985) that suicidal wishes, ideation, and threats bear a close relationship to completed suicide.

Life Events

Life events were defined as changes which took place in the last two years of life. Those life events which were found to be more common among completers are shown in Table 2. The family moving or the youth moving out of home was approximately 3.5 times more prevalent among completers. Nieger & Hopkins (1988) point out that recent loss of something or someone important, places an adolescent at higher risk for suicide. There is no doubt that the perceived double loss of home and family that comes from leaving home for the first time was a contributing factor for completers in this study. Completers also had a higher percentage of separation, divorce, or change in their parents' relationship occurring than controls did. This would seem to be an indication of the family turmoil mentioned under family controls.
circumstances as well as the potential for more loss or perceived loss which is proposed as contributing to suicide.

Job loss was also more prevalent among completers; this finding is consistent with those or Rich et al. (1986) that suicides under 30 had significantly more unemployment than suicides over 30. Sexual or physical abuse also occurred more frequently among completers. It was not reported for any of the controls. Holden (1986) reports that an experience of having been beaten up, raped, or assaulted is predictive of completed suicide. The present study lends support to the idea of physical or sexual assault as a risk factor for completed suicide in young people. Sexual identity problems were also present in completers, and again were not found at all in the control sample. A sexual identity problem was defined as 1) being homosexual as well as being unhappy and unable to accept and incorporate this homosexuality; 2) being unable to form much wanted and needed heterosexual relationships.

There is very little in the available body of research that addresses sexual identity as a risk factor for completed suicide in youth. The San Francisco Chronicle reported that 30% of suicides for young people aged 15-24 are gay (Eng, 1989). There is no question that forming satisfying sexual relationships is a developmental task of young adulthood, and one which is
not easily or painlessly accomplished, especially if one is homosexual. The present study points to irresolution of sexual identity problems as a contributing factor in completed suicide. Controls also had significantly more deaths in their families in the last two years. The losses which contributed to completed suicide in the present study did not seem to be recent deaths, but rather a move away from home and a loss of a parent to death or divorce before age 12.

**Precipitating Events**

Precipitating events were events which occurred within 1 week of the suicide. Rejection by a family member was defined as being thrown out of the house, or shut out by someone in the family. This was reported for four of the fifteen suicide victims. Two of the suicide victims had also been rejected by someone they were attracted to or in love with in the week before their suicide. This lends further support to research which has found rejection by a loved one to be a precipitating factor in completed suicide (Holden, 1986). A surprising finding was that four of the completed suicides had been released from a psychiatric or medical hospital in the week preceding their suicide. None of the parents of the controls reported any of the above events when asked if anything traumatic or upsetting had happened to their child in the last week. They reported things like being under stress from doing
too much, being sad about a sibling leaving or getting married, or being nervous about leaving home and their friends for college.

Counseling History

Significantly more completers than controls had participated in counseling and had been hospitalized for depression. This finding is in line with other research which has demonstrated that previous psychiatric treatment is a risk factor for completed suicide (Blumenthal & Kupfer, 1988; Rich et al., 1986; Shafi et al., 1985).

Personality traits

Information regarding personality traits was gathered by asking parents to describe their son or daughter in their own words. If an adjective or description was given by four or more parents it was entered as a variable under study. Table 2 shows that completers were more often described as having an inability to be assertive or to say no. This unassertiveness was also described by parents as the young person being unable to ask for what he needed or talk about and get help with troubling feelings. It is striking that there were no controls who were described as being unassertive or unable to say no. In fact, controls were very often (60% of the time) described by their parents as being outgoing. Completers were also characterized as more isolated than controls. These
findings are similar to those of Shafi et al. (1985) who reported a higher frequency of inhibited personality (defined as not sharing problems, extreme quietness, loneliness, and keeping things inside in completers than controls). Completers were also described significantly more often as being the "easy" child, the one who never gave his or her parents any trouble, the one the parent never had to worry about. This trait seems to be an extension of the unassertive, quiet young person who does not want to make waves, or ask for help at the expense of burdening someone else. There were no controls described as the "easy" one. Completers were also described as bright by their parents with much more frequency than controls.

Personality traits which were not found to be differentially distributed were: 1) sensitive; 2) creative; 3) considerate, having a lot of compassion for others; 4) having low self esteem. Low self-esteem was probably underreported in the completers in the present study because if a parent did not specifically define the child as having low self esteem it was not coded as yes, even though it may have been implicit in the description of the youth.

Depression and Acting Out Scores

A depression score was calculated for each subject by totaling the following variables: 1) ever
hospitalized for depression; 2) not eating; 3) overeating; 4) trouble sleeping; 5) sleeping all the time; 6) lack of hygiene. Each variable was coded as 0 for no and 1 for yes. The depression scores ranged from 0.00 to 5.0. Completers had significantly more hospitalization for depression, overeating and not eating enough, difficulty sleeping, and lack of hygiene than did controls. The mean depression score was significantly higher for completers as shown in Table 3. These results indicate that completers displayed many of the "classical" symptoms of depression before committing suicide.

An acting out score was computed for each subject by totaling the following variables: 1) cutting school 2) being suspended from school 3) running with the wrong crowd or friends whom the parent was doubtful about 4) running away 5) disappearing or staying out all night without calling 6) age inappropriate sexual behavior 7) shoplifting 8) outward anger or violence toward others 9) reckless driving 10) trouble with the law. Each variable in this series was also coded as 0 for no and 1 for yes. Completers were more likely to shoplift and get into trouble with law than attempters at a statistically significant level. The rest of the variables were consistently more frequent in completers but these did not reach a statistical level of significance of $p < .10$. The total score for acting
out behaviors ranged from .00 to 7. As indicated in Table 3 completers had significantly higher mean scores for acting out than controls. This finding is widely supported by existing research (Rich et al., 1986; Shafi et al., 1985).

A social support score was calculated by adding together number of close friends, number of close relatives, and number of group memberships. As seen in Table 3, this score was not statistically significant. None of the individual components of the score were differentially distributed among controls and completers so that the social support score and the individual components were not used in the subsequent linear discriminant analysis.

The set of variables for predicting suicide

Table 4 shows the combination of variables selected by the stepwise linear discriminant function analysis in which all variables found by the chi-square test or analysis of variance to be differentially distributed among cases and controls (see Table 2 and 3) were entered. The stepwise analysis was performed on 29 of the 30 cases, one case was dropped because of missing values on the depression score. The default rule of not entering any variable unless F was 1.0 or greater was used in selecting variables for the model. As shown in Table 4, the model generated by the last step of the analyses contains 8 variables. Eighty two percent of
the total variance is accounted for by the relationship of these eight predictor variables and their assignment to the completer or control group. This is determined by the squared canonical correlation as shown in Table 4. The canonical correlation is a measure of the degree of association between the discriminant scores and the groups, when squared it is the proportion of total variability explained by differences between the two groups.

The variables selected by the stepwise discriminant analysis as the best model are representative of family circumstances (loss of parent to death or divorce before age 12, and change in parental relationship including separation, divorce, remarriage, or moving in with someone), the acting out or impulsivity dimension of depression (acting out score), life events including one precipitating event (no family member died in last 2 years, no physical or sexual abuse in last two years, and rejected by family member in week preceding suicide), and the personality traits of being unassertive or unable to say no, and not being described as outgoing. The risk factor categories containing variables which were not selected for the analysis are: 1) alcohol and drug use; 2) school problem; 3) suicidal history/ideation; and 4) counseling/psychiatric history. Stepwise linear discrimination chooses the most efficient combination of
variables, so that with each addition of a variable to be tested in the model, every other variable in the model has the potential to be dropped if the new variable contains information which allows for more accurate classification into one of the two groups. The risk factor categories containing variables which were not selected for the predictive model are assumed to contain no new or additionally useful information in terms of classifying subjects into the completer or control group.

Linear discriminant analysis allows for the generation of a discriminant score with a probability of predicting membership in group 0 or 1 for each subject in the study. The equation is generated by multiplying the subjects score on each of the eight selected variables by the corresponding discriminant function coefficient and adding the constant. For example, for subject number 4, 

\[ D = (0.440)\times 0 + (1.10)\times 1 + (2.35)\times 1 + (-1.15)\times 0 + (1.78)\times 0 + (3.62)\times 0 + (-2.86)\times 0 + (-1.46)\times 0 -1.30 \] 

(all coefficients rounded to three places, See Table 4 for complete coefficients). This results in a discriminant score of 2.15 and the probability of membership in the suicide group is 0.999, given that score. All of the cases were correctly classified using the obtained discriminant score. The classification was tested by going back to the data and classifying each subject into group 0 (controls) or group 1 (completers).
using the discriminant scores which were developed for the sample.

As discussed earlier, it is not a surprise that early loss of a parent to death or divorce combined with acting out behaviors, an inability to be assertive and get one's emotional needs met, being rather introverted, and being rejected by a family member all characterize a young person at high risk for completed suicide. One puzzling finding is that not having a death in the family in the last two years is predictive of suicide. One possible explanation is that since a death in the family did not occur with much frequency in the sample of completers, they did not have the experience of having a loved one die, and so had never faced the crushing reality of death. This fits in with the idea that adolescents and young adults do not view death as permanent, and tend to romanticize it (Klagburn, 1985). The young adults in the completers sample had had no experience of a death of a close family member, which could work to diminish the romantic aspects of death, and bring home the devastating permanence of it. The second explanation offered is that since many of the completers committed suicide well over 2 years ago, in some cases as long as six years, parents did not accurately remember the death of some relative in their family. Because the question was asked with regard to any death in the family in the last two years, the
parents of controls did not have to remember back as far as the parents of completers.

The second finding which is counter intuitive is that not being physically or sexually abused is predictive of membership in the completer group. There were three completers who had been physically or sexually abused, and no controls. The reverse direction of the finding is most likely due to an intercorrelation among the variable measuring abuse and some other characteristics predictive of membership in the control group. It is impossible to separate the relative contribution or relationship of any one variable in the model, since the discriminant function is measuring the degree to which the combined variables account for membership.
CHAPTER V.
SUMMARY, CONCLUSIONS, LIMITATIONS, and RECOMMENDATIONS

Summary
The present study compared and contrasted information obtained from one or both parents of 15 young people aged 14-22 who had committed suicide to information from parents of young people aged 14-22 who had never attempted suicide. The never attempters were matched to the completers on age, sex, and city of residence. The information was obtained in face-to-face interviews and covered demographic information, family circumstances, drug and alcohol use, suicide history in the family, suicide history of the youth, depression, life events, precipitating events, and parental description of the youth’s personality. A combination of risk factors was found which accounted for 82% of the variance between completers and controls.

Conclusions
It is possible to identify a group of variables which are highly indicative of completed suicide in adolescents and young adults aged 13-22. The majority of the predictors in the equation generated by the present study are agreed upon in the available body of literature on suicidal behavior in this population.

Limitations
The generalizability of findings is limited due to the small sample size. Statistics have been reported
whenever $p < .10$ was observed, instead of at the usual acceptable level in research of $p < .05$, to make allowances for the small sample size. The small N's also prevented any analyses by sex. This is unfortunate because many studies have pointed to differences in predictors of suicidal behavior in males and females (Holden, 1986; Triolo, et al., 1984; Wade, 1987).

The study was also limited by the selection bias that occurs whenever one uses volunteers for research. Not only were subjects recruited on a volunteer basis, they were recruited from a population of parents who had participated in grief counseling because of their son or daughter's death. While volunteers were recruited in this manner to ensure they had the tools to cope with the interview, a bias is introduced by proceeding in this manner. Further limitations are introduced by using open ended questions to have parents describe their child and the way the suicide happened. Questions were posed as open ended out of respect for parents, and to minimize all feelings of blame or guilt which might be generated by the interview. The subjective nature of some of the questions may have acted to distort any common personality factors or events surrounding the suicide. Also, family history of mental illness and alcoholism was not asked about, and this is thought to be a major contributing factor to suicidal behavior (Friedman
et al., 1984; Garfinkel et al. 1982).

Next, the study is further limited because it was second-hand information. Parents may not have known exactly what was going on with their sons or daughters, especially with regard to alcohol and drug use or sexual behavior. In addition, for some of the parents it had been as long as 6 years since the suicide occurred and some of the information may have been incorrectly recalled, especially with regard to when things happened, as in checking for life events in the two years before their son or daughter committed suicide. A more complete psychological autopsy, in which interviews with friends, teachers, counselors, and a search of school and counseling records may have produced a different picture of the youth's life. Unfortunately the present study could not include interviews with everyone who had been a key person in the young person's life or a search of records because of financial and time restrictions.

Recommendations

It is recommended that the predictive model found in the study be tested on a larger sample to cross validate the usefulness of the discriminant score in accurately classifying suicide completers. The small sample size in the present study prevents any final conclusions about the model being made.

Two of the predictor variables which were life
events and selected for the model warrant further investigation. The first, a death in the family in the last two years needs to be further studied to determine if it is really operating as a risk factor or was a misclassification due to poor recall on the part of parents in the sample of completers. It may also be that being exposed to the death of a close family member and the grieving process makes one more aware of the permanent, irreversible nature of death and less likely to take one's life.

The second, not being physically or sexually abused should be checked for a possible association with some characteristic which predicts membership in the control group.

Another variable which emerged in the study under significant life events was the presence of problems with forming sexual relationships or accepting one's own sexual identity in completers. This has been given little attention in the literature.

Lastly, whenever possible analyses on suicide in young people should be performed by gender wherever the numbers are large enough, since the body of research points to large difference in males and females who are suicidal.
BIBLIOGRAPHY


Table 1. - Suicide Method and History for Completers

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Number of Previous attempts

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Presence of suicide note

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Psychiatric Diagnosis

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<td>Schizophrenia</td>
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Table 2.

Significant Differences between Suicide Completers and Controls

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</table>
Counseling/Psychiatric history:

| Youth participated in                          | 80.0 | 46.7 | 3.59 | 0.06 |
| Hospitalized for depression                    | 40.0 | ---  | 7.50 | 0.006|

Personality Traits:

| Not assertive, unable to say no               | 33.3 | ---  | 6.00 | 0.01 |
| Isolated                                      | 33.3 | ---  | 6.00 | 0.01 |
| The easy child, the good-natured one          | 26.7 | ---  | 4.61 | 0.03 |
| Bright or intelligent                         | 53.33| 20.0 | 3.59 | 0.06 |
| Outgoing                                      | 13.3 | 60.0 | 7.03 | 0.008|
Table 3
Significant Differences between Suicide Completers and Controls for Acting Out, Depression, and Social Support Scores

<table>
<thead>
<tr>
<th>Score</th>
<th>Completers (N=15)</th>
<th>Controls (N=15)</th>
<th>F</th>
<th>sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Acting out</td>
<td>2.47</td>
<td>2.26</td>
<td>.933</td>
<td>1.39</td>
</tr>
<tr>
<td>Depression</td>
<td>2.50</td>
<td>1.74</td>
<td>.400</td>
<td>.63</td>
</tr>
<tr>
<td>Social Support</td>
<td>7.07</td>
<td>4.56</td>
<td>11.00</td>
<td>6.94</td>
</tr>
</tbody>
</table>
### Table 4

**Variables selected for predicting membership in completer group**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized canonical discriminant function coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting out score</td>
<td>.43985</td>
</tr>
<tr>
<td>Loss of parent to death or divorce before age 12</td>
<td>1.0981</td>
</tr>
<tr>
<td>Separation divorce or other change in parental relationship</td>
<td>2.3525</td>
</tr>
<tr>
<td>Death in the family</td>
<td>-1.1542</td>
</tr>
<tr>
<td>Physical or sexual abuse</td>
<td>-2.8568</td>
</tr>
<tr>
<td>Rejected by family member in week before suicide</td>
<td>1.7777</td>
</tr>
<tr>
<td>Not assertive, unable to say no</td>
<td>3.6182</td>
</tr>
<tr>
<td>Described as outgoing</td>
<td>-1.4561</td>
</tr>
</tbody>
</table>

Multivariate statistics for complete model

Canonical correlation - .9047

Squared canonical correlation - .8185
Appendix A.

Questionnaire for use in interviewing parents

I. Introduction
Let me begin by saying that during our interview I will be asking you to tell me about your teenager as well as asking some very specific questions about you and your family. I would like to begin the interview by giving you a choice of which kind of question you want to answer first. Would you feel more comfortable beginning with specific questions or would you like to start by telling me about (Name) in your own words? (Proceed to part II if subject chooses specific questions). If subject wishes to begin with a general question ask question #43 then come back up to Part II.

II. Family constellation

Now I would like to ask you some questions about you and your family.

1. How many members of the family are living at home with you now? Tell me a little bit about each member and what they are doing (i.e. going to school, working, etc).
(List each member's age, sex, and brief description of where they are in their life).

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
</tr>
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<tbody>
<tr>
<td>Relation</td>
<td></td>
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<tbody>
<tr>
<td>Relation</td>
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<tbody>
<tr>
<td>Relation</td>
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<tbody>
<tr>
<td>Relation</td>
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<thead>
<tr>
<th>Name</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relation</td>
<td></td>
</tr>
</tbody>
</table>
Variable SIBORDER Code 1 - eldest
   2 - middle
   3 - youngest
   4 - only child

2. Who in your family are you closest to? What do you like best about that person?

   Relation ________________________
   Quality _________________________

3. How many times have you been married?

   ________________________

Variable NMAR code 1 - 1 marriage
   2 - 2 or more marriages

Variable BROKENH code 0 - 1 marriage no death or divorce
   1 - 1 or more marriages ending in death or divorce

4. Is (name's) biological father still living? Did they have contact? If not how old was name when contact stopped? If yes was contact sporadic or continuous?

   Parent alive ___ Yes ___ No
   Age when contact ceased ______
   AGEC code - age at death or divorce
   Contact ___ Continuous ___ Sporadic ___ None

Variable CONTACT code 1 - Continuous
   2 - Sporadic or none

Variable LOSS12' code - BROKENH eq 1 and AGEC lt 12, LOSS12=1
   AGEC Ge 12 or BROKENH eq 0, LOSS12=0

5. If not living how old was name when he died?
   _____ (record age)
6. Did name ever live with a stepparent?  
   ____ Yes  ____ No  
   Variable STEPP code 0 - No  
   1 - Yes  

7. Do you have any more children who are not living at home? Tell me a little about each of them and what they are doing. (List age and sex and brief description of each of them).  

   Name ___________________ Age ____  Relation________  
   Name ___________________ Age ____  Relation________  
   Name ___________________ Age ____  Relation________  

   Variable SIBORDR code - same as question #1  

8. How old was Name when he/she committed suicide?  
   _______  
   Variable AGE code - age at suicide  

III. Drug and Alcohol History - Thank you for answering those questions about your family. There is a great deal of evidence that suggests suicide is related to drug and alcohol use and abuse. I would like to ask some questions about the drug and alcohol history of (name).  

9. Would you say name had a problem with alcohol?  
   ____ Yes  ____ No  
   Variable ALCOHOL code 0 - No  
   1 - Yes  

10. Was name ever in treatment for alcohol problem?  
    ____ Yes  ____ No  
    Variable ALC TREAT code 0 - No  
    1 - Yes  

11. Would you say name had a problem with drugs?  
    ____ Yes  ____ No
Variable DRUGS code 0 - No
1 - YES

12. Was name ever in treatment for drug problem?
   ____ Yes  ____ No

Variable DRGTREAT code 0 - No
1 - Yes

IV. Suicide History - Thank you. Those are all the questions I have regarding drugs and alcohol. I would like to ask some questions now about suicide in your family as well as some specific questions about (name's) death.

13. What was helpful to you during this time?

14. Has anyone else in your immediate family ever tried to kill themself?
   ____ Yes  ____ No

Variable FAMILYH code 0 - No
1 - Yes

15. Was name aware of this?
   ____ Yes  ____ No

Variable AWAREF code 0 - No
1 - Yes

16. Is there anyone close to you and your family who has ever tried to kill themself? This may be a friend of the family or a relative in your extended family.
   ____ Yes  ____ No

Variable OTHERH 0 - No
1 - Yes
17. Was name aware of this attempt?
   _____ Yes _____ No
   
   Variable AWAREO code 0 - No
   1 - Yes

18. Had (name) ever attempted suicide before?
   _____ Yes _____ No
   
   Variable PREVATTM code 0 - No
   1 - Yes

19. How many times?
   
   Variable NPREVATT code - number of previous attempts

20. Did (name) seem preoccupied with suicide? By preoccupied I mean he/she talked about it, was
drawn to it on television, or in books, movies or music, wrote about it in poetry, journals,
diaries etc.
   _____ Yes _____ No
   
   Variable PREOCCUP code 0 - No
   1 - Yes

21. Did (name) threaten suicide to you or others that you know of?
   _____ Yes _____ No
   
   Variable THREAT code 0 - No
   1 - Yes

22. How did (name) commit suicide?
   
   Variable METHOD code 1 - gun
   2 - hanging
   3 - jumping
   4 - overdose on drugs
   5 - slashing wrists

V. Life events - Those are all the questions I have about the details of the suicide. Thank you for
answering them I know they are painful. The next questions I have are about the events which were
happening in your family in the 2 years before
(name) died. Research has shown that major changes which happen in adults lives affect their ability to handle stress. I would like to see if the same thing is true for teenagers. For this reason I would like to ask about changes in your family which happened in the two years before name's death. Do you feel ready to go on and answer these questions? Okay. For each of the following questions think about whether or not these events happened in your family in the 2 years before name died and answer yes or no accordingly.

23. Did your family move?
   ______ Yes ______ No

   Variable MOVE 0 - No
   1 - Yes

Note: also record youth moving out as a 1 for this variable

24. Did a brother or sister move out?
   ______ Yes ______ No

   Variable SIBMOVE 0 - No
   1 - Yes

25. Was there a separation or divorce?
   ______ Yes ______ No

   Variable SEPARATE 0 - No
   1 - Yes

Note: also record other changes in parental relationship such as moving in with someone as a 1 for SEPARATE.

26. Was there a death in the family?
   ______ Yes ______ No

   Variable DEATH code 0 - No
   1 - Yes

27. Did name breakup with a serious boyfriend or girlfriend?
   ______ Yes _______ Month _______ Year

   ______ No
28. Was there any other change which took place in your family?

_____ Yes Change

_____ No

Variable BREAKUP code 0 - No
1 - Yes

Variable JOBCHANG code 0 - No
1 - Yes

Note: this was reported for parents

Variable JOBLOSS code 0 - No
1 - Yes

Note: this was reported for young person

Variable MILITARY code 0 - No
1 - Yes

Note: Military or police service

Variable ABUSE code 0 - No
1 - Yes

Note: Physical or sexual abuse

Variable REJECT code 0 - No
1 - Yes

Note: this was reported as a precipitating event occurring within 1 week of the suicide and being defined as being rejected by a person the adolescent in love with or deeply attracted to.

Variable REJECTF code 0 - No
1 - Yes

Note: this was reported as a precipitating event occurring within 1 week of the suicide and being defined as being rejected by a family member.

Variable RELEASE code 0 - No
1 - Yes

Note: this was reported as a precipitating event occurring within 1 week of the suicide and was defined as being released from a medical or psychiatric hospital.
29. Did anyone in the family see a counselor?  
   Yes No
   
   Variable COUNSEL code 0 - No  
   1 - Yes

30. (If yes) Which family members saw a counselor?  
   For how long?  
   Who Dates  
   Who Dates  
   Who Dates  
   
   Variable COUNSELY code 0 - no young person never in counseling  
   1 - yes young person had counseling (Ever)

31. Was (name) hospitalized for depression or any other psychological reason? How many times?  
   Yes Reason  
   Number of times  
   No
   
   Variable DEPRESS code 0 - No  
   1 - Yes
   Variable NTIMES code number of times

32. Did (name) show any of the following symptoms of depression?  
   a. overeating Yes No
   
   Variable OVEREAT code 0 - No  
   1 - Yes
   b. not eating at all Yes No
   
   Variable NOTEAT code 0 - No  
   1 - Yes
   c. difficulty sleeping Yes No
   
   Variable TRBSLEEP code 0 - No  
   1 - Yes
d. sleeping all the time     Yes     No

Variable SLEEPFRQ code 0 - No
1 - Yes

e. lack of hygiene (bathing, dress, not caring about appearance)  Yes  No

Variable HYGIENE code 0 - No
1 - Yes

33. Sometimes teenagers show depression differently than adults. They show it by doing things which are inappropriate for their age and which often get them into trouble. Did your (son/daughter) have trouble in any of the following areas?

a. school - trouble at school in any of the following:

1. repeated cutting     Yes     No

Variable CUTTING code 0 - No
1 - Yes

2. suspensions     Yes     No

Variable SOSPENS code 0 - No
1 - Yes

3. being expelled     Yes     No

note: include expulsions with suspensions

4. failing courses     Yes     No

Variable FAILING code 0 - No
1 - Yes

5. spending time with the "wrong crowd" or friends you were worried or doubtful about     Yes     No

Variable WRONGC code 0 - No
1 - Yes

b. home - trouble at home in any of the following:

1. running away     Yes     No

Variable RUNAWAY code 0 - No
1 - No

2. staying out all night     Yes     No

3. disappearing for hours without calling     Yes     No
Variable DISAPPR code 0 - Yes on # 2 or 3 above
1 - No on both 2, 3 above

c. sexual activity (did you ever worry that (name) was too involved with sex for his/her age)?

_____ Yes _____ No

Variable SEXUALA 0 - No
1 - Yes

d. shoplifting or stealing from family members/friends

_____ Yes _____ No

Variable SHOPLIFT 0 - No
1 - Yes

e. trouble with the law
1. ever arrested _____ Yes _____ No
2. ever picked up by the police _____ Yes _____ No

Variable TRBLAW2 code 0 - no to 1,2 above
1 - yes to 1 or 2

3. accidents or reckless driving _____ Yes _____ No

Variable RECKLESS code 0 - No
1 - Yes

VI. Affective and personality description of teenager
Those are all the questions I have about life events and depression. The last thing that I want to ask you about is what your son/daughter was like. I would like to ask about his/her personality and emotions. Do you feel ready to go on and answer this last part?

34. How many close friends did (name) have? ____

Variable NFRIENDS code 0-9 = number of close friends
10 = 10 or more close friends

35. What were his/her friends like?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
36. Did (name) belong to a church group? school group? any other social group?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Variable NGROUPS code number of current group memberships

37. How many members of your extended family (i.e. cousins, aunts, grandparents) was name close to or spent a lot of time with?

Variable NRELATVS code 0-9 = number of close relatives
10 = 10 or more close relatives

38. What kinds of things did you and your son/daughter enjoy doing together?

39. What did you admire most about name?

40. What is your favorite story about him/her?

41. What have you learned which you would like to pass on to other people about going through an experience like this?
42. Tell me about Name in your own words (if not covered in Part 1). (I will also ask to see a photograph at this time and give the subject an opportunity to talk about the death if they wish).

Variable SENSITIV code
0 - No
1 - Yes

Variable UNASSERT code
0 - No
1 - Yes

Note: also includes unable to say no, to ask for things, to get emotional needs met

Variable CREATIVE code
0 - No
1 - Yes

Variable EASYONE code
0 - No
1 - Yes

Variable CONSIDER code
0 - No
1 - Yes

Note: Compassionate was also classified under considerate

Variable LOWSELF code
0 - No
1 - Yes

Variable ISOLATED code
0 - No
1 - Yes

Note: also includes alineated

Variable BRIGHT code
0 - No
1 - Yes
Variable OUTGOING code 0 - No
1 - Yes

Note: words like extroverted and personable were also classified under outgoing

All of the above personality traits were given by at least parents (rule for inclusion in study).

43. Is there anything else you would like to tell me?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Note: Numbers 8, 13, 18, 19, 22, 41 were not asked of controls
Appendix B.

June 3, 1989

Dear Grief Counseling Participant;

Hello. My name is Lisa Knudsen. I am working on my Master's in Clinical Counseling at Cal State University, Hayward. I am currently doing my thesis on teenage suicide. Alameda County Suicide Prevention has agreed to mail this letter to you explaining my thesis project and how you can help. This letter has been mailed to you by the center without my knowing your name.

I chose teenage suicide as my research topic because I am alarmed and saddened by the rising suicide rates among adolescents. I hope that by interviewing parents who have survived a teenage suicide I might learn some valuable information which counselors could use to identify teens at high risk for suicide. This information will be of use to counselors and to the community at large because it can be used to inform parents as well as professionals who work with teens about the warning signs for adolescent suicide. These warning signs can be used to take appropriate action and intervene to save the lives of these teens.

As part of my counseling career I have worked with both suicidal clients and with survivors of suicide on the hotline at Marin Suicide Prevention. I have engaged the help and support of the Marin and Alameda County suicide centers in contacting suicide survivors who came to them for grief counseling. They are looking forward to the completion of my study and the knowledge they will gain for their work with suicidal teens and suicide survivors.

I understand that you took part or are taking part in grief counseling at the Alameda County Suicide Prevention Center because you are a survivor of teenage suicide. I would very much like interview you as a part of my study. I would like to meet with you in person and ask you some questions about you and your family. It will take between 1 and 2 hours and would be arranged entirely at your convenience. If you agree to be contacted for an interview and fill in your name and phone number on the enclosed response sheet, you are agreeing to break confidentiality and identify yourself.
However, the interview would be completely confidential. Your name will not be used anywhere in the study results, nor will you be identified as an individual in any way.

If you would be willing to talk to me regarding an interview please mark the enclosed response sheet and fill in the phone number(s) where you can be reached. If you don't wish to be contacted by me mark the response sheet with a no. I have enclosed a self-addressed stamped envelope for returning the response sheet to the Center. I would appreciate it if you would mail the sheet as soon as possible.

Thank you very much for taking time to consider helping with this important research.

Sincerely,

Lisa Knudsen
Appendix C.

CALIFORNIA STATE UNIVERSITY, HAYWARD

Department of Educational Psychology

CONSENT FORM FOR PARTICIPANTS

In a study of Teenage Suicide:

Participant's Name: Date:

1. I hereby authorize Ms. Lisa Knudsen, a graduate student of the Educational Psychology Department at California State University, Hayward to gather information from me on the topic of teenage suicide.

   My participation will involve answering 40 questions in a face to face interview with Ms. Knudsen regarding my teenager who committed/attempted (as appropriate) suicide and our family.

2. I understand that all responses given during the interview will be completely confidential. My name will not be used on the written response form in the interview or in the study results. Only group results will be reported.

3. I understand that I may decline to participate or terminate participation at any time. I may refuse to answer any questions that I find to be offensive, embarrassing, or an invasion of my privacy.

4. I understand that I will be considered for short term counseling in the Grief Counseling program should I choose to reenter it and that I will be provided with the name and contact person of one other counseling program which will consider me for counseling immediately in the event that I should experience stress or a need for added counseling as a result of participating in this study.
5. I understand that I will be provided with summary findings from the study at my request.

6. If I have any further questions I understand that I can call Lisa Knudsen at 272-9188 or the Research advisor for the University at 881-3022.

Participant's Signature: Date:

________________________  ______________

I wish to be informed of the results of this study.

Yes ___ No ___

(If yes, please furnish address:)

________________________

________________________

________________________