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An examination of the correlates of suicidal ideation and behaviour among a sample of high school students.

Anne M. Gelinas
University of Windsor

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AN EXAMINATION OF THE CORRELATES OF SUICIDAL IDEATION AND BEHAVIOUR AMONG A SAMPLE OF HIGH SCHOOL STUDENTS

by

Anne M. Gelinas

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ABSTRACT

This quantitative-descriptive study examines the nature and prevalence of suicidal ideation and behaviour among a sample of 293 adolescents in a Roman Catholic High School in Windsor, Ontario. The sample of 157 males and 136 females was demographically consistent with the overall school population and was representative of all grade levels.

For the purposes of analysis, subjects were divided into three mutually exclusive groups: Nonsuicidals (those who reported no suicidal ideation or behaviour), Suicidal Ideators (those who had considered suicide but had never made an attempt), and Suicide Attempters (those who reportedly made one or more attempts). The variables under examination included demographics, depression, suicidal ideation, hopelessness, and stressful life events. Statistical analysis consisted of both bivariate and multivariate analyses in order to examine the correlates of suicidal behaviour.

The results of this study indicate that 47% of the total sample reported some degree of suicidal behaviour. Suicide attempters were found to comprise 10% of the sample while 37% reported having considered suicide an option. The four measures; depression, suicidal ideation, hopelessness and stressful life events were found to differentiate between and within group differences. Finally, suicidal ideation scores,

depression scores, alcohol usage and parent's marital status were revealed as the best predictors of suicidal ideation and behaviour in this sample of high school adolescents.

Implications of the study point to the clinical utility of school wide screening for suicidal ideation and behaviours among adolescent populations. Most importantly, the findings underscore the importance of primary prevention strategies in order to decrease the prevalence of suicidal thoughts and behaviours among adolescents. Recommendations for primary prevention initiatives and further research are discussed.

Dedication

To my children, Andrea and Chris,
who endured the struggle
and always understood.

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CHAPTER I

An Examination of the Correlates of Suicidal Ideation and Behaviour Among a Sample of High School Students

Suicide is a tragic and complex phenomenon that transcends socioeconomic, racial and cultural parameters and occurs in almost every age cohort across the life span (Shneidman, 1985). At minimum, suicide threatens the foundation and structure of a society and points to the disintegration of the social cohesiveness of a group (Durkheim, 1951). The very nature of the suicidal act creates an inherent diversity of societal reactions, from a view of sinful delinquency against the sanctity of life, to one of empathy for the desperation of the act. Of all forms of death, suicide provides the most blatant example of society's fear and negation of this violent form of mortality.

It has been estimated by the World Health Organization (1982), that over 1,000 people commit suicide every day around the world. Holinger (1980) suggested that violent deaths, (suicide, homicide and accidents) are the leading cause of death among all age groups in the United States. In Canada, suicide has been ranked as the fifth leading cause of early death, following motor vehicle accidents, ischematic heart

disease, respiratory disease, and lung cancer (Lalonde, 1974). More recently death from suicide was described as occurring more frequently than deaths resulting from kidney and liver disease or diabetes mellitus (Syer-Solursh, 1986).

Canadian statistics indicate that the overall rate of suicide is slowly decreasing. In 1983, the rate of suicide per 100,000 Canadians was 15.1, the highest rate recorded since 1960 (Statistics Canada, 1983). By 1985, the rate of suicide per 100,000 Canadians had dropped to 12.9, indicating the first downward trend in the rate of suicide in more than two decades (Syer-Solursh, 1986). Peters and Termansen (1982), calculated that between 1963 and 1976, a total of more than 2,000,000 years of life were prematurely lost to suicide in Canada. While these figures are indeed overwhelming, perhaps more disturbing, is the probability that statistical rates are grossly underestimated. Police, physicians and coroners are reluctant to classify a death as suicide, given the desire to minimize family distress and ensure confidentiality. Further, there is a strong possibility that many accidents (which are the leading cause of death in adolescence) are thinly-disguised suicides (Hersh, 1975).

The true magnitude of the incidence of suicide may indeed be an underestimation, however, the reported prevalence of suicidal behaviour among the population cannot be ignored. While statistics indicate a downward trend in the rate of suicide in the overall population, suicide among adolescents

has tripled in the last 20 years (Gispert, et al., 1985). Specifically, during the last two decades in the United States, suicides have increased 250% among females and 300% among males in the adolescent age group; from 4 to 12 per 100,000 since 1960 (U. S. Census Bureau, 1983). Currently, in the United States, 5,000 deaths per year are attributed to suicide among adolescents, with the ratio of male to female suicides estimated at 5:1 (National Institute of Mental Health, 1986). Canadian statistics follow similar trends to the United States. In Canada, suicide is second, only to automobile accidents, as the leading cause of death among adolescents and youth (O'Hara, 1979).

When considering the problem of suicide in adolescence, the number of completed suicides is of great concern. Of far greater concern, is the alarming number of attempted suicides among adolescents, which several researchers estimated to be as many as 50 to 150 for each completed suicide (McIntire & Angle, 1977; Tishler, McHenry & Morgen, 1981). Research by Garfinkel and colleagues (Garfinkel, 1987) suggests that there are 3,500 suicide attempts per 100,000 adolescents. While statistics indicate that males commit suicide more frequently than females, the converse is true with attempted suicides. Females generally attempt suicide in significantly greater numbers than do males. An estimated ratio of 3 to 5 female adolescent attempts to every one male adolescent attempt has been reported in the literature (Toolan, 1981). This gender

discrepancy may indicate that males tend to use more lethal methods such as guns or hanging, whereas females are more likely to use methods such as wrist-slashing or an overdose of medication in which a large margin of error exists and a higher rate of rescue occurs (Toolan, 1984).

Very often, attempts at suicide appear to be a "cry for help" in dealing with a problem that the adolescent perceives as insurmountable, rather than a clear desire to die (Pretzel, 1972; Smith, 1981). Of the one million people who reportedly attempt to kill themselves each year, 25,000 are successful in their attempt (Perr, 1979). While it is not possible to prevent every suicide, it may be possible to recognize the existence of common warning signs and precipitating crises that may preclude a fatal suicide attempt. The increasing prevalence of adolescent suicidal behaviour exacerbates the need for more effective strategies in identifying adolescents at risk.

Statement of Purpose

The study of suicide and suicidal behaviour has both perplexed and intrigued clinicians and researchers alike. Multiple strategies and methodologies have been developed over the past decades for its investigation with the ultimate goal of enabling clinicians to predict and, one hopes, to prevent suicide (Black, 1989). As yet, there is little knowledge on

how to assess the risk of suicidal behaviour among youths who have thoughts about death or attempting suicide.

Because suicide is the second most frequent cause of death among adolescents and young adults, it is essential for mental health professionals to actively engage in efforts to detect suicidal ideation and behaviour in adolescents and youth. Smith and Crawford (1986) have determined that only a fraction of young suicide attempters do in fact seek medical or professional attention. Information on the range of suicidal behaviours in normative populations could provide the missing links in detecting and preventing a suicide attempt.

Adolescents contemplate and attempt suicide for a variety of reasons. The literature suggests that a multiplicity of psychosocial and environmental variables impinge on the etiology of suicide, but findings are often contradictory. Simon and Murphy (1985) reported that most research on suicidal behaviour has utilized adult clinical populations and the underlying dynamics may differ considerably between adults and adolescents. The unique developmental characteristics of adolescence suggests that findings with adults cannot be transferred directly to adolescents (Trautman & Rotheram-Bovus, 1987). Further, no single theory sufficiently explains the causes of suicide and therefore, the predictive validity has been limited in scope (Tishler, McHenry & Morgen, 1981).

A review of the literature has identified that systematic studies of suicidal behaviour among adolescents are relatively

limited and have been plagued with methodological constraints (Wodarski & Harris, 1987). Generally investigators have utilized small clinical samples of surviving attempters thereby restricting the generalizability. Wright (1985) has suggested that there is a need for large-scale studies of non-clinical populations.

The purpose of this study is to assess the nature and prevalence of suicidal ideation and related behaviours among a sample of high school adolescents. Specific correlates of suicidal behaviour which may predict the likelihood of these behaviours among adolescents will be examined. The specific variables under examination are depression, hopelessness and stressful life events.

Rationale for the Study

To date, relatively few studies have examined the prevalence of suicidal behaviour and ideation among normative populations. This void in the literature has limited the generalizability of the current research findings. An examination of specific correlates evident in adolescent suicidal behaviour in a normative population will add to theory and provide enhancement of our knowledge of this phenomenon. Increased knowledge of the contributory factors associated with suicidality may facilitate the development of more effective strategies for primary prevention within our school system.

The escalating rate of adolescent suicide attempts among this vulnerable, at risk population, cannot be ignored. The literature suggests that children are increasingly becoming at risk for suicidal behaviour at much younger ages (Pfeffer, Lipkins, Plutchik & Mizruchi, 1988). Clearly, there is a need for more accurate and effective methods of identifying at risk populations. The identification and assessment of suicidality among adolescents will enhance the formulation of more appropriate intervention and treatment modalities.

CHAPTER II

Review of the Literature

A comprehensive review of the literature suggests that during the past decade, considerable effort has been made to investigate the phenomenon of adolescent suicide. Various research studies have consistently attempted to formulate a conceptual framework that would explain, and then predict the causal factors associated with suicidal behaviours increasingly exhibited among adolescents. While a limited number of studies have explored the possible correlates of suicidal behaviour, to date, no theoretical formulation exists that can adequately account for the prediction of suicide among adolescents (Wodarski & Harris, 1987). In fact, research findings have been less than encouraging, as similar studies have reported conflicting results (Siegel & Griffin, 1984).

Despite the limited generalizability of the research findings reported in the literature, efforts aimed at examining the dynamics of suicidal behaviour have greatly increased our knowledge of this phenomenon. According to several researchers (Arieti & Bemporad, 1978), suicidal behaviour in childhood differs markedly from that in

adulthood, and there is no agreed-upon "suicide-risk profile" for children and adolescents. The literature does identify several prevalent or characteristic features of adolescent suicidal behaviour. While suicide in adolescence has been described as an impulsive reaction to a stressful precipitating event, it is at the same time, usually the result of multiple social and psychodynamic factors that have influenced the adolescent's behaviour over a longer period of time (Kerfoot, 1980). This review of the literature will begin with an examination of the contemporary societal trends that impinge on the dynamics of the adolescent period.

Dynamics of Adolescence

Adolescence is a developmental period characterized by profound changes in physical and mental disposition (Elkind, 1984). Psychological and social developmental tasks make this an especially stressful period that is compounded by the adolescent's attempt to construct a personal identity in the midst of intense peer pressure to conform. Miller (1981) defines adolescence as a process that is critical to the development of autonomy. During this process of separating from the family to form a personal identity, the adolescent typically vacillates between dependence and independence and remains in a constant state of transition (Elkind, 1984).

Adolescents have typically been in transition as their developmental stage is between childhood and adulthood.

During adolescence, the youth experiences a new consciousness of self and has the need to reevaluate values (Konopka, 1983). This process of value clarification predisposes the adolescent to both peer and societal influence.

The social environment that exists for young people today, may be seen as an added source of conflict during this difficult developmental period. Data supporting the theme of loosening of contemporary family ties are seen in the increased rate of separation and divorce and the reorganization of the family as a social group (Eichler, 1983). The stereotypical image of the nuclear family form has been replaced with the rising prevalence of the single-parent family.

Doan & Peterson (1984) postulate that the cohesiveness of the family unit has been deteriorating. There appears to be a growing trend toward mobility among families that could result in a sense of rootlessness. This feeling may be fostered by a lack of long-term peer relationships, fluctuation of values due to differing local norms, and a general insecurity arising from the expectation that everything is subject to change (Allen, 1987). Durkheim (1951) was the first to postulate that a lack of social integration and social isolation might explain suicidal behaviour. Recent research has emphasized contemporary societal trends that further exacerbate the complexity of the adolescent period. Miller (1981) points to the widespread

breakdown in the nuclear family including the prevalence of parental separation and divorce. The weakening of the extended family and social ties, the greater mobility of families (intact and separated), and the increased availability of drugs, have all hurt the adolescent's ability to sustain meaningful relationships (Mishne, 1986). The consequences for teenagers are often unhealthy doses of competition, uncertainty, instability and alienation both from family and peers (Curran, 1986). Miller (1981) concludes that for today's adolescents, suicide becomes a common technique for conflict resolution.

While the literature identifies several common characteristics of adolescents who attempt or consider suicide, with each individual example of adolescent suicidal behaviour, there remains a wide variety of variables to consider. Precipitating events and predisposing factors which seem to contribute to suicidal behaviour include, depression, hopelessness, family discord, parental separation, divorce or death of a parent, school problems, or the break-up of an intense relationship with a peer (Contreras, 1981). Further, the experience of loss, either through death or separation, and rejection by both family and peers, seems to be a prevalent theme in the literature. While there remains a multitude of variables implicated in adolescent suicidal behaviour, this review of the literature will attempt to draw together some of the more salient features of adolescent

suicide and will be divided into four subsections, family environment, depression, hopelessness and stressful life events.

Family Environment

Clearly, the family unit, nuclear or modified family form, exerts a potential influence on the development of the adolescent. Beliefs, values, attitudes and methods of coping with potential life stressors are shaped within the context of the family environment. The parent's own level of adjustment is critical in determining the successful completion of the developmental tasks confronting the adolescent (Kerfoot, 1980). Ideally, the family unit acts as a primary support system that will facilitate the adolescent's successful transition from childhood to adulthood (Hawton & Catalan, 1987).

The organization and interaction of the family of the at-risk suicidal adolescent has been extensively reviewed in the literature. Generally, studies indicate that suicidal youth experience greater family disorganization than nonsuicidal youth. Meneese and Yutrzenka (1990) found that the severity of suicidal ideation among a nonclinical sample of rural adolescents was strongly predicted by certain characteristics of family environment, namely, family organization. That is, the less the extent to which order and organization were important in a family (in terms of structuring family

activities, financial planning, and making rules and responsibilities clear), the more serious the level of suicidal behaviour endorsed. These results are consonant with the findings of the Friedrich, Reams & Jacobs study (1982), the conclusions of Pfeffer (1981), and particularly the assertions of Cohen-Sandler, Berman & King (1982) implicating family disorganization as a significant factor in the manifestations of suicidal ideation. Further, several studies have demonstrated a relationship between absence of parental support and adolescent suicide attempts (Peck, 1987; Kaplan, 1980; Maris, 1981). Friedrich et al. (1982) found that lack of concern and familial support were associated with suicidal ideation in a junior high school sample. Similarly, Asarnow, Carlson & Guthrie (1987), in their sample of 8 to 13 year-olds, found that children who thcught of and attempted suicide tended to perceive family environments as unsupportive and stressful. In their study, perceptions of the family environment appeared to be the strongest predictor of suicidal behaviour.

Disturbed family functioning and the stress that disordered interaction produces has long been associated with behavioral and emotional difficulties in children and adolescents (Kerfoot, 1980, p. 339). Pfeffer (1986) concludes that negative, chaotic family environments have been proposed as risk factors for depression and suicidal behaviours in children. Typically, children who attempt suicide, see their

families as less cohesive, higher in conflict, and less controlled than do nonsuicidal children (Asarnow, et al., 1987).

Family conflict characterized by anger, rejection and communication problems are commonly present in families of suicidal adolescents (Abraham, 1978). Rejection of the adolescent is prevalent among the histories of many adolescents, as parents react with denial when confronted with the problems their children present (Mishne, 1986). Senior (1988) further identifies the typical family's response to suicidal behaviour among their adolescent as "disengaged". Frequently, adolescent suicide attempters are dismissed as attention seeking malcontents and their emotional distress is often underestimated (Curran, 1986).

Parental loss is another aspect of family structure and environment that correlates with suicidal behaviour in adolescents. Kerfoot (1980, p. 341) explained that "loss" can be in terms of death, desertion or separation from a significant person, or the anniversary of such an event. Family histories of suicidal adolescents have revealed a high incidence of depression and suicidal behaviour in parents and family members (Maris, 1981; Goldney, 1981; Holinger, 1978; Kosky, 1983; Meyers, Burke & McCauley, 1985; Toolan, 1984). In a study of 108 adolescent suicide attempters, Tishler (1981) found that 22 percent of the adolescents had experienced recent suicidal behaviour in a family member and

20 percent had experienced a recent death of a friend or relative prior to their attempt. Similarly, McKenry (1982) reported a higher incidence of suicide attempts among the mothers of suicidal adolescents as compared with nonattempters. It has been proposed by these authors that suicidal behaviour among family members may serve as a model and offer to the cognitively immature adolescent a readily available solution to one's problems.

Indeed, a variety of family problems and characteristics have been presented in the literature as typical of suicidal adolescents. Long standing family difficulties characterized by alcoholism, physical and sexual abuse, disengaged or emotionally rejecting parents, dysfunctional communication patterns as well as parental history of depressive illness and suicidal behaviour, have all been identified by various researchers as family factors that contribute to adolescent suicidal behaviour.

Depression

The most frequently cited variable associated with adolescent suicidal behaviour is depression. Curran (1986) has stated that adolescents quite commonly experience mild depression as part of the maturation process. Depression becomes of critical concern as a sign of suicidal thinking by virtue of its severity and persistence over time (Nichtern, 1982). While depression might appear to be a correlate of

suicidal behaviour, researchers have stressed that not all suicidal persons can be identified by their degree of depression (Friedrich, 1982). McGuire (1983) warns that while suicide and depression are not synonymous, depression is still the best indicator of potential suicide.

Difficulty exists in establishing inclusive criteria for identifying depression in adolescents. The greatest problem has been that most measurement instruments that have been utilized to measure depression in adolescents were based on adult symptomatology (Kaplan, 1984). Adolescents may not manifest depression in easily recognizable forms. Whereas depression in adults is evidenced by apathy, somatic complaints and lethargy, in adolescents it may be more concealed. For adolescents, evidence of depression may not be more than an inability to concentrate on school work or somatic complaints such as fatigue, headaches or stomach aches. In the school setting, a decline in academic performance, acting-out behaviours or a withdrawal from peers and extracurricular activities may be indicators of depression (DenHouter, 1981). Due to the various symptoms that may be manifested in depressed adolescents, and the increased evidence of the association between depression and suicidal behaviour, there is a critical need for more precise evaluation measures for adolescent depression in order to facilitate the identification of at-risk adolescents.

A number of studies have examined the symptoms that accompany suicidal thoughts and acts in adolescent population and have found that depressive symptoms predominate in youth who manifest suicidal behaviours (Bettes & Walker, 1986; Crumley, 1982). Carlson and Cantwell (1980) reviewed a clinical inpatient population of children and adolescents and reported that 88.9 percent of children meeting the criteria for affective disorders also expressed suicidal ideation. Similarly, a study by Tishler, et al. (1981) of 108 adolescents who attempted suicide over a two year period found evidence of depressive symptomatology such as sleep disturbances, changes in eating patterns, mood variations, and weight change in nearly all patients. More recently, Rosenstock (1985) found that depression accounted for 42 percent of the presenting problems of the 900 adolescents he studied, and was highly correlated with suicidal ideation and suicide attempts.

The important relationship between feelings of depression and suicidal ideation in children and adolescents previously reported by Carlson and Cantwell (1982) and Pfeffer et al. (1982) is reconfirmed by a more recent study by Kosky, Silburn & Subrick, (1986). These researchers found that more than half of the 628 children and adolescents sampled who scored positive for suicidal ideation also scored positive for symptomatic depression. Similarly, Robbins and Alessi (1985) found a strong relationship between depressed mood and

suicidal behaviour in hospitalized adolescent psychiatric inpatients.

Clearly, while a preponderance of research has examined the relationship between depression and suicidal behaviour in adolescent clinical populations, generalizations from these studies to the general high school adolescent population would be premature. Investigations of the prevalence and characteristics of suicidal adolescents within normative populations has recently been undertaken by several researchers. Simons and Murphy (1985) completed a study of high school students in which 32 percent of the males and 46 percent of the females reported that they had considered suicide. Moreover, in a study of 313 high school students in the Midwest, Smith and Crawford (1986) reported that 62.6 percent of their sample reported some degree of suicidal ideation or action, including 8.4 percent who had actually made a suicide attempt. In a random sample of 360 high school students who completed an anonymous survey, 60 percent reported having suicidal thoughts and 9 percent of those students had made one or more attempts to kill themselves (Friedman, Asnis, Boeck & DiFiore, 1987).

Although researchers are beginning to examine the prevalence of suicidal behaviour among adolescents in the general population, relatively few studies have explored the possible correlates of adolescent suicidal behaviour. In an effort to examine the prevalence of depression among high

school students, Paton and Kandel (1978), found that 38 percent of the adolescents in their sample of 8,000 scored medium and an additional 35 percent scored high on a depression self-rating scale. More recently, Kaplan, Hong & Weinhold (1984), using a self-report questionnaire, found that among 385 junior and senior high school students, 77.9 percent were not depressed, 13.5 percent were mildly depressed, 7.3 percent were moderately depressed and the remaining 1.3 percent were seriously depressed. This study also found that 23.8 percent of the adolescents expressed some degree of suicidal ideation.

Depression in adolescents concerns mental health professionals because it is also associated with other variables implicated in suicide. Grueling and DeBlassie (1980) studied statistics from several large cities in the United States and found that 50 percent of teenagers who had suffered from depression and had committed suicide also had a history of moderate to severe drinking and drug abuse. Similarly, Pfeffer, Newcorn, Kaplan, Mizruchi & Plutchik (1988) analyzed the records of 200 adolescent psychiatric inpatients and found that among both males and females, major depressive and alcohol abuse disorders were positively associated with the severity of suicidal behaviour. In a nonclinical population study of high school and college students, Wright (1985) found that suicidal adolescents were three to six times more likely than their classmates to report

drinking or drug abuse problems. Substance abuse has been found to be not only significantly associated with adolescent suicide but a serious symptom contributing to increased suicidal risk and more medically serious attempts (Robbins & Alessi, 1985). Grueling and DeBlassie (1980) have stated that alcohol and drug abuse; defense mechanisms used to combat depression, may lead to loss of control over suicidal impulses.

Hopelessness

Hopelessness, a state of negative expectancies, has been shown to be an important precursor to suicide. Suicidal hopelessness often involves no perceived alternatives to suicide, rigid and dichotomous thinking, or "tunnel vision". Beck and Weishaar (1990) postulate that the relationship between hopelessness and suicide was initially inferred by factor analysis studies of the Beck Depression Inventory. The studies of Beck (1991) reveal that hopelessness is a better predictor of suicide, suicidal ideation, or the wish to die than is depressive illness.

While hopelessness has been frequently considered to be a construct of depression, research suggests that hopelessness may be the main symptom preceding suicide. Correlational studies have examined and supported the central role of hopelessness in suicide ideation and intent (Wetzel, Margulies, Davis & Karam, 1980). In a study of college

students by Schotte and Clum (1982), hopelessness proved to be a better predictor of suicidal intent than depression in both suicide attempters and suicide ideators. The researchers concluded that hopelessness is predictive of higher levels of suicidal ideation and behaviour. The relationship between hopelessness, depression and suicidal intent has been the focus of several studies among adult psychiatric patients. In 1974, Beck, Weissman, Lester, and Trexler developed a Hopelessness Scale to measure affective, motivational and cognitive manifestations of these negative expectations in adults. Beck's measure has been found to correlate with depression and to predict suicidal ideation and attempts among adults and accounts for the major portion of the variance between suicide and depression measures (Beck, Kovacs & Weissman, 1975; Kovacs, et al., 1975; Wetzel, Margulies, Davis, & Karam, 1980). Such results have led to the suggestion that hopelessness is the 'missing link' between depression and suicidal behaviour (Beck, Steer, Kovacs & Garrison, 1975).

In a 1985 study by Beck and colleagues (Beck, et al., 1985) the researchers extensively examined 207 patients hospitalized with suicidal ideation, (but no recent suicide attempts), at the time of admission. In a follow-up period of five to ten years, 14 of the patients committed suicide. The Hopelessness Scale and the pessimism item of the Beck Depression Inventory predicted the eventual suicides. In

fact, Beck and his associates found that among patients who had made previous attempts, the extent of suicidal ideation was significantly correlated with hopelessness, irrespective of the level of depression. Moreover, hopelessness has been shown to increase progressively with increasing degrees of suicidal intent (Minkoff, Bergman, & Beck, 1973).

While a preponderance of research in the literature has examined the significance of hopelessness in the prediction of suicidal ideation and attempts among adult populations, researchers are beginning to investigate the association between hopelessness and suicidal behaviours among adolescents. Using the Hopelessness Scale developed by Beck, Weissman, Lester & Trexler (1974), Topol and Reznikoff (1982) found that Hopelessness scores differed for young suicide attempters and non-suicidal psychiatric patients such that the attempters scored higher than did non-suicidal psychiatric patients.

In a recent investigation by Kazdin, French, Unis, Esveldt-Dawson and Sherick (1983), of the relationships between suicidal intent, hopelessness and various aspects of depression in a sample of psychiatric inpatient children, the authors concluded that children who scored high on the hopelessness scale showed a significantly greater degree of depression than did those who scored low for hopelessness. Further, those children who attempted suicide or evidenced suicidal ideation had greater hopelessness scores than

psychiatric patients without suicidal ideation or attempts. The authors concluded that in their study, suicidal behaviour in children could be better predicted by feelings of hopelessness than by depression.

Clearly, while a vast amount of research has found depression to be highly correlated with suicidal behaviour among adolescents, the degree of hopelessness experienced by the adolescent appears to be a greater indicator of suicidal ideation among this population. The paucity of research on the significance of hopelessness scores in relation to suicidal ideation points to the importance of continued research. Indeed, the limited research findings suggest that the degree of hopelessness experienced by an individual may have potential implications for the assessment of suicidal risk in adolescents.

Stressful Life Events

A review of the literature illustrates a strong relationship between life stress and suicidal behaviour. Both in terms of the number of events experienced and the magnitude of perceived negative impact, life stress measures have repeatedly proven to be strong predictors of suicidal behaviour. This relationship between life stress and suicidal behaviour has been demonstrated to exist not only for actual suicides, but also for attempts and ideation (Cochrane & Robertson, 1975; Cohen-Sandler, Berman, & King, 1982;

Ferguson, 1981; Garfinkel, Froese, & Hood, 1982; Gispert, Wheeler, & Davis, 1985; O'Brien & Farmer, 1979; Paykel, Prusoff, & Meyers, 1975; Pettifor, Perry, Plowman, & Pitcher, 1983).

Stressful life events, such as the death of a parent or peer, break-up of a love relationship, parental divorce or separation, moving to a new school or failing an important examination, may temporarily overwhelm an adolescent and produce feelings of depression, hopelessness and desperation. For some adolescents, the interaction of psychodynamic factors with stressful life events may then precipitate a suicidal crisis. It is important to note that research has concluded that it is not the nature of the stressful events, but rather the number and intensity of life events experienced that differentiates the client population from the general population (Rosenstock, 1985). The literature has extensively identified several common stressful events that research has indicated to be among the precipitating factors that may trigger suicidal behaviour among adolescents.

One of the major precipitators for suicidal behaviour is separation or threatened separation from loved persons (Hepworth, Farley & Griffiths, 1988). Adolescents who have lost a parent of the opposite sex through death are particularly vulnerable to severe emotional reactions when a romantic relationship is terminated (Hepworth, Ryder & Dreyer, 1984). Wenz (1979) determined that three factors most

frequently cited by adolescents as precipitating stressors were: lack of social contact with peers in the neighbourhood, conflict with parents, and broken romances. More recently, Gispert, Wheeler, Marsh & Davis (1985) reviewed 82 adolescents who had attempted suicide and found that 40 percent of the suicidal acts seemed to have been precipitated by an argument with parents or the break-up with a girl or boyfriend. The researchers conclude that recently stressed adolescents constitute a high risk for serious and repeated suicidal behaviour.

Moreover, life stress has been shown to be associated with increased risk for depression among adolescents (Coddington,1972). Congruently, in a study of 132 junior high school students, Friedrich, Reams and Jacobs (1982) found that depression in early adolescence was very strongly related to the amount of recent life stress experienced by the adolescent, with greater life stress linked to greater depression. Similarly, Cohen-Sandler, Berman, and King (1982) encountered greater levels of stress in the lives of suicidal and depressed children as compared with clinically depressed nonsuicidal or other psychiatrically disabled control groups.

In addition to the relationship between current life stress and suicidal behaviour among adolescents, suicidal behaviour has also been shown to be related to cumulative negative stressful life events. Specifically, suicidal ideators have been found to report experiencing significantly

more negative life events than their nonsuicidal peers (Schotte & Clum, 1987). Suicide attempters have been shown to report four times as many negative life events in the six months preceding their attempts than normal controls (Paykel, Prusoff, & Meyers, 1975).

In a Canadian study that compared forty adolescents who were clients of a community mental health clinic and eventually committed suicide, to a matched group of clients who had not committed suicide, the researchers found that the suicide group had experienced a greater number of life stresses than the comparison group (Pettifor, Perry, Plowman, & Pitcher, 1987). Adolescents who attempt suicide have a greater number of negative life events, fewer social supports, and fewer personal resources than adolescents who do not (Hirschfeld & Blumenthal, 1986; Vincent & Rosenstock, 1979). McBrien (1983) suggests that significant others should be alert to the impact of negative life events and stressors (death of a loved one, firing from a job, rejection by a team or school) on the teenager's life and be able to recognize certain behaviours as attempts to adjust to the particular circumstance thereby reducing the risk for suicidal behaviour.

This review of the literature has attempted to examine some of the more salient risk factors and situational determinants evident in suicidal behaviour among adolescents. Clearly, family disorganization and disordered interactions as well as, parental history of depressive illness and suicidal

behaviour, appear to play a prominent role in the identification of at risk adolescents. Further, research has proven depression and hopelessness to play a significant role in the etiology of suicide. Finally, the number and intensity of stressful life events, coupled with psychodynamic factors appears to increase the likelihood of suicidal behaviour in at risk adolescents.

CHAPTER III

Research Methodology

Research Design

The research design employed in this study can be classified as a quantitative-descriptive study with the subtype classification of seeking variable relationships (Tripodi, Fellin & Meyers, 1983). This study is classified as such as the purpose of the study is to "seek quantitative relations among variables and explore the relations among a series of variables for a specific population" (p. 20).

The Setting and Population

The setting for this study was F. J. Brennan High School; a Roman Catholic school located on the east side of Windsor, Ontario. The population of the school at the time of the study consisted of 1,702 male and female adolescents between 14 and 19 years of age presently enrolled in grades 9 through 13 during the second semester in the month of March, 1989.

The sample. The sample size consisted of 340 randomly selected male and female students between the ages of 14 and 19 who were attending classes at Brennan High School in grades

9 through 12 inclusive. These students were selected by utilizing a systematic, stratified random sampling procedure obtained from a computerized roster of students. Stratification was on an alphabetized distribution of students according to grade, in order to ensure proportionate representation of each grade level. Secondly, by calculating the formula for systematic random sampling, it was determined that random selection of every 5th person in the population would amount to a sample of 20 percent of each grade level represented. Grade 13 students were excluded from the sampling plan due to disproportionate representation (n=4). The distribution of gender was demographically consistent with the entire school population. Three hundred and forty students were originally selected at random. Thirty-five students did not participate in the study, reducing the actual sample size to 305 students. Of the non-participants, 22 parents refused consent as they felt the subject matter was intrusive, or the research was unimportant. Six students were reported absent from school on the day of the testing. One student withdrew voluntarily during the initial explanation of the study and the rationale for the remainder of the students (n=6) is unknown. Further, an additional 12 respondents were excluded from the study sample because relevant data were recorded missing. The final sample consisted of 293 subjects.

Procedure

The initial procedure consisted of obtaining permission to conduct the study from both the Windsor Separate School Board and the High School Principal. With permission obtained, all parents were mailed a form letter that explained the purpose and rationale for the study, and the procedure for data collection. Due to the large sample size, parents were informed that consent would be assumed if they did not contact the researcher at the school to object to their son or daughter's participation in the study. Parents were encouraged to contact the researcher if they had any concerns or questions regarding the study. To encourage participation, a letter from the principal underscoring the utility and importance of the study was attached to the form letter.

Teachers were informed regarding the purpose of the study and how the study would be administered. Each teacher was given a list of students from their first period class selected to participate in the study. The school gymnasium was set up to accommodate the subjects and students were directed by their first period teachers to the gymnasium immediately after the morning announcements as it was felt that students would be more alert during the early morning. Two school guidance counsellors assisted in the distribution of the self-report instrumentation package which consisted of a sociodemographic questionnaire, developed by the researcher, the Reynolds Adolescent Depression Scale, Suicidal Ideation

Questionnaire, a Hopelessness Scale, and Coddington's Life Events Scale for Adolescents.

Due to the sensitive nature of this study, student subjects were informed of the nature of this study and assured that their participation was entirely voluntary. Further, each student was required to sign a consent form prior to the administration of the questionnaires. To protect the students' anonymity, the questionnaire package was returned unsigned and a code known only to the researcher was assigned to each subject. The administration of the questionnaire package took approximately 30 minutes to complete. An additional 20 minutes were spent in a debriefing period to describe the study and the implication of suicidal behaviour within their high school. Students were informed of the available community and campus counselling services and were encouraged to contact the researcher if they had any questions or concerns.

Data Collection Instrument

The instruments chosen for investigation in this study are commonly used standardized, self-report instruments that were pretested on a sample of 9 students (5 females; 4 males) not participating in the original study. Students were questioned after the pretest to determine any difficulties experienced in the administration or comprehension of the instrumentation package. Some confusion did arise in

completing Coddington's Life Event Scale for Adolescents (LES-A). Clarification regarding the scoring of the LES-A was given during the introduction of the data collection. The measures utilized are described below:

Demographic Questionnaire. The demographic questionnaire, developed by the researcher, ascertains basic demographic data including: age, sex, grade, academic standing, race, religion, marital status, birth order, parent(s) marital status, data on drug or alcohol usage and specific data concerning their experience with their own suicidal behaviour and that of their family and peers. As well, an open-ended question asking students for their suggestions regarding suicide prevention within their school was included at the end of the demographic questionnaire.

Suicide Ideation Questionnaire. The Suicide Ideation Questionnaire (SIQ) (Reynolds, 1987) is a self-report measure designed specifically to assess adolescents' thoughts about suicide. As a result of extensive clinical contact with distressed adolescents, Reynolds noted that many adolescents engaged in suicidal cognitions, but did not present depressive symptoms. He then designed the SIQ to evaluate cognitions of death and suicide.

The questionnaire consists of 30 items which are scored on a 0-to-6-point scale with 0 assigned to "never having had

the thought" and 6 reflecting "having the thought almost everyday". Because the SIQ is a continuous score measure, the higher the SIQ score, the greater the number and frequency of suicidal thoughts. Sample cognitions in the SIQ include the following: "I thought about telling people I plan to kill myself", "I thought that my life was to rotten to continue", and "I thought about what to write in a suicide note". The maximum score is 180, and higher scores indicate numerous suicidal thoughts occurring at high frequency. The total score may be compared with the criterion score (41 or above) suggested by Reynolds as a cutoff for clinical significance with individual screenings. Reynolds (1987) suggests a cutoff score of 30 for large-scale screening in which individual protocol examination would be difficult.

The scale was developed in field testing with over 2,400 adolescents. Coefficient alpha internal consistency measures have been reported at .97. Construct validity has been demonstrated by correlations with highly related constructs such as depression (.59) and hopelessness (.48). The SIQ has been found useful for individual assessment and as a screening measure for large group identification of suicidal adolescents (Reynolds, 1985).

Reynolds Adolescent Depression Scale. The Reynolds Adolescent Scale (RADS) (Reynolds, 1986) consists of 30 items and utilizes a 4-point Likert scale with responses ranging

from 'almost never' to 'most of the time'. The RADS is a measure of the severity of depressive symptomatology in adolescents. The scale was developed specifically for adolescents and covers a number of symptoms felt to be indicative of depression including somatic, behaviourial, cognitive, mood and vegetative signs. Symptoms of depression are assessed via the following statements: "I feel sad", I feel like nothing I do helps anymore" and, "I feel like crying". The RADS is scored by calculating the sum of the scores for each item. A derivation of a cutoff score of 77 and above was based on the frequency distribution of RADS scores of approximately 5,000 adolescents (Reynolds, 1987). A cutoff score of 77 and above has been determined to delineate a level of symptom endorsement associated with clinical depression. Internal consistency estimates have ranged from .92 to .96. Six week test-retest reliability coefficients of .84 was determined with a sample of 126 adolescents. Construct validity of the measure has been assessed by examining the relation of the measure to other self-report and interview measures of depression. In addition, normative data have been collected on over 6,000 adolescents from a variety of socioeconomic levels (Reynolds, 1984).

Hopelessness Scale for Children. The Hopelessness Scale for Children (HSC), was designed by Kazdin and colleagues,

(Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983) to measure children's cognitions related to hopelessness, an important variable found to correlate with suicidal thoughts and behaviours. The HSC focuses primarily on the child's perception of the future, and thus provides information about the individual's expectations for his or her future.

The HSC is a 17-item self-report inventory that can be used with children 7 years old and above. The instrument includes items to which the child responds either true or false, indicating whether or not the item describes how they feel.

For example, the following items describe perceptions about their lives the child may or may not have experienced: "All I can see ahead of me are bad things, not good things", "Tomorrow seems unclear and confusing to me", and "I can imagine what my life will be like when I grow up". The instrument is scored by counting the number of scored responses that are in agreement with keyed items.

Kazdin, Rodgas, and Colbus (1986) determined that children who scored at or above the 67th percentile (score $\leq$ 7.0) on the hopelessness scale were delineated as high hopelessness, and the children at or below the 33rd percentile (score $\leq$ 4.0) were delineated as low hopelessness. Adequate internal consistency (Alpha = .97) has been demonstrated as well as test-retest reliability following a 6-week interval. Construct validity has been assessed by examining the

relationship of the scale to measures of depression, self-esteem, and social behaviour. The scale correlated positively (r = .58) with depression in a sample of 262 child psychiatric inpatients (Kazdin, et al., 1983; Kazdin et al., 1986).

Coddington's Life Event Scale for Adolescents. The Life Event Scale for Adolescents (LES-A) developed by Coddington (1972), is a self-administered instrument which consists of 50 events: 17 family events over which the adolescent has no control, such as the death of a parent or grandparent; 18 extra-familial events that are usually seen as desirable, such as beginning senior high school; and 15 undesirable extra-familial events such as failing a grade in school or suspension from school. Each event has a weighted score according to the perceived intensity of the level of stress encountered over the past 12 months. Weighted scores range from 18 (Being invited to join a social organization), to 108 (The death of a parent), with a possible total score range of 0 to 2143.

The scales represent an attempt to quantify the environmental stress the adolescent has encountered over the recent past. Higher scores seem to increase risk of behavioural symptomatology two to three fold. Coddington reports measures of reliability for 12 months at 0.56. Content validity for the instrument was judged by

professionals such as teachers and pediatricians (Coddington, 1972).

Data Analysis

The raw data was manually scored by the researcher and a research assistant hired for the purpose of scoring the data. The data analysis was completed through the use of the SPSS/PC+ computer program at the University of Windsor. For the purpose of analysis, the students were divided into three principal groups: Nonsuicidals (those who reported no suicidal ideation or behaviour), Suicidal Ideators (those who had considered suicide but had never made an attempt), and Suicide Attempters (those who had made one or more past suicide attempts). Statistical analysis utilized consisted of both bivariate and multivariate analyses in order to determine both within and between group differences and correlates of suicidal behaviour among this sample of high school students.

The Concepts

Adolescent. Peerage Reference Dictionary (1980) defines an adolescent as a person between childhood and adulthood or maturity. For the purpose of this study, an adolescent is a male or female between the ages of 13 and 19 years of age.

Suicidal behaviour. Suicidal behaviours may be conceptualized as falling along a continuum of potential that

includes suicidal ideations, contemplations, threats, attempts, and completions (Beck, Kovacs, & Weissman, 1979).

Suicidal Ideation. The construct of suicidal ideation is characterized as ranging from general thoughts about death to much more serious ideation about specific means of committing suicide. For the purpose of this study, suicidal ideation is defined as the domain of thoughts and ideas about: death, suicide, and serious self-injurious behaviours, including thoughts related to the planning, conduct, and outcome of suicidal behaviour (Reynolds, 1987).

Suicide Attempt. A suicide attempt is defined as a self-harmful but non-fatal physical act committed against oneself with the intention of harming or ending one's life (Hamlin & Timberlake, 1982).

Depression. Depression is a disorder of mood that affects all areas of function including behaviourial, emotional, somatic, and cognitive domains. In this study, depression in adolescents may be expressed as a cluster of symptoms that may include lowered self-esteem, social withdrawal, fatigue, impaired school performance, crying spells, sleeping and eating disturbances, and self-destructive impulses (American Psychiatric Association, 1980).

Hopelessness. This construct has been defined by Beck (1975) as having negative expectations about the future.

Stressful life events. Stressful life events refers to the occurrence of situations of crisis or events which increase an adolescent's level of stress such as the death of a loved one, moving to a new school, or experiencing a separation or divorce of a parent (Moore, 1985).

Research Questions

The following research questions facilitated the direction and purpose of this study. More specifically, this study sought to examine the following questions:

(1) How prevalent is suicidal behaviour and ideation among a sample of high school students in the general population?

(2) What are the social and demographic variables that modify the relationships between suicide attempters, suicidal ideators, and nonsuicidal adolescents?

(3) To what extent will the scores on the depression, suicidal ideation, hopelessness and stressful life events scales differ between adolescents who report to have attempted suicide and those who reportedly evidence suicidal thoughts but have not previously attempted, and the nonsuicidal adolescents?

(4) Which variables under investigation are most likely to predict suicidal ideation or behaviour among adolescents?

Limitations

The limitations inherent in the utilization of self-report measures must be acknowledged. Self-report instruments may be especially valuable in the assessment of private events, such as thoughts and feelings about suicide and related constructs. However, information gathered through self-report methods should never be the sole source for suicide risk assessment but should be used in conjunction with converging information from interviews, direct observation, and collateral others (Fremouw, Perczel, & Ellis, 1990).

In addition, the accuracy of self-report data may be influenced by intentional misrepresentation or perceived social desirability for responding in certain ways. Socially desirable responding may include thoughtless, overly generous responses; individuals may continuously give themselves the benefit of the doubt because of negative self-perceptions (Linehan & Nielson, 1983). Specifically, Linehan and Nielson propose that individuals who care about impression management and answer questionnaires in a socially desirable fashion are not likely to fully divulge hopeless expectations or information about past and current suicidal ideation or behaviour. As a Social Desirability Scale was not used for this research, the accuracy and therefore the generalizability to the general adolescent population is not possible.

Further, caution must be taken when interpreting the results obtained from Coddington's Life Event Scale for

Adolescents. Methodological constraints are imposed by the low reliability (0.56) and validity scores and the lack of test retest studies available for comparison purposes. While there are certain basic psychometric issues requiring serious attention for future research, the Life Events Scale for Adolescents remains as one of the only scales available designed to examine and measure stressful life events occurring during adolescence.

While every effort has been made to control for and account for the stated limitations, acknowledgment of research limitations can provide direction for further research and lead to improved methodological controls in future research studies.

CHAPTER IV

Results and Discussion

The following results were obtained from the data collected through the demographic and self-report questionnaires completed by each of the research participants. All data analyses were programmed using the SPSS/PC+ computer package at the University of Windsor. The results and discussion of data are presented in the following subsections: (1) Demographic profile of sample, including presentation of all demographic data; (2) Research Questions 1 through 4 and Findings. Findings from each of the four research questions are examined individually and are followed by an interpretation and discussion. Data is presented in both tabular and written form. Tabular presentation of frequency distributions may not equal 100% as some variables do have missing values.

I. Demographic Profile of Sample

Sex and age. The high school sample consisted of 293 adolescents. The sample was generally evenly distributed between males and females with a distribution of 157 (53.6%) male and 136 (46.4%) female respondents. The age range for

the sample was from 14 to 19 years, with a mean age of 16.1 years (SD = 1.4). The mode, or most frequently occurring age was 17 years. The sample group was represented proportionately across the age range with a somewhat higher proportion of subjects represented in the 17-year-old category.

TABLE 1

Demographic Distributions, Means and Standard Deviations for Sex, Age and Grade Level of Adolescents

Value	n	%
Sex		
Male	157	53.6
Female	136	46.4
Total	293	100.0
Age		
14	51	17.5
15	54	18.5
16	55	18.8
17	76	26.0
18	48	16.4
19	8	2.7
Total	293	99.9
Mean	16.1 years	
S.D.	1.4 years	
Grade		
9	64	21.8
10	57	19.5
11	64	22.2
12	107	36.5
Total	292	100.0
Mean	10.7	
S.D.	1.3	

Grade. The grade levels of the subjects range from 9 through 12. As can be seen in Table 1, subjects in grades 9 to 11 appear to be evenly distributed. There is an over representation of subjects in Grade 12 with 37% (n=107) of the sample appearing in this grade level.

Academic standing. Subjects were surveyed regarding their perceived current academic standing. The academic ranges were grouped in ten percent categories with the lowest range scoring an average mark of 50% or under and the highest top of the range being that of an overall average of 90 to 100%. For the purposes of analysis, the midpoint ranges were entered and are displayed in Table 2. The mean score was 70.5% (SD=9.9) and the mode was 65% indicating that the majority of scores for academic standing fell within the average range. Deviations from the mean are indicated in Table 2.

TABLE 2

Frequency Distribution and Percentages of Students' Self-Perceived Academic Standing

Academic Standing	Frequency	Percentage
under 50	1	.3
50-60	39	13.4
60-70	108	37.2
70-80	89	30.7
80-90	48	16.6
90-100	5	1.7
Totals	290	99.9

Birth order. Birth order of the subjects was also surveyed as part of the demographic data collected. Subjects were asked to indicate their birth order within the family structure. The range of possible responses included: only child, oldest child, middle child or youngest child. Birth order according to gender within the family was not surveyed. Results indicate that there is a fairly even distribution of scores between respondents who are the eldest in their family (36.2%, n=106), and the youngest in their family (34.1%, n= 100). The remainder of the respondents, n=87, indicated that 8.5% were the youngest child, and 20.5% were middle children. There were two subjects who did not indicate their birth order.

Race and religion. The ethnic composition of the sample consisted of 88% Caucasian, 2% Black, 2% Hispanic, 4% Oriental, 1% Native Indian, and 3% other. As well, religious affiliation was predominately Roman Catholic (94%, n=275), with only 1% of the sample comprised of Protestants and 5% of the subjects who categorized themselves as other.

Marital status. Marital status of the parents of subjects was also surveyed in the demographic questionnaire. As can be seen in Table 3, 227 or 77.5% of the respondents indicated that their parents' marital status was that of married. Table 3 displays the frequency distributions and

percentages for the remainder of the marital status categories.

TABLE 3

Frequency Distribution and Percentages of Parents' Marital Status

Marital Status	Frequency	Percentage
Married	227	77.7
Separated	12	4.1
Divorced	28	9.6
Single Parent	5	1.7
Renamed	11	3.8
Deceased	9	3.1
Total	292	100.0

Drug and alcohol usage. The reported frequency of drug and alcohol usage can be seen in Table 4. It is important to note that students were asked to indicate if they have ever used drugs or alcohol and not the frequency or intensity of their usage.

TABLE 4

Frequency and Percentage Distribution of Drug and Alcohol Usage Among Adolescents

	Frequency (n)	Percentage (%)
Drugs		
Yes	26	8.9
No	266	91.1
Total	292	100.0
Alcohol		
Yes	149	51.2
No	142	48.8
Total	291	100.0

Table 4 illustrates that about half of the adolescents surveyed (51%) admitted to alcohol consumption whereas only 8.9% indicated that they have used drugs.

Suicidal behaviour. The nature and extent of suicidal behaviour was assessed by asking the respondents directly if they have, at any time, made a suicide attempt, the number of suicide attempts made, and the method employed in trying to take one's life. The data indicates that 30 or 10.2% of the respondents (N=293) indicated that they had made one or more attempts to commit suicide. Table 5 indicates that of the 30 subjects who reported to have made a suicide attempt, only 10 (33.3%) of the subjects made one attempt leaving the remaining 17 (56.6%) subjects to have more than one suicide attempt (range, one to five attempts). Three subjects (10.1%) who reported to have made a suicide attempt failed to indicate the

number of attempts made and were therefore counted as missing values.

TABLE 5

Distribution of Scores for Attempted Suicide, Number of Times and Method Employed by Suicidal Adolescents (N=293

Variable	Frequency (n)	Percentage (%)
Suicide Attempt		
Yes	30	10.2
No	263	89.8
Total	293	100.0
Number of Times Attempted (N=30)		
1	10	33.3
2	10	33.3
3	5	16.8
4	1	3.3
5+	1	3.3
Missing	3	10.0
Total	30	100.0
Method Employed (N=26)		
Self-poisoning	17	65.4
Self-cutting	7	26.9
Self-injury	2	7.7
Total	26	100.0

The methods used to attempt suicide ranged from self-poisoning (ingestion of narcotics, prescription pills or lethal substances), self-cutting (cutting or slashing of the wrists or other parts of the body with the intention of seriously harming oneself), and self-injury (jumping from high places, attempting to hang oneself, attempting to shoot oneself). As indicated by the data, the predominant method

employed in attempting suicide was self-poisoning as indicated by 65.4% of the respondents (N=26).

Family history of suicide. Respondents were asked if they had a family member who had attempted or committed suicide and the results indicate that 17.1% (n=50) of the total sample had a family member with a history of suicidal behaviour. As well, 58.4% of the sample stated that they knew someone who had made a suicide attempt.

Discussion of demographic profile of sample. The study sample of 157 males and 136 females was demographically consistent with the entire school population. There were approximately equal numbers of students from grades 9 through 11. While there was a significantly higher number of students represented in grade 12, the number is proportionate to the school population. The sample was homogenous with respect to race and religion. This finding is not remarkable given that the sample was collected from a white, middle-class neighbourhood in a Roman Catholic School system. This demographic profile is similar to that found by Friedman and colleagues (1987) which sampled 380 high school students in a public high school in New York.

The birth order of the students was fairly evenly distributed between eldest children and youngest children. As

very few similar studies are available for comparison, it is unknown whether this finding is remarkable.

The parental marital status of the subjects presents an interesting finding as the majority of students (77.5%) reported that they resided with both of their natural parents. Only 9.6% of the sample of students reported that their parents were divorced. This finding is remarkable as it is inconsistent with general statistics regarding the prevalence of separated and divorced families. One could hypothesize that the preponderance of intact families could be associated with the over representation of Roman Catholic families.

The consumption of drugs and alcohol reported by the students appears to be inconsistent with other available research by substance abuse experts. The Addiction Research Foundation of Ontario surveyed high school students in 1989 and found that 80% of grade 11 students and 89% of grade 13 students reportedly consumed alcohol on a regular basis. The survey also determined that 25% of grade 11 students and 29% of grade 13 students reported that they use cannabis. The frequency of usage or the type of drug consumed was not measured in this survey. Students were asked to acknowledge if they use drugs or if they use alcohol and were not required to specify the frequency of consumption. Students in this sample reported that 51% use alcohol and 8.9% use drugs. In comparison to the Addiction Research Foundation findings, these figures appear to be quite low.

With regard to the results concerning the prevalence of attempted suicides, the finding that 10.2% (n=30) of adolescents or 1 in 10, admit to having made one or more attempts appears to be consistent with several other research studies. While studies examining the prevalence of suicidal behaviour or ideation in epidemiological community-based samples are rare, the few available studies that do exist cite prevalence statistics in the range of 8.5% to 10.5 (Smith & Crawford, 1986; Friedman, et al.,1987; Simons & Murphy, 1985).

The study conducted by Smith and Crawford (1985) contained similar findings to this author's study. These researchers surveyed 313 high school students in the Midwest and found that 10.5% (n=33) of all the high school students included in the study had made one or more suicide attempts. Further, the researchers found that of the 33 adolescents who had attempted suicide, 90.6% of the attempts were judged to be of low lethality; namely, ingestion of pills with the intent to overdose. This study suggests similar, but somewhat lower findings as students reported using self-poisoning 65% of the time. Overdosing or wrist slashing was the most commonly reported method.

Finally, family history of suicidal behaviour was reported by 17.1% of the students. While several studies point to the prevalence of suicidal behaviour in the family members of adolescent attempters (Tishler, 1981; McKenry, 1982), there exists a paucity of studies that examine the

extent of suicidal behaviour in family members in the general population. Of interest was the finding that slightly more than half of the students (58.6%) reported that they knew of someone who had made a suicide attempt. While only speculative, it appears that perhaps suicidal behaviour has become much more acceptable as a means of dealing with normative crises that typically exist during adolescence.

II. Research Questions

How prevalent is suicidal behaviour and ideation among a sample of high school students in the general population?

The prevalence of suicidal behaviour and ideation was assessed by scoring two mutually exclusive questions included in the demographic questionnaire: (1) Have you ever made a suicide attempt? and (2) Have you ever thought about killing yourself but have never attempted suicide?. Frequency distributions were used to analyze the scores. It was found that of the total sample (N=293), 10.2% of the respondents reported having made one or more suicide attempts, 36.5% reported that they had thought about suicide but had never made an attempt and the remaining respondents, 53.3%, reported that they had never made a suicide attempt or thought about suicide thereby composing the nonsuicidal group. These data are presented in Table 6.

TABLE 6

Frequency Distribution of Attempters, Ideators and Nonsuicidals by Sex

	Suicide Attempters f (%)	Ideators f (%)	Non-suicidals f (%)
Males	12 (40.0)	46 (43.0)	99 (63.5)
Females	18 (60.0)	61 (57.0)	57 (36.5)
Total	30 (100.0)	107 (100.0)	156 (100.0)

While the differences between the sexes was not fully explored within the realm of this study, the distribution of males and females is presented in Table 6. One can see that in the attempter and the ideator groups, females comprised a slightly higher proportion of the sample than did males; 20% more females than males for the attempters and 14% more females in the ideator group. Conversely, the nonsuicidal group had a higher proportion of males than females in their group; 28% more males than females.

In combining the percentages for both the suicide attempters and the suicide ideators, 47% of the total sample reported some degree of suicidal thinking or behaviour.

Discussion of the prevalence of suicidal behaviour in the sample. The principal overall finding was that 10.2% (n=30) of all the high school students included in the study had made one or more suicide attempts and 36.5% of the sample reported having thought of suicide at some time in their past. When

the mutually independent groups were formed, 156 students were found to be Nonsuicidal, 107 were Ideators, and 30 were Attempters.

With regard to gender differences, for both the Attempter and the Ideator groups, females comprised a higher proportion of the total sample than males. This finding that more females engage in suicidal thoughts and behaviour is well documented and supported in the literature (Pfeffer, Newcorn, Kaplan, Mizruchi & Plutchik, 1988; Toolan, 1984, Simons and Murphy, 1985). Friedman and colleagues (1987) report that 76% (n=33) of the attempters in his study of high school students was composed of females. Similarly, this researcher found that 60% of the subjects in the Attempter group were females.

The prevalence rates of this study are consonant with the findings of Smith and Crawford (1986) who sampled 313 high school students and found that 10.5% of the sample had made suicide attempts, 37.4% of the sample were found to be Ideators, and 14.7% of the sample reported that they had an suicide plan in place at the time of the investigation. The researchers concluded that 62.6% of all students reported some degree of suicidal ideation or action. This researcher found that almost half (47%) of the students sampled reported some degree of suicidal thinking or action, still a disturbingly high proportion.

While much of the research found in the literature has been conducted with the adolescent psychiatric population,

these findings echo several authors who have found that among the nonclinical adolescent population, suicidal thinking and behaviour is not the rare phenomenon that it was once thought to be. Friedman, Asnis, Boeck and DiFiore (1987) similarly found that of the 380 high school students who completed an anonymous survey concerned with their experience with suicidal behaviour, 60% reported that they had thought about killing themselves. Further, almost 9% reported that they had actually made at least one attempt to kill themselves and over half of the suicide attempters reported at least two attempts.

Canadian researchers report a somewhat lower prevalence rate in their studies. Researchers Pronovost, Cote and Ross (1990) surveyed 2850 Quebec adolescents aged 12 to 18 in four secondary school in the Trois-Rivieres region and found that only 3.5% of their sample made suicide attempts and 15.4% of the adolescents reported to have seriously thought about suicide. Similarly, Tousignant, Hamel and Bastien (1988), surveyed Montreal adolescents in grades 9, 10 and 11 and found that 6.7% of the sample had made one or more suicide attempts and 13.2% of adolescents reported to have seriously considered suicide.

The demographic data reviewed in the previous section confirms that the study sample appears to be representative of the school population. If one were to generalize the prevalence rates to the school population, the data would indicate that of the total school population (N=1702) 174

(10.2%) students have more than likely made suicide attempts and 621 (36.5%) students have had recent thoughts of suicide. Suicidal behaviour poses a serious problem for adolescents.

Clearly, nonlethal suicidal behaviour is not be dismissed lightly. While two thirds of attempters will never make another attempt, 10% to 20% will make a repeat attempt within a year; and about 10% will eventually take their lives, 1 to 2% within a year (Murphy, 1985).

What are the social and demographic variables that modify the relationship between suicide attempters, suicidal ideators, and nonsuicidal adolescents?

The social and demographic variables that modify the relationship between the three groups, Attempters, Ideators, and Nonsuicidals were analyzed by using two types of nonparametric tests. Following the cross tabulation on the raw data, the Chi-square statistic (X^2) was used to determine the existence of association between variables and the Cramer's V statistic (V) was used to determine the strength of association between variables. Chi-square, is a test of independence, therefore, the variables found to be significant are not independent of one another but are in fact related.

All results were determined to be significant at the .05 level of confidence. Significance testing only indicates

whether a finding can be attributed to chance, or to an existing difference in the population under study.

Cross tabulations of the demographic characteristics of the three groups under examination are presented in Table 7.

TABLE 7

Cross Tabulations of Demographic Characteristics of Suicide Attempters, Suicide Ideators and Non-Suicidal Adolescents (N=293)

Variable	Suicide Attempters (N=30) Percent	Ideators (N=107) Percent	Non-Suicidals (N=156) Percent
Sex			
Male	40.0	43.0	63.5
Female	60.0	57.0	36.5
Grade			
Nine	23.3	10.3	29.5
Ten	23.3	14.0	22.4
Eleven	16.7	31.8	16.7
Twelve	36.7	43.9	31.4
Age			
14	20.0	9.4	22.4
15	16.7	13.2	22.4
16	20.0	23.6	15.4
17	20.0	33.0	22.4
18	23.3	16.0	15.4
19		4.7	1.9
Religion			
Roman Catholic	90.0	93.5	94.9
Protestant		2.8	0.6
Other	10.0	3.7	4.5
Race			
Caucasian	90.0	89.5	88.5
Black	3.3	2.9	1.9
Hispanic	3.3	1.0	2.6
Oriental		4.8	3.8
Native Indian	3.3		0.6
Other		1.9	2.6

Table 7 continued

Variable	Suicide Attempters (N=30) Percent	Ideators (N=107) Percent	Non-Suicidals (N=156) Percent
Marital Status			
Married	50.0	79.4	81.9
Separated	3.3	0.9	6.5
Divorced	23.3	12.1	5.2
Single Parent	3.3	0.9	1.9
Remarried	3.3	4.7	3.2
Deceased	16.7	1.9	1.3
Birth Order			
only child	13.3	3.7	10.9
oldest child	26.7	34.6	39.1
middle child	23.2	27.1	15.4
youngest child	36.7	34.6	34.6
Academic Standing			
under 50	3.3		
50-60	26.7	13.2	11.0
60-70	30.0	39.6	30.0
70-80	26.7	25.5	35.1
80-90	13.3	20.8	14.3
90-100		0.9	2.6
Drug Use			
Yes	27.6	8.4	5.8
No	72.4	91.6	94.2
Alcohol Use			
Yes	70.0	63.6	39.0
No	30.0	36.4	61.0
Number of Times			
One	33.3		
Two	33.3		
Three	16.8		
Four	3.3		
Five	3.3		
Method of Attempt			
Self-poisoning	65.4		
Self-cutting	26.9		
Self-injury	7.7		
Suicidal Thoughts			
Yes	60.0	100.0	
No	40.0		

Table 7 continued

Variable	Suicide Attempters (N=30) Percent	Ideators (N=107) Percent	Non-Suicidals (N=156) Percent
Know Attempter			
Yes	86.2	64.5	49.4
No	13.8	35.5	50.6
Family Attempter			
Yes	43.3	15.9	12.8
No	56.7	84.1	87.2

As can be seen in Table 7, the three groups differed significantly with respect to sex distribution: the Nonsuicidal group consisted of more males than females, and both the Ideators and the Attempters had significantly more females than males in each group. In fact, the Attempters had a slightly higher percentage of female representation than the Ideator group. While a correlation was found to exist between sex and group membership $X^2(2, N=293)=13.17$, $p < .05$ the strength of the association between the variables was found to be low ($V=.21$).

Associations were found to exist between grade and group membership $X^2(6, N=293)=23.03$, $p <.05$, age and group membership $X^2(10,N=293)=18.36$, $p <.05$), and academic standing and group membership $X^2(10,N=293)=19.25$, $p <.05$. An examination of the Cramer's V statistic for age, grade, and academic standing found that the correlation for these variables was low to very slight (Grade: $V=.20$; Age: $V=.18$; Academic Standing: $V=.18$).

The three groups were compared with respect to the reported parental marital status for each subject. The findings indicate a significant association between marital status and group membership $X^2(10, N=293)=39.25$, $p < .05$. It was found that approximately 80% of the Ideators and Nonsuicidals reported a married status while only 50% of the Attempters reported the same. Further, it was found that the Ideators and Nonsuicidals reported that 14% of the sample came from separated, divorced or single parent families while 30% of the Attempters reported a higher incidence of separated, divorced or single parent marital status. While the examination of the descriptive statistics and the Chi-square statistics indicates a significant finding, the strength of the association proved to be low ($V=.26$).

Alcohol and drug use was also examined for significant differences across the three groups and an association was found to exist between the two variables and group membership (Drugs by group: $X^2(2, N=293)=14.40$, $p < .05$; Alcohol by group: $X^2(2, N=293)=20.00$, $p < .05$). Attempters were found to have a higher percentage of reported alcohol (70%) and drug use (30%) than the Ideators and the Nonsuicidals. Ideators reported a higher prevalence of both drug and alcohol usage than the Nonsuicidals and the Nonsuicidals reported the lowest prevalence of drug and alcohol usage when compared to both the Ideators and Attempters. The strength of the association for both variables and group membership was found to be low.

Students were also surveyed regarding their knowledge of someone, possibly a peer, who had made a suicide attempt and whether they had a family history of suicide attempts. These variables were examined across the three groups to determine if an association existed between knowledge of suicidal behaviour and family history and group membership. The findings indicate that an association does exist between knowing someone who has made a suicide attempt and group membership $X^2(2,N=293)=16.13$, $p < .05$. The three groups differed significantly with respect to the frequency distribution of scores: the Attempters reported most frequently (86%) that they knew someone who had made a suicide attempt, 64% of the Ideators reported knowing someone, and the Nonsuicidals reported that 49% of the sample knew someone who had made a suicide attempt. While there appears to be a significant difference between the three groups, again the strength of the association appears to be low ($V=.24$).

An examination of the prevalence of a family history of suicidal behaviour points to a significant difference between the Attempters and the remaining two groups. Attempters reported that 43% of the group had a family history of suicidal behaviour compared with 16% of the Ideators and 13% of the Nonsuicidals $X^2(2,N=293)=16.17$, $p < .05$). The strength of the association was found to be low ($V=.24$). These data are summarized in Table 8.

TABLE 8

Significant Chi-square Results ($p<.05$) From Cross Tabulation of Demographic Variables by Group Membership

Cross Tabulation	Chi-square	Degrees of Freedom	Significance	V
Sex by group	13.17	2	.0014	.212
Grade by group	23.02	6	.0008	.198
Age by group	18.36	10	.0492	.177
Marital status by group	39.25	10	.0000	.259
Academic standing by group	19.25	10	.0372	.182
Drug use by group	14.4	2	.0007	.222
Alcohol use by group	20.00	2	.0006	.262
Attempts by group	292.99	2	.0000	1.000
Thoughts of suicide by group	263.56	2	.0000	.948
Knowing attempters by group	16.13	2	.0003	.235
Family history of suicidal behaviour by group	16.17	2	.0002	.239

Discussion of the significant variables found to modify the relationship between Attempters, Ideators, and Nonsuicidal adolescents. Not surprisingly, the groups differed significantly regarding the distribution of sex among the groups with more females representing both the Attempters and the Ideators groups. This finding is consistent with other research studies that have generally found that females are over represented among suicide attempters and suicide ideators (Pronovost, Cote, & Ross, 1990; Friedman et al., 1987). While

females are known to evidence more suicidal behaviour than males, males make highly lethal attempts and are found to comprise the group of completed suicides more often than females.

While a relationship was found to exist between group membership and age, grade and academic standing, the nature of the relationship is not known. The Attempters group appeared to have a fairly even distribution between students in the lower range and higher range of the age group. As few comparison studies exist, it is not known if this finding is remarkable. It is possible that significant results were obtained due to the higher number of senior students represented in the study.

A significant relationship was found to exist between group membership and parental marital status. Attempters were found to have a higher prevalence of separation, divorce and single parent families than the Ideators and Nonsuicidals. This finding is well supported in the literature. A number of studies have been found which indicate a correlation between the absence of one parent due to death, divorce or separation and the incidence of suicidal behaviour in the adolescent (Garfinkel, Froese and Hood, 1982; Friedrich, Reams and Jacobs, 1982; Gispert, Wheeler, Marsh and Davis, 1985; Pfeffer et al., 1988). The reasons for this correlation are many. Generally, studies indicate that suicidal adolescents see their families as less cohesive, higher in conflict, and less

controlled than do nonsuicidal adolescents (Asarnow, et al., 1987). Ideally, the family unit acts a primary support system for the adolescent. While speculative, it is possible that adolescents who are victims of family breakdown find it difficult to perceive their families as a primary support system as there are generally more stressors apparent in these family forms and seek out dysfunctional or self-destructive ways of problem solving.

Further, the findings indicate a significant association between family history of suicidal behaviour and group membership. Attempters reported that 43% of the group had a family history of suicidal behaviour. This finding is well documented in the literature. Family histories of suicidal adolescents have revealed a high incidence of depression and suicidal behaviour in parents and family members (Maris, 1981; Goldney, 1981; Kosky, 1983; Tishler, 1981). Friedman and colleagues found similar results in their study as 29% of the Attempters had a family history of suicidal behaviour. Suicidal behaviour among family members and peers may serve as a model and offer to the cognitively immature adolescent a readily available solution to one's problems.

To what extent will the scores on the depression, suicidal ideation, hopelessness and stressful life events scales differ between Attempters, Ideators and Nonsuicidal adolescents? The differences between the scores on the self-

report measures were best examined by ANOVA's performed between the three groups. The statistical test of analysis of variance is used to determine whether significant differences exist among the means of the three groups of scores. The multiple R squared statistic indicates the proportion of the variance accounted for between the groups by the dependent variable. No direction can be inferred from this analysis. The extent to which the scores differ can only be measured in whether or not they significantly differ between the three groups. All reported results are significant at the .05 level of confidence.

Table 9 illustrates the significant results from the analysis of variance procedure. As shown, all the total scored variables significantly differ between the Attempters, Ideators, and the Nonsuicidals. The Suicidal Ideation Questionnaire (SIQ) was found to have the highest F-ratio ($F(2, 290)=92.37$, $p < .05$) and accounted for 39% of the variance between the three groups. The Life Events Scale for Adolescents (LES-A) was found to have the lowest F-ratio ($F(2,290)=3.23$, $p < .05$) and accounted for only 2% of the variance between the three groups.

The means and standard deviations of each of the four self-report measures for the total sample and the three groups are presented in Table 10.

TABLE 9

Significant Results from the Analysis of Variance Procedures Between Attempters, Ideators and Nonsuicidals

Variable	Sum of Square	Degrees of Freedom	Mean Square	F - Ratio	Proba-bility	R^2
Depression score R.A.D.S.	16930.90	2	8465.45	53.91	.00	.27
Suicide score S.I.Q.	127461.60	2	63730.80	92.37	.00	.39
Hopeless score H.S.C.	674.11	2	337.05	35.80	.00	.20
Stressful life event score L.E.S.A.	225869.34	2	112934.67	3.23	.04	.02

TABLE 10

Means and Standard Deviations for Self-Reporting Measures

Variable	Total Sample (N=293)		Attempters (N=30)		Ideators (N=107)		Nonsuicidals (N=156)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
R.A.D.S.	61.8	14.6	76.3	15.0	67.5	13.2	55.0	11.5
S.I.Q.	27.6	33.5	76.7	45.3	38.1	33.8	10.9	11.3
H.S.C.	3.6	3.4	7.4	4.8	4.2	3.3	2.5	2.4
L.E.S.A.	255.7	188.2	317.9	187.6	271.7	200.6	232.7	176.6
Number of Events	7.7	5.9	8.8	5.6	8.5	6.6	6.9	5.4

As can be seen from Table 10, the Attempters scored significantly higher across all the self-report measures than the Ideators or the Nonsuicidal groups. The Reynolds Adolescent Depression Scale (RADS) reports a cutoff score of 77 to delineate a level of symptom endorsement associated with clinical depression. Attempters mean score of 76.3 (SD=15.0) well approaches the cutoff score determined to be of clinical significance. While the ideators mean score was 10% lower than the Attempters score, the standard deviation reported for the Ideators indicates that some of the sample had scores at or above the cutoff score of 77. The Nonsuicidals scored well below the cutoff score of 77.

The SIQ suggests a cutoff score of 30 for large-scale screenings. As indicated in Table 10, the Attempters scored significantly higher (M=76.7, SD=45.3) on the SIQ than the other two groups. Ideators were found to have a mean score of 38.1 (SD= 33.8) which is above the cutoff score of 30 indicating numerous suicidal thoughts occurring at high frequency. Nonsuicidals scored well below the cutoff score.

The Hopelessness Scale for Children (HSC) delineates a score of 7 or higher to be indicative of high levels of hopelessness about the future. Scores of 4 or less are indicative of low feelings of hopelessness. Clearly, the Attempters scores indicate a high level of hopelessness among the group (M=7.4, SD=4.8) while the Ideators and Nonsuicidals scored in the range of low levels of hopelessness.

The LES-A reports a range of scores for adolescents ages 14 to 19 years to fall between 170 and 220. All of the groups scored above the range suggested by Coddington. Attempters scored significantly higher (M=317.9, SD=187.6) than the Ideators and the Nonsuicidal groups. While the Attempters overall mean score was significantly higher than the Ideators, indicating a higher intensity of stressors, the mean number of life events reported was the same for both groups.

Discussion of the significant differences found between the three groups on the self-report measures. As indicated by the ANOVA's performed on the data and the frequency distributions of the scores, both between and within group differences were found to exist across all four of the measurement instruments indicating that the self-report measures do indeed differentiate group membership.

It is not surprising that the Attempters consistently scored at or above the cutoff scores across all the self-report measures for depression, suicidal ideation, hopelessness and stressful life events. Numerous studies have demonstrated a significant relationship between suicidal behaviour and depression in adolescents (Carlson & Cantwell, 1982; Clarkin, Friedman, Hurt, Corn, & Aronoff, 1984; Hawton, 1986; Robbins & Alessi, 1985). While this study did not find the mean depression score to be above the cutoff score suggested by Reynolds, it was nonetheless significant. It is

important to note that not all adolescents who manifest significant levels of suicidal behaviour also manifest depression. The relationship between suicidal behaviour and depression is often inconclusive. Further, almost all the studies cited in the literature utilize clinical samples of adolescents found in the psychiatric population. Further research is needed to examine the relationship between Attempter, Ideators, and Nonsuicidal adolescents in normative populations.

Findings from the Hopelessness Scale yield significant results for the Attempter group however, the Ideator group did not present with a high level of hopelessness as one would expect. While hopelessness was found to significantly differentiate the three groups, closer examination of the hopelessness score for the Ideator group is disappointing. A review of the literature appears to indicate that hopelessness may be a better predictor of suicidal intent than depression (Kazdin et al., 1983; Margulies, Davis, & Karam, 1980). Again, studies with normative populations are critically important as findings from clinical populations may not be generalizable to normative populations of adolescents.

The findings also indicate a relationship between life stress and suicidal behaviour. This finding is strongly supported in the literature as life stress measures have consistently proven to be strong predictors of suicidal behaviour and ideation (Cohen-Sandler, Berman, & King, 1982;

Garfinkel, Froese, & Hood, 1982; Gispert, Wheeler, Marsh, & Davis, 1985). Clearly, Attempters reported a significantly higher stressful life events score than the other two groups. Similarly, Ideators reported a higher stress score than the Nonsuicidal group. Rosenstock (1985) stated that it is not the nature of the stressful events, but rather the number and intensity of life events experienced that differentiates the client population from the general population.

Finally, the findings from the SIQ measure are quite encouraging as the scale appears to be of particular clinical utility in differentiating the three groups under investigation and appears to be a reliable measure to use in school wide screenings.

Which variables under investigation are most likely to predict suicidal ideation or behaviour among adolescents? A stepwise multiple regression analysis was conducted to determine which variables would predict group membership. For the purpose of this regression analysis, group membership would consist of both ideators and attempters. A multiple regression looks at several variables and their power to predict the value of another variable. In this case the variables used from the Chi-square analysis that were found to be significant were loaded in stepwise fashion into the regression equation, with the dependent variable defined as group membership. Fourteen variables (Sex, Grade, Age,

Marital Status, Academic Standing, Drug Use, Alcohol Use, Knowing Attempter, Family Attempter, Depression Score, Suicide Score, Hopelessness Score, Stress Score, and Number of Events) were entered into the model. Results of the regression analysis are presented in Table 11.

TABLE 11

Predictors of Suicidal Behaviour: Stepwise Multiple Regression Analysis

Variable	R	R^2	Beta	F to enter
Suicidal Ideation Score	.63	.40	-.47	186.14
Depression Score	.66	.43	-.19	106.34
Alcohol Use	.67	.45	.14	76.57
Marital Status	.68	.46	-.11	59.97

Four variables: suicidal ideation score, depression score, alcohol use, and marital status, were revealed as the best predictors of suicidal ideation and behaviour. The coefficient of multiple correlation was .68; a significant regression model, $F(4, 279)=60.0$, $p<.05$, indicated that 46% of the variance was accounted for by these four variables.

The strongest significant predictor of membership in the attempter and ideator group was the suicide ideation score accounting for 40% of the variance in the criterion variable.

Discussion of variables found to predict suicidal ideation or behaviour among adolescents. Of the fourteen

variables found to be significant in the Chi-square analysis stepwise regression identified only four variables to be predictive of suicidal ideation and behaviour among this sample of adolescents. The variable found to be most predictive was suicidal ideation. This finding is consonant with other studies and is well documented in the literature. Suicide ideation, specifically, thoughts and cognitions about taking one's life is both a primary marker for suicidal risk (Bonner & Rich, 1987; Linehan, 1981; Shafii, Carrigan, Whittinghill, & Derrick, 1985) and a basic component in the classification of suicidal behaviours (Pfeffer, 1986; Pokorny, 1974). The identification of adolescents' severity of suicidal ideation serves as a viable proactive approach for the identification of youth at risk for suicide. While it is not suggested that all adolescents who have suicidal ideation will attempt suicide, such behaviour as was found in this study is a precursor for the vast majority who do attempt suicide (Reynolds, 1986). Further, it appears that the reliability and validity of the Suicidal Ideation Questionnaire reported by Reynolds is well supported in this study.

Depression was also found to be predictive of suicidal behaviour and ideation among adolescents. This finding, discussed at length in this report, is consistently reported by numerous research studies (Carlson and Cantwell, 1982; Pfeffer, Soloman & Plutchik, 1982; Kosky, Silburn & Subrick,

1986). McGuire (1983) warns that while suicide and depression are not synonymous, depression is still the best indicator of potential suicide.

It is interesting to note that while few studies of suicidal ideation and behaviour among adolescents in the general population exist, for the purpose of comparison, this study reports similar findings to those studies undertaken with clinical populations. Further research should be undertaken to compare clinical populations with normative populations to examine the similarities and differences between these two groups.

Alcohol usage was also found to be a predictive variable as reported in the regression analysis. This finding is similar to the results noted by Pfeffer and colleagues (1988) who found that alcohol abuse was one of the best predictors of severity of suicidal behaviour in their sample of 200 adolescent psychiatric inpatients. Further, in a nonclinical population study of high school and college students, Wright (1985) found that suicidal adolescents were three to six times more likely than their classmates to report drinking or drug abuse problems. The significance of this finding points to the critical importance of screening adolescents known to utilize alcohol for potential suicidal risk.

The last variable found to be predictive of suicidal behaviour was parental marital status. Interpretation of this finding is limited due to the lack of comparison studies

available. This finding has not been reported in similar research studies. However, studies do report significant correlations between family dynamics and suicidal behaviour. Inferences regarding family dynamics and suicidal behaviour can not be made in this study as related factors were not examined. Although this variable was found to be significant, it appeared that marital status accounted for 1% of unique variance over and above alcohol use, depression score and suicide score.

The lack of findings of the Hopelessness Scale is surprising. The Hopelessness Scale was incorporated into this research design specifically due to research that supports the correlation between hopelessness, depression, and suicidal intent (Wetzel, Margulies, Davis, & Karam, 1980; Beck, et al., 1985; Kazdin et al., 1983). These studies point to hopelessness as a more important construct than depression in predicting potential suicidal risk.

The present findings provide support that the variables identified as predictive of suicidal behaviour among the adolescents sampled in this study warrant further investigation. The fact that these variables account for only 46% of the variance suggests that other factors also are associated with risk for suicidal behaviour among high school students. Studies of suicidal behaviour have found that a multiplicity of variables impinge on the etiology of suicide. For example, stressful life events have repeatedly been shown

to increase the risk of suicidal behaviour when other psychodynamic factors are present. While this study did not find stress to be predictive of suicidal behaviour in this sample of adolescents, further research is warranted.

Summary

Analysis of the data revealed that the findings apparent in this study are consistent with similar studies discussed in the review of the literature. The study presents several correlates of suicidal behaviour among a normative adolescent population that bear striking similarities to correlates found to exist in clinical population studies. Suicidal ideation, depression, alcohol usage and parental marital status were found to be predictive of membership in a suicidal behaviour (defined as attempters and ideators) group.

More importantly, the findings of this study provide critical information to facilitate the identification of at-risk adolescents. Further, the information provided from the study may help to formulate more effective assessment and intervention strategies and hopefully, more comprehensive school wide primary prevention programs for our children and youth.

CHAPTER V

Conclusions and Recommendations

The conclusions and recommendations regarding this study most appropriately begin with a poem written by a 16 year old girl shortly before she committed suicide. The poem tragically yet eloquently describes the feelings of isolation, hopelessness and cognitive rigidity that has been described throughout this study.

Time to Sleep

Let me end my life
or do it for me
I have asked you several times,
but you were not listening.

Can't you see the determination
as it hardens the lines of my face,
Takes the sun from my mouth?
Do you feel the pain
as I clutch your arm
and seek your eyes to understand?

I will do it,
if you won't
Just give me...
time to know your every move,
the weakness of your defenses
and the successful penetration
of this locked door.

Options?
I have none.
I have...nobody.
I have...nothing.
I am...nothing!

For me,
Time can not change the reality of this moment.

Through spring's cloudy mornings
and cold nights obscured by fog
I have not slept.

Each day the cycle repeats itself.
I will do it.
Perhaps tonight
when the world sleeps,
I will too!
(Gagne, 1985)

Adolescent suicide, is indeed, a tragic and complex phenomenon that poses a challenge to all mental health practitioners to help contribute to decreasing the incidence and prevalence of suicidal behaviour among our youth. As was evident in the review of the literature, suicidal behaviour among adolescents precludes a linear explanation due to the multiple psychodynamic, familial, and environmental variables that interact simultaneously. This study has attempted to examine some specific correlates of adolescent suicidal behaviour found in a normative sample of high school students.

Unravelling the causes of suicidal behaviour among adolescents is a difficult task, largely because of the necessarily retrospective nature of such inquiry. In this study, a number of variables were found to significantly differentiate the three groups under examination; Attempters, Ideators and Non-suicidal adolescents. Hopelessness, depression, suicidal ideation, stressful life events, drug and alcohol usage, family history of suicidal behaviour and various demographic variables were found to correlate with group membership. These findings, while similar to existing studies, are unique in that they are similar to findings found in clinical populations and therefore add to our knowledge regarding normative populations.

The prevalence of suicidal behaviour among adolescents can not be ignored. This study indicates that 5 out of 10 or half of all students in the school population have experienced some level of suicidal behaviour ranging from thoughts and gestures to suicide attempts. This finding, while not uncommon is quite alarming. Clearly, while very few adolescents who think about suicide will go on to make an actual attempt, suicidal ideation, as proven in this study, remains to be the best predictor of suicidal behaviour and is a precursor to suicide attempts. Further, Murphy (1985) reports that two thirds of attempters never make another attempt, however 10% to 20% will make a repeat attempt within a year; and about 10% will eventually take their lives, 1% to 2% within a year.

If the range of suicidal behaviours reflects an underlying continuum or spectrum rather than discrete behaviours, information regarding each type of suicidal behaviour is critically important. Without such knowledge, the development of effective intervention and prevention strategies is impossible. While the purpose of this study was to examine the nature and extent of suicidal behaviour in a high school sample, a secondary but equally important purpose was to gather information to facilitate more effective prevention and intervention strategies in order to decrease the prevalence of suicidal behaviour among our youth.

To extrapolate beyond the immediate findings leads one to examine the critical role of primary prevention, specifically, suicide awareness and education. Effective dissemination of relevant information can and must be accomplished within our school systems if we are to prevent the tragic and senseless deaths of our children and adolescents. Research clearly indicates that suicide can be prevented (Hawton & Catalan, 1987). Suicidal adolescents give definite warning signs that if recognized, can avert a possible attempt.

The following recommendations have been generated from the review of the literature, the study's findings and the author's clinical experience in working with suicidal adolescents. Recommendations are categorized under the following subsections: 1) educational; 2) clinical; and, 3) research.

I. Educational

Clearly the thrust of the study's findings underscore the need for more effective primary prevention programming in order to decrease incidence and prevalence of suicidal thoughts and behaviours among adolescents. The two major areas of adolescents' world consists of their home and family and their school life and peers. While the stresses that adolescents suffer from can vary, generally, suicidal crises seem to be most frequently precipitated by stresses relating to family and peer relationships (Ross, 1980). The school

system is then, the ideal milieu for the implementation of a suicide prevention program. Teachers have a primary advantage for identifying adolescents at risk for suicidal behaviours. In this regard, the following recommendations are made:

1) Education programs regarding suicide prevention must begin with the dissemination of information dispelling the myths and misconceptions surrounding suicide.

Fear, denial, mythology and stigma immobilize people in learning the truths about suicide and may blind them to even the most obvious warning signs. One of the greatest myths or misconceptions regarding suicide is that talking about suicide implants ideas about suicide that may lead one to make a suicide attempt. The prevalence of this myth caused some of the parents of the students selected for this study to refuse permission to participate due to fear and misconception. Further, the myth is widespread among educators who refuse to discuss suicide with students for fear of the misunderstood contagion effect.

First and foremost, educators, parents and adolescents themselves need to learn the myths surrounding suicide and understand that talking about suicide does not suggest it. Rather, talk about suicide provides the suicidal person a change to air suppressed feelings (Ross, 1980).

2) Educators, parents and adolescents need to learn to recognize the warning signs associated with suicidal behaviour.

Preventive programs nearly always include segments on recognizing the potential warning signs that suicidal individuals transmit. One of the most potent precursors to suicide attempts is suicidal thinking. While not everyone who thinks of suicide as a possible solution to one's problems will go on to make a suicide attempt, suicidal thinking, as was confirmed in this study, remains to be one of the more critical warning signs. Adolescents who indicate thoughts of suicide should be taken seriously. Suicidal talk should never be minimized or negated. Too often, adolescents who voice suicidal thoughts are seen as attention-seeking malcontents who are attempting to manipulate their environment for selfish purposes. Regardless of the intent, suicidal threats should be acknowledged not condemned, dismissed or ignored. Suicidal verbalizations give definite clues to emotional distress that if not recognized may lead to more serious forms of suicidal behaviour.

3) School-based suicide prevention programs should have a wider based approach which includes training regarding effective problem-solving, coping skills, as well as screening tools to identify high-risk youth.

Shaffer and colleagues (1990) evaluated students exposed to several school-based suicide prevention programs and

compared them to students not exposed to a prevention program to determine if exposure to programming would help change beliefs and attitudes about suicide. The researchers reported that "high risk" students evaluated the programs more negatively than students with no history of suicide attempts.

Clearly, school-based suicide prevention programs must include more than simply raising awareness about the problem of suicide, teaching warning signs and discussing resources for seeking help. While these components are of absolute importance, preliminary findings of the utility in reducing suicide potential through preventative programs remain inconclusive. What appears to be lacking is a more comprehensive approach to suicide prevention that includes an in-depth examination and training regarding effective problem-solving approaches, coping skills, communication skills and stress management. Schools need to devote a significant portion of their curricula to teaching problem-solving strategies for students who are faced with difficult life situations. Discussion of coping skills might include examination of maladaptive methods, including suicidal acts as well as healthy adaptive methods. Communication skills should focus the importance of communicating feelings and reducing the stigma associated with asking for professional help when coping strategies become depleted. Finally, stress management programs should encourage and train students to seek out healthy forms of stress reduction thereby discouraging the use

of drug and alcohol consumption for the purpose of stress management.

4) Suicide prevention education must be acknowledged as a priority among school administrators and needs to be incorporated as part of an ongoing process within the school curriculum.

School systems must acknowledge that suicidal behaviour among our youth is a serious problem that needs to be tackled aggressively and proactively rather than passively and reactively.

First and foremost, school personnel need to be provided with ongoing training in the teaching of suicide prevention as well as in the identification of high-risk students. Training of teachers should begin with the incorporation of specific courses related to suicide and suicidal behaviour beginning in Faculties of Education and continuing with ongoing in-service training.

Secondly, schools have typically responded to suicide prevention education by bringing in agencies or professionals for several hours to discuss the topic of suicide with students or teaching staff. Suicide prevention and education is not a self-contained topic of discussion but rather must be seen as an ongoing process that involves a taxonomy of levels of information and therefore needs to be addressed on an ongoing basis.

5) Parents need to be involved in suicide prevention training programs in order to learn to recognize potential warning signs for suicidal behaviour.

Parents are often a forgotten component in suicide awareness and education programming. Parents need to be cognizant of the unique developmental tasks and stresses confronting adolescents and need to be supported in their inherent role in identifying at-risk behaviour in their adolescent. Fear, denial, guilt and lack of knowledge often prevent parents from identifying or acknowledging potential indicators of suicidal behaviour. Further, Meneese and Yutrzenka (1990) state that a significant component of adolescent suicide prevention efforts should focus on improving social climates within families. Parents need to be made aware of the support services and community agencies that are available to assist and support them.

6) Adolescents have a valuable role to play in the prevention of suicidal behaviour and should be trained to identify at-risk peers.

Students need to learn the simple list of signs, familiarize themselves with the myths, and know who among school personnel can provide assistance or refer the suicidal person to outside professionals (Bem, 1987). Students have high credibility with their peers and thus may be more likely to get a suicidal youth to talk than would an adult. This assumption was found in a study by Ross (1980) wherein she

asked high school students the question, "If you were considering suicide, to whom would you turn for help?". Ross noted, "of the possible responses (e.g., parent, other relatives, teacher, school counsellor, nurse, friend), 'friend' was consistently the overwhelming choice" (1980, p. 243). Similarly, Pronovost and colleagues (1990) found that peers are the preferred confidant.

Students in this study were asked for their suggestions regarding the prevention of suicide among their peers. Twenty-seven percent of the students stated that a peer counselling program would be an effective way to help suicidal peers and 25% stated that more counsellors (both guidance and social workers) were needed to be available for students. The remaining respondents felt more education regarding suicide was need (see Appendix C). Clearly, adolescents have an important role to play in the development of suicide prevention programs.

II. Clinical

The results of this study have several clinical implications and the following recommendations have been formulated regarding intervention strategies.

1) High-risk students need to be identified through school wide screening procedures and then assessed individually to determine appropriate treatment strategies.

The Suicide Ideation Questionnaire appears to be a valuable assessment tool to use in school wide screening to facilitate the identification of students who may be experiencing suicidal thoughts. As Reynolds (1988) states, the assessment of suicidal ideation in adolescents is a very serious undertaking that brings with it a responsibility to intervene when significant suicidal thoughts are present. Such intervention may be in the form of referral to appropriate mental health agencies or direct intervention from the examiner. Schools must accept their role as one of the few settings where adolescents thinking of suicide may be identified.

2) Adolescents known to abuse alcohol may be at higher risk for suicidal behaviour and should be screened in this regard.

The findings from the regression analysis indicate that alcohol use is a significant predictor of adolescent suicidal ideation and behaviour. Further, Attempters reported that 70% of the sample used alcohol. Shafii and colleagues (1985) found that 70% of youngsters who end their lives by suicide have associated substance abuse. All students known to abuse alcohol or drugs should be screened for potential risk of suicidal thoughts or behaviours. In addition, more effective strategies to limit the availability of alcohol to minors are desperately needed.

3) Intervention should be targeted at the entire system in which the suicidal behaviour occurs, that is, for the individual, the family, and the community.

Just as suicide prevention must occur at multiple levels of the system, intervention with suicidal individuals must encompass both individual, family and community systems in order to be effective. Attempters indicated that the majority of them had made more than one attempt. This finding points to the need for more aggressive intervention strategies with first time attempters that includes more effective follow up counselling in order to ensure that the adolescent will not engage in recurrent suicidal behaviour.

III. Research

While the literature is replete with numerous studies that examine suicidal behaviour in clinical populations, studies examining the prevalence of suicidal behaviour or ideation in community-based samples are relatively rare. The following recommendations have been formulated for future research studies.

1) Future research is recommended in order to corroborate the findings in this study. In particular, various high schools should be studied to determine if demographic similarities or differences arise in comparison with the results of this study that affect the prevalence of suicidal behaviour.

2) Further research is needed to examine the correlation between alcohol usage and suicidal behaviour. Future research should include more specific measures of substance abuse.

3) The relationship between group membership and marital status warrants further investigation. While one could speculate that separation and divorce mediate the relationship between group membership, future research should discriminate this finding more closely.

4) While a vast amount of research exists that has examined suicide attempters, future research should examine the problem-solving coping skills and cognitive functioning in suicidal ideators. Specifically, what provokes normal adolescents to think of suicide as an option? Perhaps more research in this regard will facilitate the development of more effective preventative strategies in order to decrease the prevalence of this self-destructive behaviour among our youth.

APPENDIX A

LETTERS OF PERMISSION

University of Windsor

February 15, 1989

Mr. M.M. Lozinski
Superintendent of Education
Windsor Roman Catholic Separate
School Board
1485 Janette Avenue
Windsor, Ontario
N8X 1Z2

Re: MSW Research Project
Ms. Anne Gelinas

Dear Mr. Lozinski:

Ms. Anne Gelinas, a graduate student of social work presently completing her practicum at Brennan under the supervision of Neil Van Velzen, has requested that I write to you regarding her MSW research project.

I am Ms. Gelinas' thesis chairman and she has been consulting with me on a regular basis in the development of her study which will investigate risk factors related to suicidal behaviour among adolescents. She has submitted a detailed proposal for the study which has been approved by the University of Windsor, School of Social Work. She is requesting permission to conduct her study among a sample of students at Brennan High School. She has shared her proposal and discussed it with Mrs. Janet Ouellette, the principal, who I understand is supporting Ms. Gelinas' request.

The study will be conducted in such a way as to create minimal inconvenience to staff and students. The study is entirely voluntary and confidential, and of course the necessary permission to participate (informed consent) will be received in accordance with the policies of both the School Board and the University.

As Ms. Gelinas states in her proposal, "increased knowledge of the contributory factors associated with suicidality may facilitate development of more effective strategies for primary prevention within our school system". The efforts of both teachers and school social workers in meeting the educational needs of adolescents should be facilitated by the findings of the study. Indeed, participating in the study itself should be a positive educational experience for the students who do so.

STAFF MEMO:

This memo is to inform you that on WEDNESDAY, APRIL 12th, I will be conducting a testing session in the South Cafeteria with 340 students from grades 9 through 12 during PERIOD 1. As we have shortened periods that day, the testing session may run into part of period 2

I am conducting a study on suicidal behaviour at Brennan as part of my thesis for my master's degree in social work. Hopefully, the study will generate some implications for suicide prevention within your school system.

It is important that I obtain the participation of as many of these 340 students as possible so that my sample of students will be representative of the school population. I am asking for your assistance in directing the students from your homeroom to the SOUTH CAFETERIA PERIOD 1 on Wednesday, April 12th. On Tuesday, April 11th, I will be distributing a list of students in your homeroom that have been selected to attend the session. I will place the list in your mailbox so please check your mailbox on Wednesday morning, April 12th. If you have any questions or concerns please feel free to contact me.

Your cooperation is greatly appreciated.

Anne Gelinas
Social Worker

Dear Mr. Ms._____:

Today, Wednesday, April 12th, Period 1, I am conducting a testing session in the South Cafeteria. Please direct the following students to the South Cafeteria at 8:55. I will be explaining the study to the students when they arrive. Once again, your co-operation is greatly appreciated.

Anne Gelinas
Social Worker

F.J. Brennan
Catholic
High School

910 Raymo Road, Windsor Ont.
N8Y 4A6 (519) 945-2351

Janet M. Ouellette
PRINCIPAL

98

James Byrne
Darlene Kennedy
Frank Marcon
VICE-PRINCIPALS

April 5, 1989

Dear Parents:

Your son/daughter has been randomly selected to participate in a study on suicidal behaviour at Brennan that I am conducting as part of my masters degree in social work at the University of Windsor. I have received full approval to conduct this study at Brennan from both Mr. Lozinski; the superintendent, and Mrs. Ouellette. My study will have important implications for suicide prevention planning within your school system as well as helping teachers, parents, and professionals to identify students that may be at risk.

The testing session will take place on Wednesday, April 12th during Period 1. I want to assure you that your son's/daughter's participation in this study is entirely voluntary and is strictly anonymous. He/she will not be permitted to give any identifying information. This means that no student will be signing their name, address, phone number or any other revealing information.

It is important that your child participate in this study. If you DO NOT wish your child to participate in this study, please call me at 945-2351 before Wednesday, April 12th. If you have any questions or concerns about the study, please feel free to contact me. I would be happy to discuss my study with you. If you do not call, I will assume the approval of your child's participation. Your co-operation is greatly appreciated.

Sincerely,

Anne Gelinas
Social Worker

APPENDIX B

DATA COLLECTION INSTRUMENTS

Instructions

The following questionnaire package has five parts. All scales have directions on the top of the page. Be sure to read all instructions carefully before answering any questions. There are no right or wrong answers so please answer honestly. DO NOT write your name or any other identifying information on any of the sheets. It is very important that you answer ALL the questions. Please do not leave any questions blank or your response will be disqualified. When you are finished, please return the package to me and return to your seat quietly.

Your participation is greatly appreciated.

Anne Gelines
Social Worker

Demographic Questionnaire

Please answer all questions and do not leave any questions unanswered. Your response is completely anonymous so please answer honestly. Check only one response.

1. Your sex is..... male female

2. Your present grade level is..... 9 10 11 12

3. Your age is _____

4. Your religious denomination is:
   - Roman Catholic
   - Protestant
   - Hindu
   - Other _____

5. Your race is:
   - Caucasian
   - Negro
   - Hispanic
   - Oriental
   - Native Indian
   - Other _____

6. Your parent(s) marital status is:
   - married
   - separated
   - divorced
   - single
   - remarried
   - deceased

7. Which of the following are you?
   - only child
   - oldest child
   - middle child
   - youngest child

8. Your present academic standing is:
   - 90-100%
   - 80-90%
   - 70-80%
   - 60-70%
   - 50-60%
   - under 50%

9. Do you use drugs? Yes No

10. Do you use alcohol? Yes No

11. Have you ever made a suicide attempt? Yes No
    If yes: a)How many times ?_____
    b)What method did you use?_____

12. Have you ever thought about killing yourself but have never attempted suicide? Yes No

13. Do you know someone who has attempted suicide? Yes No

14. Do you have a family member who has attempted or committed suicide? (Circle attempted or committed) Yes No

15. What do you think can be done within the school to prevent or help students who are thinking about suicide?

_____

_____

_____

_____

_____

Name _____

Age _____ *Grade* _____

Sex _____ *Date* _____

ABOUT MYSELF

RADS Form HS

by William M. Reynolds

Side One Directions

On the back of this page are a number of sentences that people use to describe their feelings. You will be reading each sentence and deciding how often you feel the way the sentence describes. There are no right or wrong answers. Just remember to answ .r the way you really feel.

PAR Psychological Assessment Resources, Inc.
P.O. Box 998 / Odessa, Florida 33556

9 8 7 6 5 4 3 2 Printed in U.S.A.

This form is printed in blue ink on white paper. Any other version is unauthorized.

Reorder #1256-AS

Side Two Directions

Listed below are some sentences about how you feel. Read each sentence and decide how often *you* feel this way. Decide if you feel this way: almost never, hardly ever, sometimes, or most of the time. Fill in the circle under the answer that best describes how you really feel. Remember, there are no right or wrong answers. Just choose the answer that tells how you usually feel.

	ALMOST NEVER	HARDLY EVER	SOME TIMES	MOST OF THE TIME
1. I feel happy	○	○	○	○
2. I worry about school	○	○	○	○
3. I feel lonely	○	○	○	○
4. I feel my parents don't like me	○	○	○	○
5. I feel important	○	○	○	○
6. I feel like hiding from people	○	○	○	○
7. I feel sad	○	○	○	○
8. I feel like crying	○	○	○	○
9. I feel that no one cares about me	○	○	○	○
10. I feel like having fun with other students	○	○	○	○
11. I feel sick	○	○	○	○
12. I feel loved	○	○	○	○
13. I feel like running away	○	○	○	○
14. I feel like hurting myself	○	○	○	○
15. I feel that other students don't like me	○	○	○	○
16. I feel upset	○	○	○	○
17. I feel life is unfair	○	○	○	○
18. I feel tired	○	○	○	○
19. I feel I am bad	○	○	○	○
20. I feel I am no good	○	○	○	○
21. I feel sorry for myself	○	○	○	○
22. I feel mad about things	○	○	○	○
23. I feel like talking to other students	○	○	○	○
24. I have trouble sleeping	○	○	○	○
25. I feel like having fun	○	○	○	○
26. I feel worried	○	○	○	○
27. I get stomachaches	○	○	○	○
28. I feel bored	○	○	○	○
29. I like eating meals	○	○	○	○
30. I feel like nothing I do helps any more	○	○	○	○

RS	
TOTAL %	
_____ %	

CI	

Name _____

Age _____ *Grade* _____

Sex _____ *Date* _____

ABOUT MY LIFE

SIQ Form HS

by William M. Reynolds

Side One Directions:

On the back of this page are a number of sentences about thoughts that people sometimes have. You will be reading each sentence and deciding how often you have the thought the sentence describes. There are no right or wrong answers. Just remember to answer the way you really think.

PAR Psychological Assessment Resources, Inc.
P.O. Box 998 / Odessa, Florida 33556

9 8 7 6 5 4 3 2

Printed in U.S.A.

This form is printed in turquoise ink on white paper. Any other version is unauthorized

Side Two Directions:

Listed below are a number of sentences about thoughts that people sometimes have. Please *indicate which of these thoughts you have had in the past month.* Fill in the circle under the answer that best describes your own thoughts. Be sure to fill in a circle for each sentence. Remember, *there are no right or wrong answers.*

This thought was in my mind	Almost every day	Couple of times a week	About once a week	Couple of times a month	About once a month	I had this thought before but not in the past month	I never had this thought
1. I thought it would be better if I was not alive	○	○	○	○	○	○	○
2. I thought about killing myself	○	○	○	○	○	○	○
3. I thought about how I would kill myself	○	○	○	○	○	○	○
4. I thought about when I would kill myself	○	○	○	○	○	○	○
5. I thought about people dying	○	○	○	○	○	○	○
6. I thought about death	○	○	○	○	○	○	○
7. I thought about what to write in a suicide note	○	○	○	○	○	○	○
8. I thought about writing a will	○	○	○	○	○	○	○
9. I thought about telling people I plan to kill myself	○	○	○	○	○	○	○
10. I thought that people would be happier if I were not around	○	○	○	○	○	○	○
11. I thought about how people would feel if I killed myself	○	○	○	○	○	○	○
12. I wished I were dead	○	○	○	○	○	○	○
13. I thought about how easy it would be to end it all	○	○	○	○	○	○	○
14. I thought that killing myself would solve my problems	○	○	○	○	○	○	○
15. I thought others would be better off if I was dead	○	○	○	○	○	○	○
16. I wished I had the nerve to kill myself	○	○	○	○	○	○	○
17. I wished that I had never been born	○	○	○	○	○	○	○
18. I thought if I had the chance I would kill myself	○	○	○	○	○	○	○
19. I thought about ways people kill themselves	○	○	○	○	○	○	○
20. I thought about killing myself, but would not do it	○	○	○	○	○	○	○
21. I thought about having a bad accident	○	○	○	○	○	○	○
22. I thought that life was not worth living	○	○	○	○	○	○	○
23. I thought that my life was too rotten to continue	○	○	○	○	○	○	○
24. I thought that the only way to be noticed is to kill myself	○	○	○	○	○	○	○
25. I thought that if I killed myself people would realize I was worth caring about	○	○	○	○	○	○	○
26. I thought that no one cared if I lived or died	○	○	○	○	○	○	○
27. I thought about hurting myself but not really killing myself	○	○	○	○	○	○	○
28. I wondered if I had the nerve to kill myself	○	○	○	○	○	○	○
29. I thought that if things did not get better I would kill myself	○	○	○	○	○	○	○
30. I wished that I had the right to kill myself	○	○	○	○	○	○	○

TS	
TOTAL %	
_____ %	

CI	

HPLS-SCALE

Instructions to the child:

These sentences are about how some kids feel about their lives. Your answers let us know about how kids feel about things. I am going to read each sentence to you. I'd like you to tell me if the sentence is true for you or false for you. If the sentence is how you feel, you would say it is like you or true. If the sentence is not how you think or feel, you would say it is not like you or false.

Let's try some examples:

A. When I grow up, I want to be a teacher. true false

B. I don't think I will have a pet when I grow up. true false

(For each example, stop to explain what the answer given by the child means.)

There are no right or wrong answers. Just tell me if the sentence is like you or not like you--true or false.

T	F	1.	I want to grow up because I think things will be better.
T	F	2.	I might as well give up because I can't make things better for myself.
T	F	3.	When things are going badly, I know that they won't be bad all of the time.
T	F	4.	I can imagine what my life will be like when I'm grown up.
T	F	5.	I have enough time to finish the things I really want to do.
T	F	6.	Someday, I will be good at doing the things that I really care about.
T	F	7.	I will get more of the good things in life than most other kids.
T	F	8.	I don't have good luck and there's no reason to think I will when I grow up.
T	F	9.	All I can see ahead of me are bad things, not good things.
T	F	10.	I don't think I will get what I really want.
T	F	11.	When I grow up, I think I will be happier than I am now.
T	F	12.	Things just won't work out the way I want them to.
T	F	13.	I never get what I want, so it's dumb to want anything.
T	F	14.	I don't think I will have any real fun when I grow up.
T	F	15.	Tomorrow seems unclear and confusing to me.
T	F	16.	I will have more good times than bad times.
T	F	17.	There's no use in really trying to get something I want because I probably won't get it.

LIFE EVENT SCALE — ADOLESCENTS (Age 12 and over)

NAME _____ DATE _____ AGE ____ SEX ____ RACE ____

If any of the events listed below occurred in the PAST 12 MONTHS, write the weight in the correct column on the right	WEIGHT	SUMMER June July Aug	FALL Sept. Oct. Nov.	WINTER Dec Jan. Feb	SPRING Mar. April May
The death of a parent	108				
The death of a brother or sister	88				
Divorce of your parents	70				
Marital separation of your parents	62				
The death of a grandparent	52				
Hospitalization of a parent	52				
Remarriage of a parent to a step-parent	51				
Birth of a brother or sister	50				
Hospitalization of a brother or sister	49				
Loss of a job by your father or mother	46				
Major increase in your parents' income	41				
Major decrease in your parents' income	43				
Start of a new problem between your parents	41				
End of a problem between your parents	30				
Change in father's job so he has less time home	35				
A new adult moving into your home	34				
Mother beginning to work outside the home	28				
Being told you are very attractive by a friend	26				
Going on the first date of your life	42				
Finding a new dating partner	34				
Breaking up with a boy/girl friend	39				
Being told to break up with a boy girl friend	35				
Start of a new problem between you and your parents	43				
End of a problem between you and your parents	35				
Beginning the first year of senior high school	19				
Move to a new school district	41				
Failing a grade in school	47				
Suspension from school	34				
Graduating from high school	33				
Being accepted at the college of your choice	39				
Recognition for excelling in a sport or other activity	24				
Getting your first driver's license	32				
Being responsible for an automobile accident	36				
Becoming an adult member of a church	25				
Being invited to join a social organization	18				
Being invited by a friend to break the law	21				
Appearance in a juvenile court	31				
Failing to achieve something you really wanted	32				
Getting a summer job	35				
Getting your first permanent job	40				
Deciding to leave home	41				
Being sent away from home	46				
Being hospitalized for illness or injury	50				
Death of close friend	63				
Becoming involved with drugs	45				
Stopping the use of drugs	30				
Finding an adult who really respects you	22				
Getting pregnant or fathering a pregnancy	Boys 61, Girls 88				
Getting married	78				
Outstanding personal achievement (special prize)	39				
Other events (describe and check column)					

SCORING INSTRUCTIONS:

1. If any events were added at the bottom of the page, a weight must be assigned. Use the weight assigned to some similar event on the list and place it in the appropriate column.

2. Three-month Scores are computed simply by adding the numbers in each column.

3. Six-month Scores must be adjusted to allow for the attenuation of the effect of events that occurred more than three months ago. To do so add the most recent Three-month Score to 75% of the next most recent Three-month Score.
   Example: A child participating in a study in mid January reported the following Three-month Scores: Summer 80, Fall 40, Winter 0, and Spring 50. The most recent Three-month Score is 40 and the next most recent 80. The Six-month Score is 40 + (75% of 80) = 40 + 60 = 100.

4. Nine-month Scores can be determined by adding 50% of the next most recent Three-month Score to the Six-month Score. In the above example this would be (50% of 50) since the study was carried out in January, added to 100. The Nine-month Score is 125.

5. One-year Scores are computed in the same way, adding 25% of the most distant Three-month Score, 0 in this example.

INTERPRETATION OF SCORES:

The table below can be used as a guide, the figures are not precise and may not be generalizable to other geographic locations. The majority of healthy children and adolescents will obtain scores below these figures. Higher scores seem to increase risk of behavioral symptomatology two to three fold.

Approximate upper limit scores for
seventy five percent of a young population

	Length of Scoring Period			
Age	Three Months	Six Months	Nine Months	Twelve Months
8 -10	50	95	110	110
11 -13	60	115	130	135
14 - 16	75	140	160	170
17 - 19	90	170	195	200

APPENDIX C

TABLE 12

TABLE 12

Frequency and Percentage Distribution of Student Responses to Question Regarding Primary Prevention N=293

Responses	Frequency (n)	Percentage (%)
Peer counselling	90	26.2
More counsellors (guidance, social work)	83	24.1
Open communication	53	15.4
More suicide education for students	32	9.3
Preventative program in curriculum	32	9.3
Education of staff	30	8.7
Nothing can help	14	4.1
Education of family	5	1.5
Suicide hotline	4	1.2
Screening of students	1	0.3

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VITA AUCTORIS

Anne M. Gelinas was born July 11, 1959 in Windsor, Ontario. She attended St. Maria Goretti and St. Louis elementary schools and graduated from Riverside Secondary High School in 1977. Anne began her post-secondary education in 1981 on a part-time basis majoring in psychology and social work at the University of Windsor, Ontario. In 1986, she graduated with an Honours Bachelor of Social Work degree. Following graduation Anne was employed at Maryvale Adolescent Treatment Centre. In the fall of 1988, Ann enrolled in the Master of Social Work program at the University of Windsor, Windsor, Ontario.

Currently, Anne is employed as a school social worker with the Roman Catholic Separate School Board and is actively involved with the Windsor-Essex County Suicide Prevention and Awareness Committee as well as several committees in the Windsor community. Anne is married and has two children, Andrea and Chris.