2000

Does the theory of planned behaviour predict suicidal intent?

Gail Anne. Matheson
University of Windsor

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

Does the Theory of Planned Behaviour Predict Suicidal Intent?

By

Gail Matheson

A Dissertation
Submitted to the Faculty of Graduate Studies and Research
through the Department of Psychology
In Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy at the
University of Windsor
Windsor, Ontario, Canada
2000

Abstract

It is generally recognized that a variety of factors contribute to suicide. No single determinant is either necessary or sufficient to bring about suicide. A theoretical framework within which to consider how suicide becomes an acceptable option for some people is needed. The Theory of Planned Behaviour was applied to suicidal behaviour, and it was hypothesized that the attitude one holds towards suicide, the subjective norms one experiences regarding suicide, and the sense of perceived behavioral control that one has with regard to suicide would predict suicidal intent. Participants completed a survey measuring these variables based on a vignette about suicide. It was found that attitude towards suicide, subjective norm, and perceived behavioral control accounted for 72% of the variance in suicidal intent, with perceived behavioural control being primarily responsible. Further, these variables accounted for more of the variance than hopelessness or depression, which are generally considered to be highly predictive of suicidal intent. Implications for suicide prevention efforts are discussed.

TABLE OF CONTENTS

List of Tables

List of Figures

Chapter I

Introduction

Suicide in Canada

Since 1978, approximately 3500 Canadians have committed suicide annually. Almost four times as many males as females commit suicide, and there is a continuing trend for suicide rates to be higher in young persons. Suicide ranks fourth in causes of potential years of life lost among men and women (surpassed only by cancerous malignancies, coronary heart disease, and injuries) (Health Canada, 1997). Historically, some suicide attempts may be recorded as injuries if intent cannot be determined. As such, the incidence of suicide may be underreported.

In Canada, the suicide rates have remained relatively stable between 1981 and 1997, with a slight downward trend. The overall rates for men and women demonstrate an overall trend of 3 to 4 times as many suicides for men as for women. Those individuals aged 15-19 continue to demonstrate a disturbing upward trend in suicide rates. Adolescent suicide continues to be a concern among Canadian youth (Health Canada, 1997).

In Canada, and most other countries (World Health Organization, 1999), females attempt suicide at a much higher rate than males. Males generally use more lethal means

in their attempts and are therefore more likely to die from their attempt. Men are more likely to use firearms, hanging or asphyxiation, while women are more likely to use drug overdoses and asphyxiation (Health Canada, 1997).

The suicide rate in Canada remains unacceptably high compared to international rates. The World Health Organization (1999) reported the rate in Canada to be among the highest one-third (actual ranking was 26) compared to 97 European, American, and Asian countries. The annual suicide rates for men and women in Canada and the United States indicated that up to 1972, the suicide rates were lower in Canada than in the United States (Lester & Leenaars, 1998). From 1977 onwards, the suicide rates in Canada were and continue to remain higher than those in the United States (Lester & Leenaars, 1998; World Health Organization, 1999)

Pritchard (1992) compared standardized general and youth suicide mortality figures for 21 Western countries in 1973 and 1987. The 1987 male suicide mortality rate was at least 20% higher than the 1973 rate in 17 of the 21 countries, with the average change being an increase of 35%. Changes in the general suicide rates ranged from an increase of 108% in Ireland to a decrease of 10% in Germany during these years. The increase for Canada was 23%. The overall suicide rates for men and women were only marginally higher in 1992 than in 1985. Although particular age groups showed considerable fluctuation (15-29 and 80+ years of age), few age groups demonstrated a

definitive upward or downward trend over this period (Health Canada, 1994). The trend for higher rates among males remained the same.

With respect to youth, Joffe, Offord, and Boyle (1988) found that in Ontario, 5 to 10% of boys and 10 to 20% of girls aged 12 to 16 years had experienced suicidal ideation or attempted suicide within the previous six months. The prevalence of suicidal ideation among those aged 15 and older was studied by Ramsay and Bagley (1985), who reported that 13% of urban adults in Calgary had made plans for suicide, and 10% had made suicide attempts during their lifetimes. Dyck, Bland, Newman, and Orn (1988) conducted a community study in Edmonton and found that 11.5% of the sample had made plans for suicide, and 3.6% had attempted during their lifetime. Similar results were found by the Ontario Health Survey of 1990 (Ontario Ministry of Health, 1992).

Suicide Terminology

The terms suicide, suicide attempt, self-harming behaviour, and parasuicide are used commonly in the suicide literature. Durkheim (1897/1951) defined suicide as "all cases of death resulting directly or indirectly from a positive or negative act of the victim himself which he knows will produce this result." (p. 23) Common to all definitions of suicide is the intention to die.

A suicide attempt has been defined by some as the act of trying to take one's own life. Shneidman (1985) considered a suicide attempt to be those actions of a person who

intended to commit suicide, but survived or had intervention that did not allow a loss of life to occur. If the person hurt himself or herself, or tried to overdose on drugs, but did not intend to die, (or in fact did not want to die), this behaviour does not qualify as a suicide attempt in the strictest sense. Instead, this behaviour is called self-harming or self -destructive behaviour by some. The British refer to this as parasuicide (Platt, 1989). Those who intend to kill themselves and those who do not are considered to be different populations among suicide researchers (Bedrosian & Beck, 1979).

It is important in suicide research that the particular suicidal behaviour being considered be clearly specified. Variations in terminology and the contradictory findings that result from this lack of a common starting point have limited our understanding of suicide.

Suicide Risk Factors

Epidemiological Approaches to Suicide

It is generally recognized that a variety of neurobiological, psychological, cultural and social variables contribute to suicide. Many sociocultural factors have been demonstrated to contribute in some degree to suicide, such as permissive social attitudes towards suicide and media attention to celebrity suicides (e.g., Stack, 1990), social isolation from a supportive network (e.g., Simonds, McMahon, & Armstrong, 1991), suicide of role models or peers (e.g., Gould, Wallenstein, & Davidson, 1989), and an

environment that facilitates suicide, such as one that permits the ready availability of guns (Health Canada, 1994). Other bodies of research have considered the contributions of perfectionism (e.g., Hewitt, Flett, & Turnbull-Donovan, 1992), biological correlates (e.g., Ashton, Marshall, Hassanyeh, & Marsh, 1994), affective disorders (e.g., Wagner & Linehan, 1994), alcohol (e.g., Nielsen, Senager, & Brahe, 1993) and economic outlook (e.g., Kuda, 1990) to suicidal intent. One can conclude that understanding suicide requires an appreciation of its multidimensional nature.

A substantial body of the suicide research literature documents its psychiatric epidemiology. For example, most public health units in Canada collect epidemiological data concerning the prevalence and incidence of suicide. Typically, suicide rates are reported with age and gender breakdowns, in relation to the prevalence of mental illness for a specified geographical area (Windsor-Essex County Health Unit, 1996). Much of the research in suicide focuses on the relationship between suicide and mental illness, particularly depression, alcoholism, and schizophrenia. Researchers also consider the role of risk factors within the individual, such as hopelessness, a history of poor coping, and difficulties in problem solving.

People who have been diagnosed with clinically severe depression or some other psychiatric disorder demonstrate a statistically higher risk of suicide than the general population (Health Canada, 1994). Tanney (1992) conducted a review of the literature

and reported that mental disorders are more common in populations of persons completing suicide; suicide and suicidal behaviours occur much more frequently in populations of psychiatric patients. Suicide is the major cause of premature death in persons with schizophrenia (Allebeck, 1989). Miles (1977) concluded that as many as 10% of persons diagnosed with schizophrenia eventually die by suicide.

Persons with alcoholism are also over-represented among suicides, and a disproportionately high rate of suicide has been found among alcoholics. The rate of alcoholism among suicide completers may be as high as 21%, and as many as 15 to 18% of alcoholics may ultimately complete suicide (Murphy & Wetzel, 1990; Smart & Mann, 1990).

Depression and Hopelessness

Depression is the most common psychiatric disorder among patients who have attempted suicide (Davis, 1995). Among mental disorders, depression is the most closely associated with suicide. Many studies have found that persons with depressive disorders are at significantly higher risk than the general population for both suicide and non-fatal suicidal behaviours (Tanney, 1992). Some researchers have found rates of depression to be as high as 70% among suicide completers (Barraclogh, Bunch, Nelson, & Sainsbury, 1974).

Silver, Bohnert, Beck, and Marcus (1971) demonstrated the relationship between depression and suicidal intent. Levels of suicidal intent and depression were assessed in forty-five hospitalized suicide attempters. Eighty percent of the suicidal patients fell into the depressive range on the Beck Depression Inventory (BDI). Of these, 49% were catagorized as severely depressed, and 31% were moderately depressed. When suicidal intent scores were grouped according to the patient's depth of depression, significantly higher levels of intent were found at higher levels of depression. There was a significant positive correlation between the BDI scores and suicidal intent ($r = .62$).

Hopelessness has been argued to play a major role in the successful prediction of suicide (Beck, Steer, Kovacs, & Garrison, 1985; Dyck, 1991). Beck (1967) observed that depressed patients appeared to have a "cognitive triad" consisting of negative views of the self, their life situation, and the future. The relationship between suicidal intent and negative views of the future contributed to the development of a hopelessness scale (Beck, Weissman, Lester, & Trexler, 1974). Beck found that the major source of variance in suicidal intent is hopelessness (Beck, Steer, & McElroy, 1982).

Perhaps unsurprisingly, the relationship between hopelessness, depression, and suicide appears to be strong. Within parasuicidal populations, hopelessness has been found to mediate the relationship between depression and suicidal intent (Salter & Platt, 1990) and to predict the likelihood of future parasuicidal behaviours (Petrie,

Chamberlain, & Clarke, 1988). Hopelessness has been demonstrated to play a central role in the suicide of children and adolescents. Studies with psychiatric inpatient children have demonstrated hopelessness to be a significant predictor of suicidal intent and ideation, independent of the effects of depression (Asarnow & Guthrie, 1989; Carlson & Cantwell, 1982). Studies of adolescent psychiatric inpatients have found that hopelessness positively covaries with number of suicidal gestures, seriousness of intent, and medical lethality of attempts (Brent, Kolko, Allan, & Brown, 1990; Robbins & Alessi, 1985; Topol & Reznikoff, 1982). Levy, Jurkovic, and Spirito (1995) also reported that hopelessness was the best predictor of suicidal intent and ideation within a sample of male and female adolescent attempters who presented at a general hospital emergency room following a suicide attempt.

Lester (1992b) conducted a review of all the literature concerning suicide written in the English language between 1980 and 1990, a review of some three and a half thousand articles and books. In his section covering depression, hopelessness, and suicide, there is strong evidence of an interrelationship among these variables. Within the same time period, Lester (1992b) summarized a smaller research base that suggested that depression and hopelessness operate independently of each other, with hopelessness acting as the stronger predictor in some cases, and depression in others.

Abramsom, Alloy, and Metalsky (1989) attempted to clarify the relationship between depression and hopelessness, and indirectly, their relationship to suicide. Abramson, Seligman, and Teasdale (1978) proposed a hopelessness theory of depression. One of the assumptions of this approach is that depression is not a single disorder, but is a group or cluster of disorders with similarities in symptoms, cause, treatments, and prevention (Abramson et al., 1989). Using Abramson's language, the "proximal sufficient cause" of the symptoms of hopelessness depression are (a) negative expectations about the occurrence of highly valued outcomes, and (b) expectations of helplessness about changing the likelihood of occurrence of these outcomes.

Within this theory, negative events set the stage for people to become hopeless. It is the inferences about why the event occurred, inferences about the consequences that will result from the negative event, and inferences about the self given that the event occurred, that determine if a person will become hopeless, and therefore the possibility of experiencing hopelessness depression. For example, if a student does poorly on the Graduate Record Exam (GREs), he or she may attribute it to a lack of preparation on his or her part (i.e., why the event occurred). The consequence will be that he or she does not get admitted to the graduate program of choice at this time with the poor GRE results. The individual may then conclude that he or she is lazy and a failure. According to Abramson, inferred negative consequences are particularly likely to lead to hopelessness

when the desired outcome is important, not remediable, not likely to change, and affects a large scope of life. The student in the example would be a likely candidate for hopelessness depression.

Hopelessness is likely to develop into hopelessness depression if other contributory factors exist, such as a lack of social support, or poor coping skills. According to Abramson et al. (1989), hopelessness depression is characterized by suicidality, among other factors (such as sad affect, apathy, sleep disturbance, and lowered self-esteem). Thus, suicidality is seen as a symptom of hopelessness depression, rather than suicidality being caused by depression and hopelessness.

Abramson, Alloy, and Metalsky (1995) admit that the research testing the hopelessness theory of depression is inconclusive. One of the key hypotheses of the theory is that hopelessness precedes and is a cause of the symptoms (such as sad affect, apathy, sleep disturbance, and lowered self-esteem) of hopelessness depression. Recent studies have provided some support for this hypothesis (Rholes, Riskind, & Neville, 1985; Kapci, 1998) and Abramson et al. (1995) have called for a research program that examines and refines the hopelessness theory of depression.

Social Influences on Suicide

Despite a consistent reference by suicidologists to the contribution of both social and psychological factors to suicide, the majority of the epidemiological data and the

research on risk factors has concentrated on internal or within the person factors, such as depression. Bagley and Ramsay (1985) stated that the amount of Canadian research on social factors in suicidal behaviours is small and generally disappointing. They called for a research program on suicidal behaviour that establishes how internal and external (social) factors interact in influencing suicidal actions. This understanding of the impact of the social world has particular implications for prevention programs, because they tend to be forms of social interventions.

Durkheim's Sociological Approach

One of the most influential frameworks for considering the impact of society on suicide is Durkheim's sociological approach. Durkheim's study (1897/1951) originated from his concerns about the lack of scientific rigour characterising the research methodologies in the area of sociology at the time. Suicide was selected as the topic for an application of his proposed methodology, in part because of the clear definition of the act, and because statistics on suicide existed with which to demonstrate the methodology.

Durkheim (1897/1951) presented suicide rates for a number of different European countries at different points in time. He undertook a systematic examination of potential "organic-psychic dispositions" and the influence of the physical environment. Mental illness, race, heredity, climate, temperature, and the seasons were among those factors considered. In each case, Durkheim (1897/1951) concluded that the influence of the

previously cited factors was not sufficient to explain suicidal behaviour. Instead, Durkheim argued that social forces better accounted for variations in suicides. He attempted to determine social causes and social types of suicide, as part of his methodological demonstration. This process included examining variations in suicide rates as a function of different social "concomitants," including: (1) religion, (2) marriage, (3) political and national crises, (4) the degree to which the society has developed, (5) military involvement, and (6) economic crises.

As a result of this examination, Durkheim (1897/1951) proposed three types of suicide: egoistic, altruistic, and anomic. Other authors have referred to a fourth category, fatalistic suicide (Shneidman, 1985). However, for the purposes of this work, only the three directly catagorized by Durkheim will be reviewed.

One of the main conclusions of Durkheim's work was that suicide varies inversely with the degree of integration of society. Durkheim (1897/1951) wrote: "When society is strongly integrated, it holds individuals under its control, considers them at its service and thus forbids them to dispose wilfully of themselves" (p. 209). Egoistic suicide results when an individual experiences a detachment from society, which is termed by Durkheim to be excessive individuation. When the individual experiences what are today termed risk factors (e.g., loss of a loved one, unemployment), the individual is more open to suicide because the inhibiting effect exerted by society is not strong.

Altruistic suicide is, in contrast, the result of insufficient individuation. Altruistic suicide is exemplified by situations where the suicidal act results from the individual failing in his or her obligation, or situations in which the individual believes he or she is dying for the greater good of society (Durkheim, 1897/1951). In these cases, the individual kills himself or herself because it is his or her duty to do so. Durkheim (1897/1951) referred to cultural examples of the time where society imposed the act of suicide, such as the case of Indian women who burn themselves on the funeral pyres of their deceased husbands.

Anomic suicide results from a disruption in society that results in the inability of society to exercise its influence to control suicidal deaths. In the case of anomic suicide, the collective order of society is disrupted by political, economic, or national crises, and during the time required for social order to recover, a greater number of suicides occur (Durkheim, 1897/1951). An example would be the suicides that occurred following the stock market crash that resulted in the Great Depression. Images of businessmen jumping from the windows of their offices remain associated with this event.

Sociocultural factors that might contribute to either egoistic or anomic suicide include permissive social attitudes towards suicide, societal demoralization or fragmentation, and the suicide of role models or peers (Durkheim, 1897/1951). Within

the social psychological research literature, the social factors that have attracted the most attention include attitudes towards suicide, and the influence of social norms.

There is little doubt that society influences individual behaviour. But it is also necessary to understand how this social influence becomes a part of the individual and the choices they make. In particular, we need to know how a person becomes vulnerable to suicide. If Durkheim is correct, and certain types of suicide are influenced by certain social factors, what leads a person to become detached from the suicide-inhibiting influence of society? We still ask the question: What motivates certain individuals to develop suicidal intent, while others in the same situation do not?

Attitudes and Suicide

Attitude toward suicide has received attention in the suicide literature perhaps because of its possible link to suicide prevention. There is an implicit logic that if attitude towards suicide is predictive of suicidal behaviour, then all we have to do is to identify those individuals with the most accepting attitudes towards suicide and change their minds! Simplistic as this may seem, many suicide prevention programs do attempt to make the audience less accepting of suicide as an option for themselves, while promoting an accepting attitude towards those individuals who are suicidal, and therefore need our help. The goal is to reduce the likelihood of an individual choosing suicide themselves,

while increasing the likelihood of that individual being willing to help another person who is at risk for suicide.

There is evidence to suggest that attitudes of the general public towards suicide are more positive than might otherwise be expected for a phenomenon with a strong historical taboo. For example, Domino, Gibson, Poling, and Westlake (1980) surveyed 800 college students using a questionnaire measuring information and attitudes about suicide. They found students' attitudes towards suicide to be generally accepting of the idea of suicide, with more than half saying that they would not be ashamed if a member of their family committed suicide. However, it was still seen by almost half the sample as a moral transgression against the laws of God and nature. Thirty-nine percent of students agreed or strongly agreed with the statement, "Suicide is an acceptable means to end an incurable illness," while 43% disagreed or strongly disagreed. As well, 38% of the students agreed or strongly agreed with the statement " some people are better off dead," while 47% disagreed or strongly disagreed. Similarly, to the statement "People do not have the right to take their own lives," 25% agreed or strongly agreed, 46% disagreed or strongly disagreed, and 29% were undecided. It is somewhat surprising to note the dichotomous responses for most of these statements. As was noted earlier, suicide has a strong historical taboo, and one might expect to see responses leaning more towards the unacceptable side of the scale than they are.

Bagley and Ramsay (1985) surveyed a random sample of 679 subjects drawn from the general population of Calgary, Alberta. Interviews were conducted in the respondents' homes. Information was gathered about respondents' values and attitudes to suicidal behaviour, the prevalence of past or current suicidal ideations in their lives, their experience of suicidal behaviours in others, and their access to potentially lethal methods of self-destruction. Information was also gathered on current mental health, recent experiences of social stress, experiences and problems in the use of alcohol and drugs, recent social network contacts, and perceptions of potential helping resources. The researchers reported a significant correlation (r=.41) between suicidal ideation (past or current) and suicidal actions in an individual's lifetime. The researchers then examined the correlations between the Suicide Opinion Questionnaire (Domino, Moore, Westlake, & Gibson, 1982) factors and suicidal ideations within two groups constructed within the original sample: 631 individuals with no history of suicidal behaviour, and 48 individuals with a history of suicidal behaviours. People with suicidal ideas but no history of suicidal behaviour tended to have higher scores on the Acceptance of Suicide factor. In contrast, those with past suicidal ideas and a history of suicidal actions reported that suicide was an unacceptable answer to stress. Of course, it is possible that attitudes towards suicide do not predict suicidal behaviour. It is also possible, however, that this

group had re-evaluated the outcome of suicidal behaviour based on experience and changed their attitudes towards suicide.

Although there is a relationship between attitude towards suicide and suicidal behaviours, there is not enough evidence to suggest that attitudes towards suicide necessarily predict suicidal behaviour. Research in the area of attitudes and behaviour indicates that general attitudes do not predict individual behaviour (Kraus, 1995). Rather, we need to understand one's attitude towards suicide under very specific conditions to be able to predict the likelihood of an individual's likelihood to perform particular suicidal behaviours under the same conditions (Fishbein & Ajzen, 1975).

Social Norms and Suicide

Examination of the role of social norms has a long history in terms of the suicide literature. Stearns (1921) argued for the impact of social norms on suicidal behaviour:

> Why do not certain forlorn, sick, and friendless ones end it all? Undoubtedly the pressure of public opinion, as expressed by law and church restriction, has had a restraining influence. A hundred years ago, such sermons as Suicide: An Atrocious Offence Against God and Man were thundered from the Protestant pulpit; now many clergymen secretly condone the act. From this it would appear that change of custom is represented by an increased suicide rate. Public health

> measures framed to reduce this cause of death must, therefore, either restore the public opinion that acted as a check on suicide or find a substitute. (p. 755)

Farber (1968) maintained that the probability of an individual committing suicide is partly a function of the degree of tolerance of suicide in society, such that the greater the degree of tolerance, the greater the risk of suicide.

Gibbs (1968) wrote that while it is possible to explain suicide without considering the normative evaluation of the act, variation in the normative evaluation of suicide is one important aspect of suicide. Not only does it require explanation, Gibbs argued, but

> it could also be a crucial factor in the aetiology of suicide, particularly variation in rate. In other words, the possibility should be entertained that some social units have very low suicide rates primarily because the act is subjected to severe social condemnation in those units. (p.16)

Gibbs (1968) questioned whether variation in reactions to suicide within a given society could account for differences in the suicide rate of various sections of the population, or whether increases or decreases in the suicide rates of countries reflected corresponding changes in the norms pertaining to suicide. That is, do norms regarding suicide lead to changes in suicidal behaviours and suicide rates, or does suicidal behaviour lead to changes in the norms we hold regarding suicide?

Bagley and Ramsay (1989) argued that public attitudes toward suicide (which can be conceptualized as social norms) are important parts of the value climate which inhibits or legitimizes suicide. In a study examining the link between religious beliefs and suicide, they found that people with a strong commitment to religious values did not accept the normality of suicide under various circumstances. They saw suicide as a moral crime, and believed that the increase in suicide was the result of the declining influence of religion. Overall, examination of the data suggested that people with a strong current religious commitment tended to report not having experienced suicidal ideas in the past year.

Diekstra and Kerkhof (1989) also argued that society might affect an individual's likelihood of committing or attempting suicide through the transmission of general attitudes towards suicide. They stated that although most researchers in the area of suicide would not disagree with this position, empirical studies comparing prevailing attitudes towards suicide in social groups that differ in their suicide rates are virtually non-existent. A recent exception is a study by Stack (1996) matching estimates of the mean cultural approval rates of suicide in 35 nations with the suicide rates for each of the 35 nations. Covariates such as mean national church attendance, education level, and whether or not the nation had a communist social system were included in a multiple regression analysis. The results suggested that cultural approval of suicide is the most

important correlate of female suicide rates and the second most important correlate of male suicide rates. The models explained between 36 and 44% of the variance in suicide rates.

There is a tendency to consider suicide to be a deviant and irrational behaviour, and researchers tend to examine suicide within the context of deviation from the norm (Singh, Williams, & Ryther, 1986). However, Boldt (1989) reported a growing tendency to move away from predominantly negative conceptions of suicide, toward a view that there are times and situations in which suicide is acceptable, if not appropriate.

Singh et al. (1986) examined public opinion on suicide in four situations: incurable disease, bankruptcy, family dishonour, and being tired of living. Data were drawn from 1977, 1978, 1982, and 1983 general social surveys, with a total sample of 6,521 respondents. Attitudes towards suicide were assessed by asking if the respondent agreed or disagreed that in each of the above four situations, the person has the right to end his or her own life. In each of the four test years, the highest approval for suicide was in the situation where a person had an incurable disease (increasing from 39.2% in 1977 to 49.7% in 1983; percentage differences were statistically significant at or beyond the .001 level). There was very little approval for the situations of family dishonour (ranging from 6.4% to 7.9%), or bankruptcy (ranging from 5.6% to 7.8%). The approval was

somewhat higher in the situation where a person was tired of living (ranging from 12.0% to 14.9%).

Canadian youth suicide rates have increased more rapidly than the rate of any other age group. Between 1965 and 1974, while the rate for all ages of Canadian suicides increased 47%, the youth rate (15-24 years) increased 156%. Most of this increase was due to suicides by young males. Similar increases have been witnessed in other countries, although the rate for Canadian youth exceeds that of the United States. Overall, youth rates in Canada have tripled, making suicide the second leading cause of death among male and female adolescents, next to accidents (Health and Welfare Canada, 1994).

Recognizing the concern over the rise in the suicide rate among youth, Stack, Gundlach, and Reeves (1994) examined social norms among youth towards suicide, and investigated the impact of the heavy metal music subculture on suicide. The researchers used subscriptions to a heavy metal magazine standardized for the size of the youth population. As well, data on suicide in the 50 states plus Washington, DC were obtained. Since heavy metal music is a cultural product consumed primarily by younger age groups, the suicide rate was calculated for ages 15-24, and also for ages 25-34. Suicide rates were calculated per 100,000 persons in a specific age group. Heavy metal music within specific age groups and the corresponding youth suicide rates were significantly correlated. Metal music accounted for 51% of the variance in youth suicide rates, when

socioeconomic status, family functioning, and ethnicity were introduced. This suggests that for at least some young people, belonging to the heavy metal subculture may contribute to a social norm that is accepting of suicide.

At an intuitive level, it makes sense that, as is the case with many other behaviours, suicide is influenced by social norms. There is evidence of a correlation between social norms and suicidal behaviour. However, the research does not address how social norms become internalized, nor do we have a clear understanding of why suicide is acceptable to some, but not to others.

Suicide as Choice

Perturbation and Lethality

Shneidman (1976) documented certain general psychological features which seem to be necessary for a lethal suicidal event to occur. The four which he notes as the most significant are acute perturbation, heightened inimicality, increased cognitive constriction, and the idea of cessation. Acute perturbation refers to an increase in the individual's overall state of upset (Shneidman, 1985). It is consistent with having a number of stressful events in one's life, or having too much to handle. The person may experience a sense of hopelessness about being able to deal with their situation.

A suicidal person also shows signs of heightened inimicality, which is an increase in self-abnegation or self-hate (Shneidman, 1985). The individual's self perception is very negative; it may include shame and guilt. The individual may act as if he or she does not deserve good things.

Shneidman (1985) also noted an increase of constriction of intellectual focus for the person in crisis, which has been sometimes termed tunnel vision or cognitive constriction. The individual, at the point of crisis, is unable to see viable options to suicide, options that would ordinarily occur to the individual under different circumstances.

The final element is the idea of cessation (Shneidman, 1985). This is the realization that it is possible to stop the pain of living. For people who commit suicide, it is not that they do not want to live anymore; rather, it is that they do not want to live like **this** anymore. Cessation is viewed by Shneidman (1985) as the igniting element. While cessation is the idea of ending one's life, lethality is a term that refers to the act with intent which leads to death.

Perturbation and lethality are key to Shneidman's conceptualization of suicide. Shneidman (1985) stated that "no one has ever died from elevated perturbation alone." In other words, many people experience unhappiness, tragedy, or misery, but they do not all kill themselves. Shneidman identified lethality as the element that is dangerous to life. If

one experiences extreme unhappiness, and realizes that it can be ended by taking one's life, then the intention to do so provides the necessary and sufficient elements for suicide to occur.

As a result, Shneidman (1985) stated that the best way to treat a person experiencing high lethality (i.e., a suicidal individual) is to address the perturbation directly, not the lethality. If you can reduce their level of upset, the need to end the pain through suicide is also reduced. It is usually not possible to convince a suicidal person that suicide is a bad idea once they have decided it is an option. But by reducing the pain, and increasing the options to suicide (and thus addressing the cognitive constriction), lethality is also reduced.

Perturbation and lethality are key to understanding when suicide becomes a coping option. However, the issue of how two people can experience elevated perturbation while only one of them considers suicide has not been addressed. Why do some people consider suicide to be an option, while others do not?

Integrating Social and Personal Factors

Almost any article or book regarding suicide describes suicide as complex, multidimensional, or the result of the interaction of a myriad of social and psychological factors. Despite this acknowledgement, most research in suicide is not integrated, and often represents a clinical/psychiatric approach, or a sociological approach. Lester

(1992b) criticized clinical/psychiatric research for appearing to be the result of a convenient data base of a sample of psychiatric patients, resulting in studies that are often without a theoretical basis or theoretical relevance. Similarly, he has argued that sociological and psychological research needs to move beyond identifying correlates of suicide, and move more towards more comprehensive theories of suicide.

It is clear from the above bodies of research that no single determinant is either necessary or sufficient to bring about suicide. Although risk factors like depression or attitudes towards suicide are useful in conceptualizing suicidal behaviours in a group of clinically defined people, they are less useful as predictors of suicide for individuals.

In the broad field of mental health, the message that mental illness is just like physical illness (like diabetes or cancer) was a focus of the social marketing of the idea of not hiding, and thus promoting, help-seeking for mental illness. Even today, the Canadian Mental Health Association promotes itself on billboards as "A health club for your mind," reinforcing the idea that mental and physical health (and therefore illness) are parallel. There is something appealing to this conceptualization of mental illness; very few people blame someone for suffering an attack of appendicitis. Suicidality is often seen as an illness; in fact, it is cause for hospitalization. Suicide is viewed by some as the inevitable result of mental illness.

However, in the introduction to its 1994 report, the Task Force on Suicide in Canada stated "Suicide is an action; it is not an illness." Silverman and Maris (1995) argued that "a suicide is, by definition, not a disease, but a death that is caused by a self-inflicted, intentional action or behaviour." Shneidman (1985) argued that "suicide must be a ... death in which the deceased caused the death by his actions or behaviour...intended, chose, decided, or willed to die...." As was indicated earlier, Durkheim (1897/1951) observed that there are numerous suicides that are not connected with insanity. Lester (1992b) stated that the failure of laws (e.g., social forces used to influence behaviour) to eliminate the social problem of suicide led to its reclassification as a psychiatric illness. Instead, Lester (1992b) argued that the goal of work with the suicidal individual should be to help them to see other alternatives, other choices. Similarly, Shneidman (1985) argued that his goal in therapy is to acknowledge with the individual that suicide is one option, but to also explore the possibility of other options. He has identified cognitive rigidity, the narrowing of the ability to see other options at the point of crisis, as one of the characteristics of suicide. Thus, the intent to commit suicide is seen as a choice by many.

What remains is to determine how the intent to commit suicide becomes a choice. To do so, we must integrate what we know about the intra-individual factors and the extra-individual factors that are related to suicide.

Suicide as Choice in Contrast to Deterministic Assumptions

Perhaps one of the longest running debates in psychology, and in philosophy, is the question of free will versus determinism with regard to human behaviour (Leahey, 1987). Psychological science has followed the direction of natural science, assuming that a pursuit of universal natural laws will eventually yield an understanding of people (Strong, Yoder, & Corcoran, 1995). There is a sense that if we could get all the variables right, and control for all the possible confounds, we would be able to predict and control human behaviour.

Those who support determinism argue that human behaviour is determined by various factors outside of the person. Free will or moral responsibility do not have a place in this viewpoint (Sappington, 1990). Philosphers like Spinoza and Schoepenhauer represent this view, and psychologists such as Freud and Skinner have argued this position. For Skinner, free will was incompatible with the ability to predict and control, since behaviour that is freely chosen is also unpredictable.

For psychologists such as Maslow, Frankl, and Perls, free will was a cornerstone of their work. Although they insisted that people have free will, they did not discuss ways to test this aspect of their theories (Sappington, 1990). Perhaps this is appropriate, since the humanistic movement in psychology (represented by Maslow and others) was a rebuttal to the deterministic approach of behaviourism (Leahey, 1987).

The question of whether suicide occurs as a result of free will or determinism is not articulated in the literature; however, the issue is there. Much of the suicide literature is produced by practitioners in the medical field, particularly by the area of psychiatric medicine. Medicine is a field in which the natural laws of science are dominant, and the deterministic model is appropriate. This approach denies that suicide is a choice. It is often seen as a biological imbalance, and is treated with medication. In particular, in the research examining depression, hopelessness, or other psychiatric conditions that put a person at risk for suicide, there is an implicit assumption that suicide is the logical end point of the risk factor.

Many would question if a person who is in crisis really experiences choice. Indeed, Shneidman's (1985) identification of cognitive constriction as an element of the psychology of suicide seems to support the idea that an individual in crisis does not experience choice. Therefore, it could be argued that the act of suicide is not a choice.

However, Shneidman (1985, 1996) conceptualizes suicide as both a choice and the result of deterministic features such as depression, cognitive constriction, and lifelong coping styles. This compromise represents the soft determinism view. Soft determinism states that people do make conscious choices between different courses of action, but these choices themselves are determined by other factors (Sappington, 1990).

The approach Shneidman (1996) has supported in his counselling work with suicidal individuals is to reduce the individual's perturbation and therefore lethality. The principle here is that if the person is not feeling overwhelmed by personal circumstances, their intent to die will also be reduced. In fact, this is the approach supported by many suicide crisis workers.

When the immediate threat of suicide is reduced, there is still work that needs to be done in the long term. Shneidman suggests changing the meaning of their pain, and their views of self that accompany the pain. Similarly, Alloy et al. (1999) have argued that the meaning or interpretation people give to their experiences influences whether or not they will become depressed. What is significant here is the acknowledgement that the interpretation of our reality is what is important in understanding the intent to end one's life. This suggests an answer to the question of why two people can experience the exact same risk factors, and one of them will make a suicide attempt while another will not. Suicide is not determined by these risk factors; the meaning we attribute to these events is the key.

One of the significant questions in the study of suicide (which has been stated and restated throughout this paper) is what elements differentiate a person who will attempt suicide from a person who will not. If we are to resolve this question and acknowledge

the issue of choice, it is necessary to differentiate between the formation of the intent to commit suicide in a given situation versus the act of suicide.

Although it is possible that at the point of crisis the act of suicide is not a choice, it will be argued further in this paper that one's intent to commit suicide in specific circumstances is determined well before the point of crisis. The individual evaluates the benefits and costs of suicide, considers the social norms regarding suicide, and may think about the level of control he or she could have over performing a suicide act. It will also be argued that development of suicidal intent may occur with little conscious focus, and is developed prior to the circumstances in which an individual considers suicide.

How Suicidal Intent Becomes a Choice

If one's intent to commit suicide is the result of the meaning attributed to experiences, then the question of what contributes to the different meanings of these events remains. We then need to ask how suicide becomes an appropriate response to these experiences. The work of researchers such as Durkheim (1897/1951), and the research documenting attitudes towards suicide, points to the influence of social factors. The work in the areas of depression and hopelessness, particularly with respect to attributions, points to the influence of intra-individual factors. And finally, since no overall theory of suicide has emerged yet, a theoretical framework within which to understand the many correlates of suicide is necessary.

The theory of planned behaviour is a model for predicting intent and behaviour that incorporates both intra-individual and extra-individual factors. It also allows for volitional control. To understand how suicide becomes a choice or an option to some, we will first review the theory of planned behaviour, then consider the consistency between its theoretical constructs and the correlates of suicide. Finally, a model will be proposed that integrates the suicide literature with the theory of planned behaviour.

An Overview of the Theory of Planned Behaviour

Fishbein (1967a; Fishbein & Ajzen, 1975) proposed the theory of reasoned action, within which it was argued that attitudes and subjective norms influence intentions to perform a particular behaviour. Fishbein suggested that the proximal cause of behaviour is one's intention to engage in the behaviour. This theory was later expanded by Ajzen (1988) to include perceived behavioural control, and was called the theory of planned behaviour (See Figure 1).

The theory of planned behaviour hypothesizes that attitudes influence behaviour by their influence on intentions, which are decisions to act in a particular way. The causal model can be summarized as follows: (a) behaviour is determined by intention to engage in the behaviour, (b) intention is determined by attitude toward the behaviour and

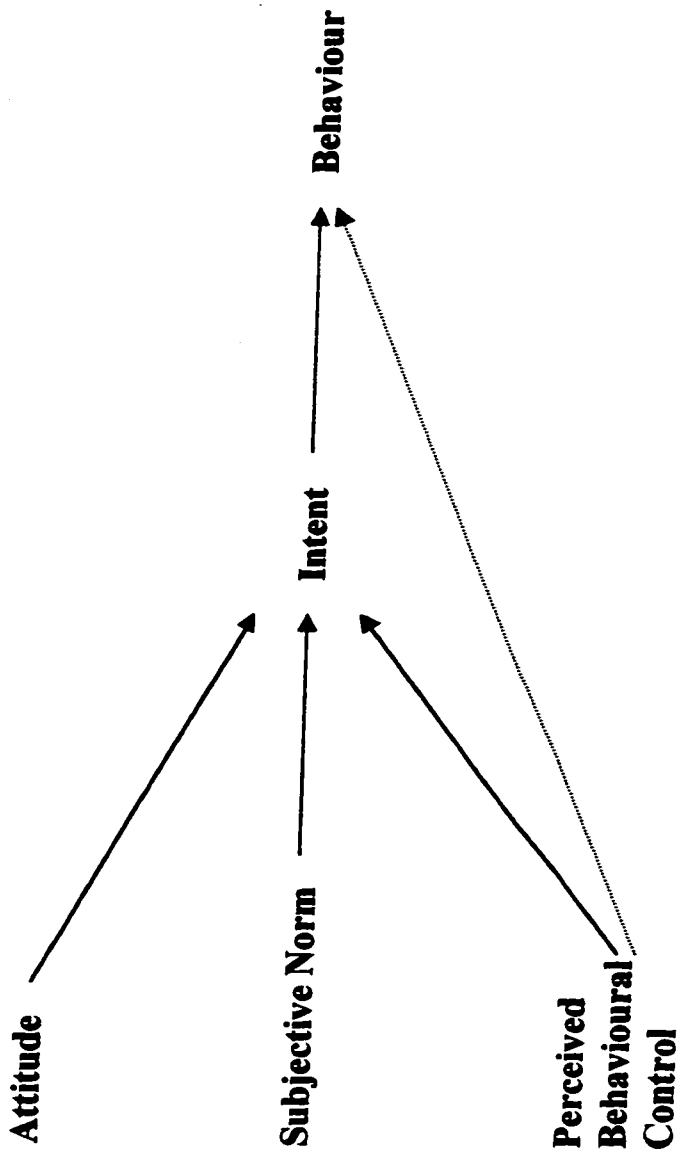


Figure 1: The Theory of Planned Behaviour

an individual's sense of the subjective norm regarding the behaviour (c) attitude is determined by behavioural beliefs and evaluation of the salient outcomes, and (d) subjective norm is determined by normative beliefs and motivation to comply with the salient referents (Fishbein & Ajzen, 1975). Added to attitude toward the behaviour and subjective norm is the individual's degree of perceived behavioural control. Perceived behavioural control provides a conceptual framework that incorporates the influence of past behaviour, and addresses incomplete volitional control.

Perceived behavioural control refers to the perceived ease or difficulty of performing the behaviour. It also reflects past experience as well as anticipated obstacles and the realistic constraints that may exist. Ajzen (1988) theorized that as a general rule, the more favourable the attitude and subjective norm towards the behaviour, and the greater the perceived behavioural control, the stronger the individual's intention to perform the behaviour. The theory of planned behaviour assumes that perceived behavioural control is a motivating factor for intentions. For example, a person who believes that he or she has neither the resources nor the opportunity to perform a behaviour will not form strong intentions to engage in that behaviour, despite holding positive attitudes towards the behaviour or believing that his or her referents would approve of performing the behaviour. Ajzen (1988) did not expect the relationship

between perceived behavioural control and intention to be mediated by attitude and subjective norm.

Behavioural beliefs are assumed to influence attitudes towards behaviour, and normative beliefs constitute the underlying determinants of subjective norms. In addition, control beliefs are distinguished as the basis for perceptions of behaviour control. These beliefs may be based on past experience with the behaviour, but will also be influenced by second-hand information about the behaviour (e.g., experiences of friends and acquaintances, media). The more opportunities and the fewer obstacles that are anticipated, the greater the perceived control over the behaviour. And the greater the perceived behavioural control, the more likely one is to form an intention to behave in a particular way.

Ajzen and Fishbein (1980) did not assume that people engage in elaborate (i.e., time-consuming and conscious) cognitions before acting. Rather, they argued that people form their intentions through their attitudes and subjective norms, form their attitudes through observing the consequences of their behaviour, or the behaviour of others, and form their subjective norms based on their perception of the approval or disapproval of significant others towards their behaviour. Once intentions, attitudes and subjective norms have been formed, they will not necessarily be reviewed at each and every opportunity for behaviour. People may retrieve only an intention, or an attitude toward a

behaviour and perhaps a norm, which then produce an intention in that situation (Ajzen, 1988; 1991).

It is possible, however, that perceived behavioural control beliefs are assessed at the time most proximal to the formation of a behavioural intention. One's perception of control can vary from one point in time to another. Consider the scenario of how the theory of planned behaviour might contribute to one's intention to walk for 30 minutes a day, five times a week. One might believe that it is good to walk for 30 minutes a day, five times a week, and that it will lead to a desirable level of fitness and overall wellness. One may also believe that important others feel it is something one should do. But, if a person has a hectic business schedule, children, and a number of volunteer commitments, that person may not feel that they have the necessary control over their lifestyle to implement this change, and so they do not do so. However, five years from now, circumstances may change sufficiently to increase the person's perceived behavioural control, and therefore, the person will form an intention to walk for 30 minutes a day, five days a week.

The Theory of Planned Behaviour and Suicide

Within the theory of planned behaviour, attitude is defined as the evaluation of the likelihood that a particular behaviour will lead to a desired outcome. The impact of the subjective norm is dependent upon the degree to which an individual perceives that those

important others with whom he or she is motivated to comply believe that he or she should perform the behaviour. And finally, perceived behavioural control is the extent to which an individual believes he or she has control over performing a particular behaviour.

Conceptualizing attitude as an evaluation of the likelihood that a particular behaviour will lead to a desired outcome is consistent with Shneidman's (1985) identification of the common psychological characteristics of suicide. To Shneidman (1985), suicide is a goal directed behaviour. The purpose of suicide is to seek a solution, the goal of which is ending unbearable psychological pain. Thus, when one realizes that suicide would end the pain, one's attitude towards suicide may become more positive.

With respect to subjective norm, the influence of others with respect to suicide is recognized in suicide research. Diekstra (1985) has asserted that the best predictor of future suicidal behaviour is a history of knowing of similar behaviour by others or by the self. The question of imitation and the effects of reports of suicide in the media have been studied for some time (see for example Biblarz, Brown, Biblarz, Pilgrim, & Baldree, 1991; Stack, 1990).

When discussing subjective norms with respect to suicide, we must look at the degree to which suicide is "accepted" within the individual's referent group. A lack of rejection of suicide can result in an individual perceiving an accepting subjective norm among his or her referents. For example, consider the case of a man whose father and

mother killed themselves when their health reached a certain level of deterioration. He has decided that he would rather kill himself than live when he reaches a particular state of infirmity. Although this saddens his wife, she has never said as much to him. It is possible that the man believes that his wife understands and perhaps approves of his decision. His parents (who may be part of the man's referent group) through example have also provided him with the perception that they would approve of his decision.

The degree to which individuals believe they have control over a behaviour (i.e., perceived behavioural control) is key in choosing suicide. People who attempt suicide have been divided into groups of single or multiple attempters. In comparison to those individuals who have only made a single suicide attempt, individuals who have made more than one attempt tend to have many and more intense risk factors in their backgrounds: more symptom chronicity, worse coping histories, more frequent histories of substance abuse and suicidal behaviour in the family, higher lethality and depression scores, and greater likelihood of inpatient admission (Kral & Sakinofsky, 1994). The increased risk associated with multiple attempts is consistent with the idea of perceived behavioural control, in the sense that past behaviour strengthens the predictability of a specific behaviour. As well, the individual is familiar with the self-harming behaviour, and may very well feel more control over that behaviour at the point of crisis than over any of the factors contributing to the crisis.

In a study conducted by Truant, O'Reilly, and Donaldson (1991), a sample of 99 Canadian psychiatrists were asked to rank the importance or value of certain risk factors in assessing the likelihood that a person will commit suicide. The three most highly ranked factors were degree of hopelessness, communicated ideation or plan, and previous attempts.

The role of communicated ideation or plan is consistent with perceived behavioural control. In training, crisis workers are taught that the more specific the plan, the greater the suicide risk. Further, if the person has immediate access to the means of the attempt, the greater the indicated likelihood of suicide. Recall that Ajzen (1988) proposed that there may be a direct link between perceived behavioural control and the behaviour itself. A reasonable hypothesis could be posited such that a well formulated plan and the accessibility of means represents increased perceived behavioural control (and specific intentions), and thus would result in a greater likelihood of the behaviour of suicide.

Let us consider how perceived behavioural control may play a role in suicide. Crisis situations often relate to the level of control that a person believes she or he has over a situation. It has been my experience as the Executive Director of a suicide prevention centre that persons intending to commit suicide believe that choosing to end their life is the only thing they still have control over. The perception of control is

augmented by the ease of the accessibility of common means of suicide such as pills, a knife, or rope. If one had to try to find a solution to an unendurable situation, it is not hard to imagine that one would choose what seemed to be most under one's immediate control.

Integrating Approaches to Understanding Suicide

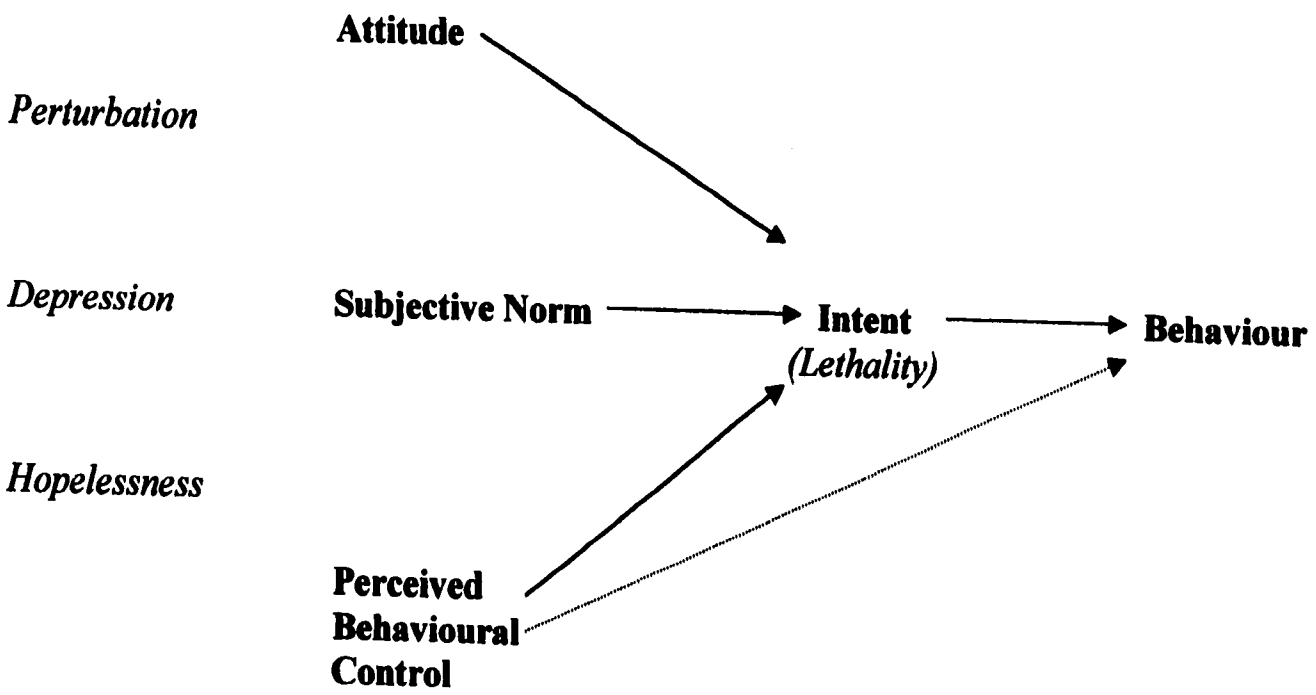
There are many approaches to understanding suicide. Shneidman (1985) documented thirteen; several variations on these exist. Among these, the roles of depression and hopelessness are very significant (Lester, 1992). Shneidman's concepts of perturbation and lethality are also significant as a framework for understanding suicide. Certainly the experience of depression or of hopelessness is consistent with perturbation. If one is depressed or feeling hopeless, then this level of upset can be characterized as heightened perturbation.

Ajzen proposed that one's attitude and one's subjective norms may be formed well in advance of the time when an intention or a behaviour is necessary. Feelings of depression and hopelessness (i.e., perturbation) may be the triggers for activating the previously formed attitude and subjective norm for suicide. Thus, depression and hopelessness may not be direct causes of suicide, but they are the proximal cues for the activation of one's attitude and subjective norm supporting suicide as an acceptable coping option. For example, a person may believe that if things ever became bad enough

(or if he or she was ever sick enough), then suicide would be a way to end the pain. He or she may also believe that the people who are important to him or her would understand their decision, resulting in a positive subjective norm. Or, they may feel that the people who are important to them wouldn't care, which may also support their decision. In this case, a "not negative enough" subjective norm may be formed (assuming that subjective norm is a continuum). When the individual considers his or her perceived level of control over suicide, if they feel that they have sufficient control over the act, an intention to commit suicide will result (See Figure 2).

Consider the case of a young man with no family and no money, living on the charity of friends. Circumstances become such (perturbation) that he believes suicide would be the best way out to end the pain (positive attitude towards suicide in this situation). And since he has very few close relationships, he believes that his friends would be unburdened by his death ("not negative enough" subjective norm). However, he can not come up with a fool-proof way to die. He has no access to firearms. He has no money for lethal drugs. He considers slitting his wrists, but is concerned that it will take too long and someone might intervene. For this man, attempting suicide is not a coping option; only a completed suicide has the necessary attitude and subjective norm.

Figure 2: The Theory of Planned Behaviour and Shneidman's conceptualization of suicide



Fortunately, he experiences low perceived behavioural control (no access to means that he finds acceptable), and thus does not develop a behavioural intention (high enough level of lethality) to lead to a suicide behaviour.

The key element in this particular case is the level of specificity. Simply attempting suicide is not enough for this man. Recall that the attitude-behaviour research, and the theory of planned behaviour, are clear that general attitudes do not predict behaviour (Ajzen & Fishbein, 1977). One must measure attitude and subjective norm towards a specific behaviour within a specific context. Therefore, general attitudes favoring suicide do not predict when or if an individual will engage in suicidal behaviour. Rather, we need to measure a person's specific attitudes towards suicide, his or her subjective norms regarding suicide, and his or her perceived behavioural control within a specific context at a particular moment in time.

Suicide, the Theory of Planned Behaviour, and Volitional Control

As was stated earlier, it is important to differentiate between the issue of how one develops an intention to commit suicide, as opposed to how one comes to commit a suicidal act. The theory of planned behaviour is a good model for understanding how the idea of suicide becomes an option for some people and leads to the formation of an intention. The theory of planned behaviour may not be as effective in predicting the act

of suicide, in that at the point of crisis, suicide may or may not be under one's volitional control.

The theory of planned behaviour has been demonstrated to operate differently for the formation of intentions versus behaviour in the case of problem drinking. Schlegel, D'Avernas, Zanna, DeCourville, and Manske (1992) investigated the relative contribution of the theory of reasoned action (attitude and subjective norm) and the theory of planned behaviour (attitude, subjective norm, and perceived behavioural control) in the prediction of intention and behaviour with respect to problem drinking. They surveyed problem drinkers and non-problem drinkers as part of a twelve year longitudinal study on alcohol and drug use, and measured intention to get drunk and frequency of getting drunk as the criterion variables.

Schlegel et al. (1992) found that attitude and subjective norm became less predictive as drinking became heavier. The theory of planned behaviour (including perceived behavioural control) was more predictive of intention and behaviour than the theory of reasoned action (attitude and subjective norm alone). Subjective norm was important to the prediction of intention for non-problem drinkers, but was unrelated to intention for problem drinkers.

Perceived behavioural control also worked differently for problem drinkers versus non-problem drinkers. For non-problem drinkers, perceived behavioural control was

related to the formation of intention to get drunk such that high perceived behavioural control was associated with a lower intention to get drunk. However, perceived behavioural control had no impact on intention to get drunk for problem drinkers. Schlegel et al. (1992) speculated that it is possible that problem drinkers have intended to not get drunk many times, but ended up drunk regardless.

Schlegel et al. (1992) argued that it is important to investigate the level of volitional control associated with different behaviour or with different levels of the same behaviour. They argued that a single, fixed model may not be adequate for predicting behaviours that vary in their level of volitionality.

As such, it is possible that suicidal intent and suicidal behaviour may be very different constructs. While the theory of planned behaviour appears to be appropriate to understanding the prediction of suicidal intent, it is not assumed that the same is true for suicidal behaviour, or the act of making a suicide attempt. This study focuses on the formation of suicidal intent, which is likely the best predictor of suicidal behaviour. However, examination of the appropriateness of the model for suicidal behaviour would require following individuals who engage in suicidal behaviour; for both ethical and practical reasons, this is not feasible within the current study.

The theory of planned behaviour has received strong empirical support and has been applied to many areas. It has predicted cheating on a test, shoplifting, and lying to

get out of assignments (Beck & Ajzen, 1991). Wambach (1997) demonstrated the usefulness of the theory of planned behaviour in predicting breastfeeding intention and outcome. Hanson (1997) reported the effectiveness of the theory in predicting cigarette smoking. Krahe and Reiss (1995) applied the theory to predict condom use and AIDS-preventative behaviours. The theory of planned behaviour will now be applied to predicting suicidal intent.

Summary

Broadly speaking, the question under investigation is how does the intention to commit suicide under certain circumstances develop. It is clear that many people experience the risk factors associated with the prediction of suicide, but most of those people do not attempt suicide. It is not clear what process differentiates the two groups in terms of the development of suicidal intent.

It has been argued that the attitude one holds towards suicide, the subjective norm that one experiences regarding suicide, and one's perceived behavioural control predict suicidal intent. Suicidal behaviour will not be included in the study.

Level of specificity is important in terms of the circumstances or level of perturbation that may activate the cognitive process for suicidal intent. Depression and hopelessness have been described as elements of perturbation, or the triggers for a previously formed intention towards suicide.

This approach to uniting a social-cognitive model of the formation of an intention to an area like suicide is a new application of the theory of planned behaviour, and it is also a new approach within the suicide literature. As such, attempts have been made to integrate the dominant concepts within the suicide literature such as depression, hopelessness, perturbation, and lethality, with the concepts of the theory of planned behaviour.

Hypotheses

The theory of planned behaviour has been proposed to be an appropriate model for understanding and predicting suicidal intent. The general model of the theory of planned behaviour will be tested, and the following hypothesis is proposed:

1. Attitude towards suicide, subjective norm beliefs, and perceived behavioural control will individually and in the aggregate predict an individual's suicidal intent.

Ajzen (1988) has proposed that one's perceived behavioural control is based on past experiences. Truant et al. (1991) and others have indicated that past suicidal behaviour is a strong predictor of future suicidal behaviour. Because of the postulated relationship between perceived behavioural control and past behaviour, it is reasonable to expect perceived behavioural control to play a large role in the development of suicidal intent, particularly for those individuals who have a past history of suicidal behaviour. The following hypotheses are proposed:

2. Perceived behavioural control beliefs will account for the greatest proportion of the variability of an individual's current suicidal intent.
3. Perceived behavioural control beliefs will be significantly higher for those individuals with a history of past suicidal behaviour than for those individuals who have not attempted suicide in the past.
4. The mean level of suicidal intent will be higher among those who have attempted more than once.
5. The mean level of suicidal intent will be significantly higher for those individuals with high levels of perceived behavioural control beliefs and a history of past suicidal behaviour than for those individuals with a low sense of perceived behavioural control and no history of past suicidal behaviour.

Ajzen (1988) argued that one's attitude towards a behaviour is determined by how likely one believes it is that certain outcomes will result from the behaviour, and how desirable these outcomes are to the individual. The more experience a person has with a behaviour, the more they know what outcomes are likely to occur. As such, one's attitude towards a behaviour that results in desired outcomes will become more positive the more one performs that behaviour. The following hypothesis is proposed:

6. Individuals who have attempted suicide only once will have lower mean scores on attitude towards suicide (i.e. less accepting attitudes) than multiple attempters.

It has been argued that depression and hopelessness are important correlates and predictors of suicidal behaviour, and therefore, are also important correlates of suicidal intent. However, there is little evidence of a comprehensive theoretical model relating hopelessness and depression to suicidal intent and suicidal behaviour. Applying the theory of planned behaviour to understanding suicide is a new approach. To be able to determine the usefulness of the theory of planned behaviour in its contribution to suicide theory, it is necessary to compare its effectiveness in predicting suicidal intent against the recognized dominant predictors of suicide. The following hypothesis is proposed:

7. Attitude towards suicide, subjective norm, and perceived behavioural control will account for a greater proportion of the variance in suicide intent compared to the variance accounted for by depression and hopelessness.

Chapter II

Method

Participants

Participants were solicited from psychology classes at the University of Windsor during the summer and fall semesters in 1997. Participation was voluntary, although participants were able to earn one experimental bonus point towards their final grade. A total of 532 respondents completed the survey. The majority of participants were female, with 393 females participants (74%) and 139 male participants (26%). Ages of respondents ranged from 17 to 65, with an average age of 21.5 years (SD=5.86). The majority of the sample (88%) was single.

Measures

Demographics

Participants were asked to indicate their sex, age, ethnic background, whether or not they were in a romantic relationship, and their marital status. (See Appendix A.)

Operationalizing the Theory of Planned Behaviour

Standard measures of attitudes, subjective norm, and perceived behavioural control are not used in testing the theory of planned behaviour. Instead, researchers try to operationalize the constructs in a manner consistent with the general guidelines discussed

by Ajzen (1988), which is also reflected in the research methodology he has used. In general, attitudes are measured in terms of a behavioural outcome and the evaluation of that outcome. Subjective norm is measured in terms of one's perception of how the people with whom one is motivated to comply would feel about this behaviour. Perceived behavioural control reflects the control one has over performing a particular behaviour.

There are no studies applying the theory of planned behaviour to suicide, so measures were developed specifically for the present study. The constructs were operationalized with two goals in mind: (a) to be as consistent as possible with previous research in the operationalization of the constructs, and (b) to integrate the work in suicide and key constructs within that literature with the theory of planned behaviour.

The Suicide Attitudes Questionnaire (SUIATT)

As was indicated earlier, there are no standardized measures used in testing the theory of planned behaviour. Researchers sometimes use measures of attitudes towards behaviour that have been tested and standardized for that particular behaviour, such as in the case of problem drinking (Schlegel, D'Avernas, Zanna, DeCourville, & Manske, 1992), and cigarette smoking (Hanson, 1997). The SUIATT, developed by Diekstra & Kerkhof (1989), was selected as an existing scale that measures attitudes towards suicide.

Participants were asked to complete the SUIATT as the first measure in the battery. Factor analysis of the SUIATT (Diekstra & Kerkhof, 1989) has resulted in six

factors. These factors are: (1) probability of suicide for self or near and dear others in the case of severe physical and/or social disruption; (2) right to commit suicide; (3) rationality versus mental abnormality of suicide; (4) emotional or affective meaning of suicide; (5) probability of suicide by people in general in the case of severe physical and/or social disruption; and (6) the consequences of suicide.

Ajzen's operationalization of attitude (Ajzen & Madden, 1986) reflected the weighing of positive and negative evaluations of particular outcomes of a specific behaviour, and an evaluation of the likelihood of those outcomes occurring as a result of that behaviour. The factors of the SUIATT show conceptual consistency with the attitude construct in the theory of planned behaviour, in that factors 3, 4, and 6 address the evaluation of suicide and its outcomes. (Factors 1, 2, and 5 reflect the normative aspect of suicide and may be more consistent with subjective norm in the theory of planned behaviour.)

The SUIATT consists of 71 items with Likert-type 5 point response scales. The items are scored in such as way that the more restricting, rejecting or negative the answer/attitude is, the lower the score. The SUIATT has a reported coefficient alpha of .87, and test-retest correlations of .65 (Diekstra & Kerkhof, 1989). Questions are phrased in terms of the attitudes towards suicide that the respondent holds for people in general,

for the person nearest and dearest to the respondent, and attitudes towards suicide for the respondent. (See Appendix B.)

Suicide Scenario

Scenarios or vignettes have been used by researchers in situations where the theory of planned behaviour was being tested with socially unacceptable behaviours (e.g., Beck & Ajzen, 1991, regarding cheating, shoplifting, and lying among undergraduates; Parker, Manstead, & Stradling ,1995, regarding driving violations).

The suicide scenario for this study was derived from paraphrased statements taken from actual/authentic suicide notes that are common elements of suicide situations (Leenaars, 1988b). In particular, the scenario described depressed emotional states, situational crisis (i.e., breakup with girlfriend or boyfriend, and failing at school), and the need to escape from unbearable psychological pain. The scenario is phrased as follows:

> Ever since your girlfriend/boyfriend left you, you have felt this empty feeling inside, to the point of numbness, like there is something dead inside. You still love her/him, and don't know how to live without her/him.
>
> You can't do anything right at school, and you know that your instructor is going to fail you. You feel like you can't handle the responsibility of life. You have tried to cope with the pressures but find that you just can't do it. You feel like you have tried to make it and failed. This terrible depression keeps coming

over you and you can't bear feeling so bad. You can't fight anymore. You wish that you could disappear without hurting anyone.

Lester and Heim (1992) and Leenaars (1988a) have reported that there are no differences in the themes of suicide notes for men or women, so the same content was used in the suicide scenario for both male and female respondents.

Attitude (Behavioural Beliefs) toward Suicide

According to Ajzen (1988), one's attitude toward a behaviour is determined by the person's evaluation of the outcomes associated with the behaviour, and by the likelihood of these outcomes occurring. As such, the attitude measure was constructed in a way to include both a series of likely outcomes and evaluations of these possible outcomes.

The eight items designed for this scale were operationalized in a manner similar to the one used by Terry and O'Leary (1995) to study exercise behaviour, which resulted in a reported Cronbach's alpha of .81 for Terry and O'Leary's measure. Terry and O'Leary (1995) asked respondents to indicate the likelihood that particular outcomes would be consequences of exercising on 7-point Likert scales. Respondents were also asked to assess outcome evaluations, by evaluating how pleasant or unpleasant each outcome would be on 7-point Likert scales. This form of operationalizing attitudes towards behaviour is consistent with the way in which Ajzen has measured the construct (Ajzen & Madden, 1986).

Attitude items used in the current study assessed the likelihood that certain outcomes would arise from suicide. These outcomes were based on the common characteristics of suicide identified by Shneidman (1985), as well as research on common themes of suicide notes. Possible outcomes included: (a) the ending of unbearable psychological pain (based on Shneidman's situational aspects of suicide, and studies of suicide notes by Brevard, Lester, & Yang, 1990, and Leenaars, Lester, & Yang, 1992); (b) pain for the people left behind (based on Shneidman's relational aspects of suicide and studies of suicide notes by Brevard et al., 1990, and Leenaars et al., 1992); (c) a sense of relief for the people left behind (based on Shneidman's relational aspects of suicide, and studies of suicide notes by Leenaars et al., 1992); (d) escape from an intolerable situation (based on Shneidman's relational aspects of suicide); and (e) suicide as a solution to the situation in the scenario (based on Shneidman's conative aspects of suicide). Each of the behavioural belief statements also had a corresponding evaluation item measuring the positive or negative evaluation of each of the above outcomes. For example, participants indicated on a 7-point Likert scale whether the ending of unbearable psychological pain (which was clarified in the measure as "when it hurts really badly inside and you can't make it stop") in the suicide scenario would be "good-bad." (See Appendix C.)

Subjective Norm

Subjective norms are a person's beliefs that specific individuals or groups approve or disapprove of performing a specific behaviour. These individuals or groups are called referents, and can include parents, spouse, friends, co-workers, etc.. There is no research on suicide that identifies who most influences an individual's thinking about suicide. Studies on the effects of the media and suicide suggest that film and music stars with whom one identifies may be influential (Biblarz et al., 1991; Stack, 1990). Research on the risk of having a family member or a friend commit suicide (Lester, 1992b) would suggest that family members and friends may be part of one's normative concept of suicide. It is not clear who would come to mind for participants in the study.

The six items designed for this measure were based on the manner in which Beck and Ajzen (1991) operationalized subjective norm to study cheating, shoplifting, and lying, which resulted in reported Cronbach's alphas of .81, .84, and .85 for their measures. Specifically, Beck and Ajzen (1991) used the phrases "most of the people who are important to me would...," "No one who is important to me thinks it is ok to...," and "Most people who are important to me would look down on me if I ...."

In an attempt to explore who might be salient for this construct, participants were asked to identify individuals that they believed think most like themselves about suicide.

They also rated the extent to which their attitudes towards suicide were similar to this person's attitudes.

Participants were asked to answer those questions directly measuring subjective norm with those persons in mind. Participants rated on a 4 point scale the extent to which they strongly agree/strongly disagree with each of the five statements. An example of an item included "Most of the people important to me would likely strongly agree/agree/disagree/strongly disagree with my decision to commit suicide in this situation." (See Appendix D).

Perceived Behavioural Control

Perceived behavioural control refers to the perceived ease or difficulty of performing the behaviour. It also reflects past experience as well as anticipated obstacles and the realistic constraints that may exist.

The seven items developed for this measure were based on those used by Beck and Ajzen (1991) which resulted in reported Cronbach's alphas of .66, .78, and .67 for the measure of the construct. Beck and Ajzen used phrases such as "For me to cheat on this exam is easy/difficult" and "If I want to, I can cheat on this exam (True/False)." Terry and O'Leary (1995) used similar items, which resulted in a reported Cronbach's alpha of .85. An example of the items used by Terry and O'Leary was "For me to exercise 20

minutes, three times per week for the next two weeks will be: 1=very easy to 7=very difficult."

Participants were asked to rate the extent to which they believed they would have control over committing suicide in the situation described in the suicide scenario. Items were rated along a 7-point Likert scale. Examples of items included "For me to commit suicide in this situation would be easy/difficult," and "How easy or difficult would it be to commit suicide in this situation? (Very easy/very difficult)." (See Appendix E.)

Past Behaviour

Six closed-ended questions assessing past suicidal behaviour were included. Past suicidal behaviour has been demonstrated to be highly correlated with future suicide attempts (Lester, 1992b; Clarke & Lester, 1989). These items are concerned with suicidal ideation (i.e., How often have you considered attempting suicide?), suicide attempts with intent to die (i.e., If you have ever made a suicide attempt, think now about your most recent attempt. To what degree did you intend to die?), and number of suicide attempts (i.e., How many times have you attempted suicide?). Level of intent was measured as an indicator of the seriousness or the lethality of the attempt. There is some evidence suggesting that suicide attempters "get better at it," and the means used become more lethal over time (Lester, 1992b). (See Appendix F).

CES-D

The Center for Epidemiologic Studies Depression Scale (CES-D scale) was used for this research (Radloff, 1977). The CES-D scale is a 20 item self-report scale designed to measure depressive symptomology, with emphasis on the affective component, depressed mood, in the general population. Participants indicated the frequency with which they have experienced this depressive symptomology in the last week. For this measure, depression is conceptualized as state-dependent, rather than being a trait of the individual. Depression was measured because of its documented relationship to suicide (Davis, 1995).

The reported measures of internal consistency for this scale have been high, with a coefficient alpha ranging from .84 to .90; split halves ranged from .76 to .85, and Spearman-Brown ranged from .86 to .92. Test-retest correlations ranged between .45 and .70 over a period of 2 months (Radloff, 1977). (See Appendix G.

Self-reported Intent

Two items were developed to measure suicidal intent based on the phrasing used by Parker et al. (1995) to study driving behaviour with reported Cronbach's alphas of .77, .85, and .81 and Beck and Ajzen (1991) to study shoplifting, lying, and cheating, with a reported Cronbach's alpha of .85. These researchers did not study suicide.

Parker et al. (1995) asked participants how likely they felt it was that they would commit a specific driving violation in the situation described in the scenario, and if an occasion would arise over the next 12 months when they would commit the violation in question. Beck and Ajzen (1991) asked participants to indicate how likely they were to perform the dishonest action if the specific situation arose, or if they would be likely to perform the behaviour in the future.

Participants in the current study were asked to rate along a 7-point Likert scale the likelihood of committing suicide in the situation described in the scenario, and to indicate how likely it was that an occasion would arise over which he or she would commit suicide. (See Appendix H.)

The Hopelessness Scale

The Beck Hopelessness Scale was included because research has indicated that the seriousness of suicidal intent is highly correlated with negative expectancies of the future (i.e., a sense of hopelessness) (Beck et al., 1974; Minkoff, Berman, Beck, & Beck, 1973). Hopelessness is conceptualized as a state rather than an individual trait for the purposes of this study.

The scale consists of 20 true-false statements. Nine items are reversed such that a "false" response indicates hopelessness. A sample item is "I look forward to the future with hope and enthusiasm." For the remaining eleven items, a response of "true"

indicates hopelessness. A sample item is "My future seems dark to me." For every statement, a response is assigned a score of 0 or 1, and the total hopelessness score is the sum of the scores on the individual items. The possible range of scores is 0 to 20. The reported measure of internal consistency was high, with a coefficient alpha of .93. (See Appendix I.)

Procedure

Potential participants met in small groups with the experimenter. They were asked to read and sign an informed consent form, and then completed the measures.

The measures were administered in the form of a questionnaire, with the tester in the room. No identification of the participant was necessary on the measures. The names and contacts of various mental health and crisis centres were included at the end of the questionnaire and left with each participant should they wish to get help concerning any issues that the survey may have triggered. The tester was also available to provide support and answer any questions about suicide raised by participants. Further, a debriefing sheet was also available, which described the general theory of the research and the main hypotheses, and included an expression of appreciation for their participation. Information regarding suicide warning signs and risk factors was given to each participant, as well as information on what to do if they knew someone who is at risk for suicide.

Chapter III

Results

Reliability

Tests of internal consistency for each of the measures were calculated using Cronbach's coefficient alpha. Adequate reliability levels were found for all measures with the exception of the (total) Attitude Scale, its Likelihood component, and the Subjective Norm measure (see Table 1).

The reliability score for the Attitude scale was unacceptably low (Cronbach's alpha = .56). Part of the explanation for this may be in the way the scale was constructed. The attitude scale first identifies an element of suicide, such as the ending of unbearable psychological pain, and asks the participant to evaluate the likelihood of this element as the reason for the suicide in the scenario. The next item then requires the participant to evaluate how good or bad this element is. These are quite different exercises conceptually, and it is not surprising that a low level of internal consistency was found.

In an attempt to remedy this, the likelihood and evaluation scale items were analyzed seperately. Reliability was improved marginally for the evaluation component, resulting in an alpha of .60, but the reliability score for the likelihood items decreased to .32. Nunnally (1978) states that an alpha of less that .70 is too weak for use. Subsequent

Table 1

Internal consistency of each measure

Measure	Reliability (Cronbach's alpha)	Mean	SD	Possible Range of Scores
SUIATT	.91	169.8	28	71-355
SUIATT (personal subscale)	.89	43.4	14.2	20-100
SUIATT (general subscale)	.77	68.7	9.2	22-110
SUIATT (near and dear subscale)	.85	62.5	12.8	20-100
Attitude (TPB)	.56	32.9	8.9	10-70
Attitude (likelihood component)	.32	19.2	3.4	5-35
Attitude (evaluative component)	.60	13.7	5.5	5-35
Subjective Norm (Total Scale)	.65	8.8	2.0	5-20
Perceived Behavioural Control	.84	18.9	9.9	7-49
Intent	.81	5.3	3.5	2-14
CES-D	.93	36.3	12.5	20-80
Hopelessness	.85	24.0	4.1	20-40

analyses were conducted using the SUIATT as an attitude measure.

Since the reliability for the attitude measure was weak, the SUIATT personal subscale was used as a conceptual alternative to the Attitude scale. The item content of the SUIATT personal (self) subscale is consistent with the concept of attitude as defined by Ajzen (1988). The SUIATT addresses the evaluation of suicide and its outcomes for self or near and dear others. The SUIATT measures factors such as the rationality versus mental abnormality of suicide, the emotional or affective meaning of suicide, and the consequences of suicide.

The reliability score for all five Subjective Norm items was also low (Cronbach's alpha = .65). However, Items 2 and 4 are conceptually the most consistent with Ajzen's operationalization of subjective norm. These two items are "Most of the people important to me would likely strongly agree/agree/disagree/strongly disagree with my decision to commit suicide in this situation" and "No one important to me would likely think it is OK to commit suicide in this situation –strongly agree/agree/disagree/strongly disagree". The reliability for these two items is .56, which is unacceptably low. The analyses reported in this section are reported using Item 2 and Item 4 separately.

As an exploratory measure, respondents were asked to indicate who they believed thought most like themselves about suicide. Although no quantitative analysis was done

on this item, the responses were characterized as family (mother, father, sister, brother, cousins, etc.), friends, or mentors (teacher, coach, friend of the family).

Normality of the Data

In order to screen for normality of the data, values of skewness and kurtosis were calculated. For each of the dependent and independent variables, the data were slightly skewed in that the values were not zero. With large samples such as this one, Tabachnick and Fidell (1989) recommend visually inspecting a histogram with the normal curve superimposed. In a large sample, a variable with significant skewness or kurtosis often does not deviate enough from normality to make a realistic difference in the analysis. Visual inspection of each variable revealed slight negative skewness in Intent, Depression and Hopelessness. To further graphically assess normality, normal probability plots were run for each variable. The results suggest normality. To further assess the normality of the data, tests of homoscedasticity were performed for each of the variables in relation to each other. The scatterplots were not skewed.

As a final precaution, regression analyses were re-run using transformed variables, as well as the original variables. Variables were transformed using a reflection and square root, to accommodate for the slight negative skewness found in Intent, Depression, and Hopelessness. No improvements were found in the models as a result of transforming the variables. This is consistent with Tabachnik and Fidell's (1989) findings, in that when

variables are only moderately skewed, improvements of analysis with transformations are often marginal.

The issue of possible collinearity between perceived behavioural control and intent was noted. This occurs when variables are too highly correlated. Tabachnik and Fidell (1989) indicate that correlations of .90 and above are cause for concern. Perceived behavioural control and Intent have a correlation of .82. Although this does not lead to any immediate statistical concern, the theoretical relationship between the two variables may need clarification (see Discussion section).

Scoring

In general, the scales were scored so that a high score represents a high rating on the variable. The SUIATT scale was scored such that a high score on the measure reflected a high acceptability of or more positive attitude towards suicide.

The Subjective Norm items were scored in such a way that a high score reflects a perception that the people who thought most like the respondent about suicide would have a positive opinion about choosing suicide in the case scenario.

The Perceived Behavioural Control Scale was scored in such a way that a higher score reflects a high sense of control over choosing suicide in the case scenario.

The Intent Scale was scored such that the higher the score, the greater the respondent's intent to commit suicide in the case scenario, or at some time overall. The

measure of Past Behaviour was scored such that the higher the score, the higher the number of suicidal events in the respondent's history.

The CES-D (Depressed Affect) and the Hopelessness Scale were scored such that a high score reflected high levels of depressed affect and high levels of hopelessness, respectively.

Characteristics of the Sample Regarding Suicide

Thirty nine percent of the participants reported that they have never considered attempting suicide, while 24% (128 participants) have considered attempting suicide once, 15% (80 participants) considered attempting suicide twice, and 28% (149 participants) considered attempting suicide on three or more occasions.

The majority of the participants reported that they have never made a suicide plan (68%). Twelve percent reported making a suicide plan once, 7% reported making a suicide plan twice, and 13% reported making a suicide plan on three or more occasions.

The majority of the participants reported that they had never attempted suicide (68%). Nineteen percent reported attempting suicide once, 5% reported attempting suicide twice, and 8% reported attempting suicide on three or more occasions.

Of those who did make a suicide attempt, the majority did not intend to die (65%). The mean score for this item was 2, where 1 represented "I did not intend to die" and 7

represented "I very much intended to die". Eight percent of participants indicated that they had very much intended to die.

Respondents were provided with the following scenario:

> Ever since your girlfriend/boyfriend left you, you have felt this empty feeling inside, to the point of numbness, like there is something dead inside. You still love her/him, and don't know how to live without her/him.
>
> You can't do anything right at school, and you know that your instructor is going to fail you. You feel like you can't handle the responsibility of life. You have tried to cope with the pressures but find that you just can't do it. You feel like you have tried to make it and failed. This terrible depression keeps coming over you and you can't bear feeling so bad. You can't fight anymore. You wish that you could disappear without hurting anyone.

When asked if they would attempt suicide in the scenario provided, the average score was 2.4, where 1 was (recoded) very unlikely, and 7 was (recoded) very likely. Eleven percent of participants did choose 6 and 7, indicating they felt it was very likely they would attempt suicide in the scenario. When asked if there would ever be a situation in which they would be likely to commit suicide, the average score was 3.0, where 1 was (recoded) very unlikely, and 7 was (recoded) very likely. Thirteen percent of participants

did choose 6 and 7, indicating that it was very likely that there would be a situation in which they would commit suicide.

Respondents were asked to indicate if they had ever considered suicide. In general, those who had not considered suicide had lower mean levels of intent than those who had at some time considered suicide. Similarly, those who had never made a suicide plan demonstrated lower mean levels of intent than those who had at some time made a plan. Finally, those individuals who had never made a suicide attempt demonstrated lower mean levels of intent than those who had made at least one attempt. (See Table 2 for a summary of means.)

A one-way ANOVA was conducted on the frequency with which an individual had considered suicide (never, once, twice, three or more times) and intent. There was a significant relationship between number of times an individual had considered attempting suicide and level of intent, $F(3, 531) = 61.7$, $p<.001$. A Scheffe test indicated that groups of individuals who had never considered suicide, had considered it once, twice, or three or more times differed significantly from each of the other groups in mean level of intent.

Table 2:

Mean levels of intent in relation to past experiences with suicide.

Question:
How often have you considered attempting suicide?

Response Option	Mean Level of Intent
Never	3.5
Once	5.0
Twice	6.3
Three or more times	8.1

Question:
How often have you made a suicide plan (that is, worked out how you would do it)?

Response Option	Mean Level of Intent
Never	4.3
Once	6.9
Twice	6.1
Three or more times	8.9

Question:
How many times have you attempted suicide?

Response Option	Mean Level of Intent
Never	4.1
Once	7.0
Twice	7.5
Three or more times	10.5

A one-way ANOVA was conducted on the frequency with which an individual had made a suicide plan (never, once, twice, three or more times) and intent. There was a significant relationship between number of times an individual had considered attempting suicide and level of intent, F (3, 531) = 51.3, $p<.001$. A Scheffe test indicated that groups of individuals who had never made a suicide plan differed significantly from each of the other groups in mean level of intent. There was no significant difference between those who had made a suicide plan once or twice, but individuals who had made a suicide plan three or more times differed significantly from each of the other groups.

A one-way ANOVA was conducted on the frequency with which an individual had made a suicide attempt (never, once, twice, three or more times) and intent. There was a significant relationship between number of times an individual had attempted suicide and level of intent, F (3, 525) = 73.9, $p<.001$. A Scheffe test indicated that groups of individuals who had never made a suicide suicide attempt differed significantly from each of the other groups in mean level of intent. There was no significant difference between those who had made a suicide attempt once or twice, but individuals who had made a suicide attempt three or more times differed significantly from each of the other groups.

Correlations

Correlations among the dependent and independent variables were calculated, and are reported in Table 3. The SUIATT-self subscale was highly and significantly positively correlated with intent, Perceived Behavioural Control, and Depressed Affect.

Hypothesis One

It was predicted that attitude towards suicide, subjective norm beliefs, and perceived behavioural control would predict an individual's suicidal intent. A standard multiple regression was performed between intent as the dependent variable, and the SUIATT personal subscale, Subjective Norm (2 Items), and Perceived Behavioural Control as the Independent Variables. Table 4 displays the unstandardized regression coefficients, the standardized regression coefficients, the squared semipartial correlations (sr^2), and R, R^2, and adjusted R^2. Perceived behavioural control, Subjective Norm, and the SUIATT personal subscale were significant predictors of intent, $R^2 = .72$, $F(3,528) = 456.45$, $p<.001$.

For comparison, a standard multiple regression was performed between intent as the dependent variable, and the SUIATT personal subscale , Subjective Norm (Item 2),

Table 3

Correlations between the dependent and independent variables.

	General Attitude SUIATT	Self Attitude	Near & Dear Attitude	TPB Attitude	Attitude (evaluative)	Subj.Norm (2 items)	PBC	Intent	Depression	Hopelessness
General Attitude SUIATT	1.0									
Self Attitude	.39	1.0								
Near & Dear Attitude	.46	.61	1.0							
TPB Attitude	.14	.26	.19	1.0						
Attitude (evaluative)	.17	.34	-.02*	.75	1.0					
Subj. Norm (2 items)	.16	.40	.01*	.16	.29	1.0				
PBC	.25	.52	.28	.41	.49	.32	1.0			
Intent	.27	.61	.35	.39	.51	.37	.82	1.0		
Depression	.06*	.41	.17	.24	.19	.18	.46	.47	1.0	
Hopelessness	-.01*	-.34	-.17	-.15	-.24	-.18	-.39	-.39	-.52	1.0

All correlation coefficients are significant at the $p<.01$ level unless otherwise indicated.

* $p>.05$

Table 4 :

Standard Regression on Intent by SUIATT personal subscale, Subjective Norm (2 Items), and Perceived Behavioural Control

Variable	B	β	sr^2 (unique)
SUIATT-personal subscale	.06	.24	.04*
SN	.13	.06	.01*
PBC	.25	.70	.56*

$R^2 = .72$
Adj. $R^2 = .72$
$R = .85$
*$p < .001$

and Perceived Behavioural Control as the Independent Variables. Table 5 displays the unstandardized regression coefficients, the standardized regression coefficients, the squared semipartial correlations (sr^2), and R, R^2, and adjusted R^2. Only two variables, the SUIATT personal subscale and Perceived Behavioural Control, were significant predictors of intent, $R^2 = .72$, $F(3,528) = 458.24$, $p<.001$.

Also for comparison, a standard multiple regression was performed between intent as the dependent variable, and the SUIATT personal subscale , Subjective Norm (Item 4), and Perceived Behavioural Control as the Independent Variables. Table 6 displays the unstandardized regression coefficients, the standardized regression coefficients, the squared semipartial correlations (sr^2), and R, R^2, and adjusted R^2. Only two variables, Attitude and Perceived Behavioural Control, were significant predictors of intent, $R^2 = .85$, $F(3,528) = 456.23$, $p<.001$.

Hypothesis Two

It was predicted that perceived behavioural control beliefs would account for the greatest proportion of the variability of an individual's current suicidal intent, in comparison to attitude and subjective norm. In all regression models conducted above, perceived behavioural control accounted for the greatest proportion of variance, $sr^2 = .55$ to .61.

Table 5 :

Standard Regression on Intent by SUIATT personal subscale, Subjective Norm (Item 2), and Perceived Behavioural Control

Variable	B	β	sr^2 (unique)
SUIATT-personal subscale	.06	.23	.04*
SN Item 2	.14	.03	.000
PBC	.25	.70	.55*

$R^2 = .72$
Adj. $R^2 = .72$
$R = .85$
*$p < .001$

Table 6 :

Standard Regression on Intent by SUIATT personal subscale, Subjective Norm (Item 4), and Perceived Behavioural Control

Variable	B	β	sr^2 (unique)
SUIATT-personal subscale	.06	.22	.04*
SN Item 4	.14	.03	.000
PBC	.25	.70	.56*

$R^2 = .72$
Adj. $R^2 = .72$
$R = .85$
*$p < .001$

Hypothesis Three

It was predicted that perceived behavioural control beliefs would be significantly higher for those individuals with a history of past suicidal behaviour than for those individuals who have not attempted suicide in the past. A t-test was conducted to determine if perceived behavioural control beliefs were significantly higher for those individuals with a history of past suicidal behaviour. A significant effect was revealed, $t(281)=10.80$, $p<.001$, such that those individuals with a history of past suicidal behaviour had higher levels of PBC (X=25.4) than those individuals with no history of past suicidal behaviour (X=15.9). This finding is consistent with the hypothesis.

Hypothesis Four

It was predicted that the mean level of intent would be higher among those who have attempted suicide more than once. A t-test was conducted to determine if levels of suicidal intent were significantly higher for those individuals with a history of past suicidal behaviour. A significant effect was revealed, $t(169)= 4.8$, $p<.001$, such that individuals with more than one attempt had higher levels of suicidal intent (X=9.33) than those individuals with only one attempt (X=6.99). This finding is consistent with the hypothesis.

Hypothesis Five

It was predicted that the mean level of suicidal intent would be highest for those individuals with high levels of perceived behavioural control beliefs and a history of past suicidal behaviour than for those with a low sense of perceived behavioural control beliefs and no history of past suicidal behaviour. A 2 (History) x 2 (perceived behavioural control) analysis of variance (ANOVA) was performed. Levels of Perceived Behavioural Control were determined by a median split. For Perceived Behavioural Control, the median was 17 (with a range from 7 to 46); those cases below 17 were considered low, and those cases above were considered high.

Levels of History were determined by the number of suicide attempts in a respondent's past behaviour. Those individuals with no suicide attempts in their past constituted the No History group (N=361), and individuals with one or more attempts were included in the History category (N=171). Table 7 displays the results of the ANOVA.

There was a significant main effect for History, F (1, 531)= 70.0, $p<.001$, such that those individuals with a history of suicide attempts had higher mean levels of intent (X=7.92) than those individuals with no history of suicide attempts (X=4.12). A significant main effect was also found for Perceived Behavioural Control, F (1,531)=258.0, $p<.001$, such that those individuals with a high sense of Perceived

Table 7:

Results of 2 x 2 ANOVA on level of intent by History and Perceived Behavioural Control.

	SS	df	MS	F	p
History	426.8	1	426.8	70.0	.000
Perceived Behavioural Control	1573.2	1	1573.2	258.0	.000
History x Perceived Behavioural Control	49.8	1	49.8	8.2	.004

Behavioural Control demonstrated higher mean levels of intent (X=7.63) than those individuals with a low sense of Perceived Behavioural Control (X=3.02).

A significant two-way interaction was found between History and Perceived Behavioural Control, F (1, 531)=8.17, p<.01. Those individuals with no history of past suicide attempts and with low Perceived Behavioural Control demonstrated the lowest levels of suicidal intent. Those individuals with a history of suicide attempts and high levels of Perceived Behavioural Control demonstrated the highest levels of suicidal intent. This finding is consistent with the hypothesis. Table 8 displays a summary of the means. Figure 3 graphically displays the interaction effect.

Hypothesis Six

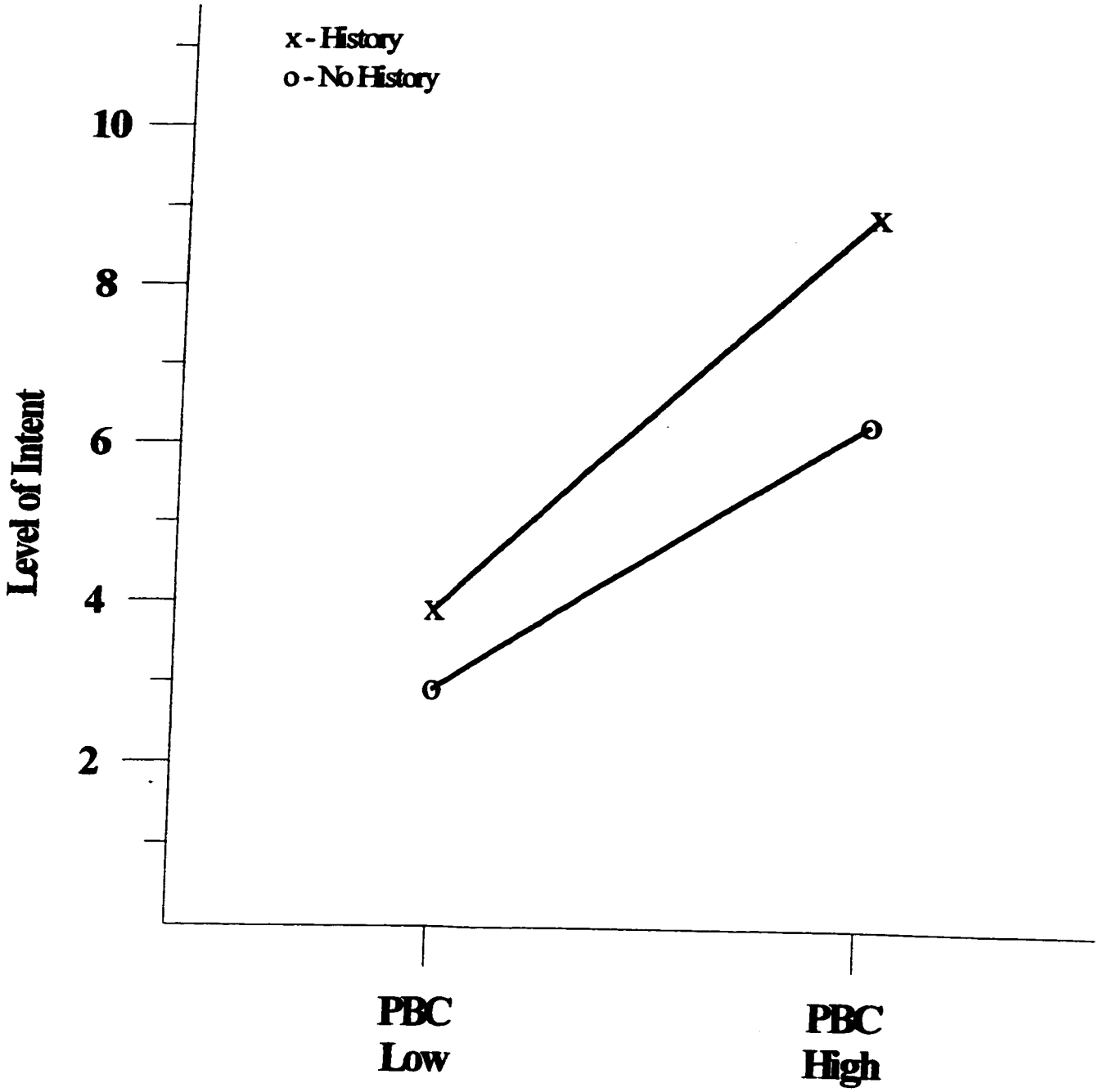
It was predicted that individuals who have attempted suicide only once would have lower mean scores on attitude towards suicide (SUIATT personal subscale) than multiple attempters. A t-test was conducted to determine if attitude scores were significantly higher for those individuals who had made more than one attempt. A significant effect was revealed, t (169) = 2.0, p< .05, such that those with more than one attempt had more positive (accepting) attitudes towards suicide (X=53.0) than those with only one attempt (X=38.8). This finding is consistent with the hypothesis.

Table 8:

Mean levels of Intent for Perceived Behavioural Control and History

	PBC Low	PBC High
No History	2.9	6.3
History	3.9	8.9

Figure 3 : Interaction Between Perceived Behavioral Control and Past History of Suicidal Behavior on Level of Intent



Hypothesis Seven

It was predicted that attitude towards suicide, subjective norm, and perceived behavioural control would account for a greater proportion of the variance in suicide intent compared to the variance accounted for by depression and hopelessness. A standard multiple regression was performed with intent as the criterion variable, and SUIATT-personal subscale, Subjective Norm (2 Items), Perceived Behavioural Control, Depression, and Hopelessness as the predictor variables. Table 9 displays the unstandardized regression coefficients, the standardized regression coefficients, the squared semipartial correlations (sr^2), and R, R^2, and adjusted R^2 . SUIATT-personal subscale and Perceived Behavioural Control were significant predictors of intent, R^2 = .73, $F(5, 526) = 279.33$, $p<.001$. In both cases, Attitude and Perceived Behavioural Control accounted for more of the variance in intent than Depression and Hopelessness, although Perceived Behavioural Control was primarily responsible for the variance accounted for in intent.

Table 9 :

Standard Regression on Intent by SUIATT-personal subscale, Subjective Norm (2 Items), Perceived Behavioural Control, Depression, and Hopelessness

Variable	B	β	sr^2 (unique)
SUIATT-personal	.05	.21	.09*
SN (2 Items)	.004	.003	.000
PBC	.24	.67	.52*
Depression	.01	.05	.005
Hopelessness	.04	.05	.005

$R^2 = .73$
Adj. $R^2 = .73$
$R = .85$
*$p < .001$

Chapter IV

Discussion

The theory of planned behaviour states that one's intentions regarding a particular behaviour are predicted by the attitudes one holds towards that behaviour, and the subjective norms one holds (i.e., a person's beliefs that specific individuals or groups approve or disapprove of performing the behaviour). One's sense of perceived behavioural control is also considered to be a significant predictor of intent, and refers to the perceived ease or difficulty of performing the behaviour for oneself. Perceived behavioural control is shaped by past experience. Ajzen (1988) theorized that as a general rule, the more favourable the attitude and subjective norm towards the behaviour, and the greater the perceived behavioural control, the stronger the individual's intention to perform the behaviour. The theory of planned behaviour assumes that perceived behavioural control is a motivating factor for intentions. The focus of this study was to apply the theory to the prediction of suicidal intent.

The overall model involving attitude, subjective norm, and perceived behavioural control was highly and significantly predictive of suicidal intent. Intent was measured by asking how likely it is that the participant would commit suicide in the described scenario, and also by asking how likely it is that an occasion would ever arise that would lead the participant to commit suicide. In this study, one's own attitudes towards suicide,

one's subjective norm, and one's sense of perceived behavioural control predicted suicidal intent in the described scenario. Although all three variables were statistically significant predictors of suicidal intent, the greatest proportion of the variance was accounted for by perceived behavioural control, as predicted.

Perceived behavioural control accounted for the greatest proportion of the variance in each regression model. In a multiple regression performed with intent as the dependent variable, and the attitude (evaluative component), subjective norm, and perceived behavioural control as the predictor variables, perceived behavioural control accounted for the greatest proportion of the variance in suicidal intent. In a second multiple regression that was performed between intent as the dependent variable, and the SUIATT personal subscale (attitudes toward suicide for oneself), subjective norm, and perceived behavioural control as the independent measures, perceived behavioural control again accounted for the greatest proportion of variance in suicidal intent ($sr^2 = .56$ and .57). Previous research utilizing the theory of planned behaviour has also documented the relative strength of perceived behavioural control as a predictor of intent. In a review of the relevant literature, Ajzen (1991) documented that the tests of the perceived behavioural control-intention link were significant, even controlling for the effects of attitudes and subjective norms. Madden, Ellen, and Ajzen (1992) found that perceived behavioural control predicted behavioural intentions across ten different behaviours.

Giles and Carnes (1995) reported that participants who believed they lacked the necessary skills or abilities (perceived behavioural control) to engage in blood donating behaviour were unlikely to form strong behavioural intentions even if their attitudes and subjective norms were favorable. Vermette and Godin (1996) reported that perceived behavioural control was the strongest predictor of intention for nurses to provide care at home to homosexual versus hetrosexual AIDS patients. Bunce and Birdi (1998) found that perceived behavioural control strong predicted doctors' intentions to request hospital autopsies.

The contribution of perceived behavioural control and past behaviour towards suicidal intent was also significant. Perceived behavioural control beliefs were higher for those individuals who had a history of past suicidal behaviour (defined as one or more attempts). This is consistent with the proposal by Ajzen (1988) that one's perceived behavioural control is based on past experiences. If one has been able to engage in a behaviour in the past, one has a greater sense of control over the ability to engage in that behaviour again.

Individuals with a history of only one suicide attempt demonstrated lower mean scores on attitude toward suicide than multiple attempters. The more experience an individual has with suicide, the more positive his or her attitude is towards suicide. Multiple attempters also demonstrated a higher level of perceived behavioural control.

Further, level of intent was higher for those individuals with a history of at least one suicide attempt than for those with no history of suicide attempts. These data suggest that experience with suicide may place one at greater risk for suicidal intent, and presumably for the act of suicide itself.

This finding is consistent with and adds to previous research indicating that having a history of suicide attempts is a risk factor for suicide. In a study of 84 psychiatrists (Truant, O'Reilly, & Donaldson, 1991), a history of previous attempts among clients was rated as the third most significant risk factor for suicide. The first two items were the degree of hopelessness and communicated ideation or plan. Simonds, McMahon, and Armstrong (1991) listed a history of previous attempts as a significant predictor of future attempts in adolescents. Lester (1992) also documented a history of previous suicide attempts as a significant risk factor for future suicide attempts.

Similarly, suicidal intent was higher among those individuals who have attempted more than once. This is consistent with the theory of planned behaviour, in that the more one engages in a behaviour, the more positive one's evaluation or attitude towards suicide, one's subjective norm, and one's sense of perceived behavioural control would be expected to be towards that behaviour. It follows then that one's intent must also be higher as a result. Multiple-episode attempters are also more psychologically distressed,

and have a more pronounced history of significant family problems than single-episode attempters (Kral & Sakinofsky, 1994).

This argument is further supported by the finding that the mean level of suicidal intent was significantly higher for those individuals with high levels of perceived behavioural control beliefs and a history of past suicidal behaviour than for those individuals with a low sense of perceived behavioural control and no history of past suicidal behaviour. The correlation of .60 between perceived behavioural control and past suicidal behaviour (measured as no previous suicide attempts, one previous suicide attempt, or two or more suicide attempts) illustrates that perceived behavioural control increases as one's history of suicidal behaviour increases.

As an additional check on the efficacy of the theory of planned behaviour in predicting suicidal intent, the relative contribution of the variables was compared, with hopelessness and depression as predictors of suicidal intent. It is worth noting that perceived behavioural control accounted for even more of the variance in suicidal intent in the present study than depression and hopelessness combined. Depression and hopelessness have generally been viewed as the best predictors of suicidality (Barraclough et al., 1974; Beck et al., 1982; Lester, 1992). If this trend can be replicated in future research, both in terms of suicidal intent and suicidal behaviour, it will have significant implications for suicide theory. Currently, suicide is viewed as a result of

depression and hopelessness, and many theoretical approaches to understanding suicide treat it as "the worst case scenario" of experiencing depression (Beck, 1967; Beck et al., 1985; Abramson et al., 1995). Although there may be significant overlap, the theory of planned behaviour may provide a supplementary cognitive-theoretical framework within which to understand suicide.

One criticism by the author of the research on suicide as a result of depression and hopelessness is that it focuses on the correlates of suicide. Cognitive theoretical approaches like Abramson's Hopelessness Depression (1995) and Beck's cognitive approach to depression (1967) attempt to pull the correlates together to result in a model of suicidal behaviour. The strength of the theory of planned behaviour is that it is a model that can extend itself to most behaviours. Rather than trying to piece the correlates together into a unified theory of suicidal intent or suicidal behaviour, the theory of planned behaviour provides a framework within which the relationship of the correlates to the intention or behaviour can be better understood.

The implication of perceived behavioural control accounting for a greater proportion of the variance in suicidal intent than depression and hopelessness is that depression and hopelessness may not be direct causes of suicide, but instead are proximal cues for the activation of one's previously developed attitude, subjective norm, and perceived behavioural control regarding suicidal intent. In other words, a person may

have developed an attitude, subjective norm and perceived behavioural control belief regarding suicidal intent for a time when things get "too bad." As such, when the feelings of depression and hopelessness reach a particular level, the suicidal intent may be activated.

Once depression and hopelessness trigger or activate the schema for suicidal intent, perceived behavioural control may be the necessary and sufficient variable for the formation of the suicidal intention. Ajzen (1988) indicated that perceived behavioural control alone may have the greatest influence over behaviour, and it has a significant influence over intent. Replicating this finding (i.e., perceived behavioural control accounting for a greater proportion of variance in suicidal intent than depression and hopelessness) would have implications for linking the correlates of suicide within a theoretical model of suicidal intent, and perhaps a model of suicidal behaviour.

Kral (1994) also conceptualized suicide as the result of a schema activated by overwhelming psychological pain. Kral built on Shneidman's concepts of perturbation and lethality. Perturbation is considered the motivator for suicide, and can be related to the degree of "psychache" or unbearable psychological pain experienced by the individual. Lethality is described as the intent to commit suicide as a way of ending the pain. Kral (1994) points out that many people experience "psychache," but not all of these people kill themselves. It is his view that lethality, or the idea of suicide, is

activated under times of overwhelming pain as the way of ending the pain. It is the psychological accessibility and acceptability of suicide that makes suicide a choice for some but not for others.

Consistent with the theory of planned behaviour, Kral (1994) argued that the idea to commit suicide under certain circumstances can be developed well in advance of the experience of unbearable psychological pain. It is the perturbation that brings the idea of suicide into the forefront of the individual's thoughts. This supports the model proposed above concerning the theory of planned behaviour, depression, and hopelessness. Depression and hopelessness can be conceptualized as characteristics of perturbation. The attitude one holds towards suicide, one's subjective norm, and one's sense of perceived behavioural control contribute to one's suicidal intent, or lethality. This intent to commit suicide under the right circumstances can be formed well in advance of the experience of perturbation, but it is triggered by the emotions or perturbation experienced by the individual at a particular time.

The idea of mood activating cognitive schema is not new. For example, Segal (1988) speculated that accessibility of previously held negative self-beliefs may vary with mood or context. Depression researchers have debated the extent to which the negative cognitive processes of depressed persons are stable characteristics of vulnerable individuals, or changeable features influenced by mood (Showers, Abramson, & Hogan,

1998). McClain and Abramson (1995) assessed negative self-schemas in vulnerable individuals at times when they were and were not under stress and found that a person's schemas vary with mood. When stress levels were high, depressed individuals (based on symptoms on the Beck Depression Inventory) reported more negative self-schemas than individuals who were not depressed. When stress levels were low, self-schemas did not vary between depressed and non-depressed individuals. Showers et al. (1998) assessed the content of self-schemas in persons vulnerable and non-vulnerable to depression twice, once when their mood was low and once when it was not. Showers et al. (1998) reported significant change in the self-schema with change in stress and mood.

It is possible then, that a person can hold an attitude, subjective norm, and perceived behavioural control belief about suicidal intent that is not activated until the relevant mood (depression and hopelessness) is present.

Critique and Future Prospects

In summary, the theory of planned behaviour predicted suicidal intent. One's attitude towards suicide, perceived behavioural control, and subjective norm did predict suicidal intent. The contributions of attitude and subjective norm were quite small statistically, and it is therefore difficult to reach clear conclusions regarding their roles. However, the trend in the patterns of results of each of the hypotheses is consistent with the predictions one would make based on the theory of planned behaviour.

One strong condition for the success of predicting intent based on attitude, subjective norm and perceived behavioural control is that measurement of each variable occurs within a clearly specified context. Level of specificity is crucial. This study measured the theory of planned behaviour with some success using only one context (i.e., only one vignette). Future research should consider multiple vignettes, and look for differences in attitudes, subjective norms, and perceived behavioural control between various scenarios. It is reasonable to expect that although suicide may be more acceptable to some individuals in one situation, it may not be so in others.

To test the theory of planned behaviour, the attitude measure must identify an outcome and allow for an evaluation of that outcome. A positive evaluation is argued to result in a positive or accepting attitude towards the behaviour, and lead to the greater likelihood of the performance of that behaviour (Ajzen, 1988). Conversely, a negative evaluation will result in a negative attitude toward behaviour, and lead to a greater likelihood that the behaviour will not be performed. In cases of socially desirable behaviours, like weight loss and breastfeeding, the valued outcomes are easy to identify. However, when trying to predict undesirable behaviour such as suicide, very little is known about what outcomes might be considered to be positive by an individual. In a very real sense, this is core to one of the key questions in suicidology: Why did he/she do it? Indeed, this is the key question in understanding all behaviour.

Future research on the development of an attitude toward suicide measure would be very useful, for both the study of the theory of planned behaviour and for research on suicide in general. The most widely used attitude towards suicide questionnaire is the Suicide Opinion Questionnaire (SOQ) (Domino, Gibson, Westlake, & Gibson, 1982). The scale loads onto eight factor scales, including the belief that suicide is a mental illness, the belief that suicide is a cry for help, one's beliefs about the right to die, beliefs about religion and suicide, beliefs about impulsivity and suicide, beliefs about the normality of suicide, suicide and aggression, and suicide as a moral evil. Recently, the internal consistency of the scale has been criticized (Rogers & DeShon, 1995). However, the SOQ was not used for the current study because it did not measure attitude in a manner consistent with Ajzen's (1988) definition of attitude. Attitude is defined as including an evaluation of the outcome of suicidal behaviour, while the items included in the SOQ refer more to beliefs about suicide in general. Although measures such as the SUIATT are somewhat consistent with Ajzen's conceptualization of attitude, a specific measure needs to be developed for the theory of planned behaviour, and tested with a variety of populations. Attention must be given to identifying the most common outcomes of suicide, such as the ending of emotional or physical pain, and determining how those outcomes are viewed. Research documenting the differences in evaluation of outcomes between suicidal and non-suicidal populations would be very valuable.

Further development regarding the operationalization of subjective norm is also required. It makes sense to incorporate a variable in the theory of planned behaviour that addresses the impact of social influence. However, in the current study, subjective norm accounted for the least amount of variability in suicidal intent, and in some of the regression analyses it was not statistically significant. In the cases where it was statistically significant, this is likely due to the impact of the large sample size.

In the current study, the scale measuring subjective norm was not statistically sound, and showed a low reliability as a whole. Analyses were run using the items from the scale that had the best face validity with respect to the most common ways of measuring subjective norm (i.e., referred to what those individuals most important to the participant might think). Although the overall model was always significant for predicting suicidal intent using attitude, subjective norm, and perceived behavioural control, subjective norm was consistently statistically nonsignificant.

There are three possibilities for why this was the case: a) subjective norm was poorly operationalized in this study; b) subjective norm is not a relevant variable to the suicide scenario presented in the vignette; or, c) the way in which subjective norm is currently operationalized in the literature is a weakness to the overall theory of planned behaviour.

Certainly there is evidence that in this study, subjective norm was poorly operationalized. It demonstrated low reliability, accounted for little meaningful variance in suicidal intent, and was not statistically significant in all analyses of the model.

Subjective norm may not be relevant to the suicide scenario used in this study. In eight out of ten studies reviewed by Ajzen (1988), the relative contribution of attitudes exceeds that of subjective norm. In a meta analysis of 113 articles applying the theory of planned behaviour, Van den Putte (1991) reported that the relationship between attitude and intent was stronger than the relationship between subjective norm and intent. Jurgens (1998) used a vignette to assess nurses' intention to administer morphine for post-operative pain, and found that attitude and perceived behavioural control emerged as the significant predictors of behavioural intention. Clare and Smith (1999) found that children's attitudes and perceived behavioural control were significant predictors of their intentions to interact with children with physical disabilities. Thus, in studies where subjective norm was apparently well operationalized, subjective norm is still not a strong predictor of intent. Ajzen (1988) concluded that it may be possible that attitude is more relevant than subjective norm in certain cases, and the reverse may be true in others. However, the research reviewed above would suggest that subjective norm is not relevant in a great number of cases.

This leads to the third option, which is that the way in which subjective norm is currently operationalized in the literature is a weakness to the overall theory of planned behaviour. If in fact subjective norm is consistently a weaker contributor to the prediction of intent, this would indicate that the variable may need to be refined. And if it is a relevant contributor some times but not others, why would this be the case? The current theory of planned behaviour does not explain why this may occur. The end result is either a problem with the inclusion of the variable in the model, or a problem with the definition and operationalization of the variable.

There are varying opinions as to how subjective norm impacts behaviour. As a result, there are questions about how to best operationalize the construct. It is possible that the individual is influenced by: a) what one believes others think about the relevant behaviour, or b) what those with whom one is motivated to comply believe. Although there is some evidence to suggest that family and friends constitute the reference group for the current respondents, further research is required to confirm if this is the case in general. Rather than indicating the degree to which the referent thinks like the respondent does about suicide, respondents should be asked the degree to which they are motivated to comply with the referent.

Further, the extent that we are consciously influenced by others is debatable. Although Ajzen (1988, 1991) indicated that the processing or evaluating of the attitude,

subjective norm, and perceived behavioural control do not occur as a conscious process, the measurement of the variables, particularly subjective norm, depends heavily on conscious awareness of their influence.

It is more likely that subjective norm is internalized, and that we see our opinions as our own. We could not easily identify who has influenced the development of various opinions on any topic. In Western culture, we pride ourselves on being individuals, with our own opinions. As a result, we may be insulted when it is suggested we are thinking or doing something because our family or friends are thinking or doing it. Until we understand how subjective norm, or social influence in general, is internalized, we will continue to have difficulties in measuring it.

With respect to both the operationalizaton of attitude and of subjective norm, it is difficult to confirm the value of the theory of planned behaviour with the variation in measurement of its variables. Ajzen (1988) suggested what elements should be incorporated into the measurement of attitude, subjective norm, and perceived behavioural control, but there is no consistent standard or validated method of measurement. Ajzen (1991) reviewed research applying the theory of planned behaviour, and found that while the theory was good at predicting behaviour, the nature of the relationship between the variables is unclear. As such, the operationalization of the concepts has resulted in measurement difficulties (e.g. Beck & Ajzen, 1991; Doll &

Ajzen, 1990). Other researchers have attempted to more finely define and operationalize perceived behavioural control (Terry & O'Leary, 1995), intention (Davis & Warshaw, 1992), and the personal norm as an alternative to subjective norm when considering antisocial behaviours (Parker, Manstead, & Stradling, 1995). Future research programs addressing the theory of planned behaviour should incorporate a two-phased approach, involving the fine-tuning of the construct, development and validation of its measures, and the application of the model and these measures.

In the current study, and in much of the research on the theory of planned behaviour, perceived behavioural control is conceptualized as what one "could" do, and intent as what one "would" do. Davis and Warshaw (1992) have differentiated between behavioural intent (the degree to which a person has formulated conscious plans to perform or not to perform a behaviour) versus behavioural expectation (the individual's perceived likelihood that he or she will perform an act). The current study measured perceived behavioiural control in a manner most consistent with behavioural expectation. Although the argument made by Davis and Warshaw (1992) is theoretically sound, very little research has focused on making this differentiation, and there is limited empirical evidence for such a difference.

The operationalization of perceived behavioural control and intent were very similar in the current study, which would account for the high correlation between the

two variables. Intent needs to be more finely defined to include evidence of the formation of an intention, such as if the person has already made a plan, choice, or decision to perform or not perform a specific behaviour. Davis and Warshaw (1992) argued that intention is not a belief, but a behavioural decision. Questions regarding perceived behavioural control should address not only if they can do something, but why they know they can do it. This type of information would enrich the definition of the concept of perceived behavioural control.

It has been noted that the contribution of perceived behavioural control towards explaining the variance in suicidal intent is statistically much larger than the contribution of any other variable. The direct link proposed by Ajzen between perceived behavioural control and behaviour may also account for some of this. Multiple suicide attempters tend to use the same means over and over again (Clarke & Lester, 1989; Lester & Leenaars, 1993). They know that they can attempt suicide; they have done it before, and can do it again. Perceived behavioural control and past behaviour have been demonstrated to lead to behavioural intentions. In the current study, both variables were related to higher intentions to attempt suicide in the context of the scenario.

However, the question of whether high perceived behavioural control can supercede the other constructs in the theory of planned behaviour is worth exploring in future research. In studies of lying, cheating, and shoplifting, perceived behavioural

control accounted for the greatest degree of variance in behaviour. Terry and O'Leary (1995) reported that attitude accounted for a greater degree of the variance in exercise behaviour than did perceived behavioural control. Attitude was also a better predictor of smoking among adolescent females than perceived behavioural control (Hanson, 1997). Ajzen (1988, 1991) stated that each variable may be more or less important in different situations. Very little research exists using the theory of planned behaviour to predict socially undesireable behaviour (Beck & Ajzen, 1991; Parker, Manstead, & Stradling, 1995; Parker, Stradling, & Manstead, 1996). As such, whether or not the theory operates in the same way as for socially desirable behaviour needs to be addressed.

It is interesting to compare the findings of the current study regarding the contribution of perceived behavioural control to those of Schlegel et al. (1992) with respect to problem drinking. Schlegel et al. (1992) found that high perceived control over drinking was associated with lower intention to get drunk in nonproblem drinkers. On the other hand, perceived control had no impact on intention to get drunk for problem drinkers. Contrary to what would be predicted by the theory of planned behaviour, problem drinkers demonstrated a low level of perceived behavioural control, but were very likely to demonstrate the behaviour. Schlegel et al. (1992) argued that this could be a result of problem drinkers not having a sense of control over their drinking since there may have been times when they did not intend to get drunk, but did so anyway. This

raises two points; first, that in individuals who engage repeatedly in socially undesirable behaviour, perceived behavioural control should be low, and second, intention may not predict behaviour with respect to socially undesireable behaviour.

In direct contrast but consistent with the theory of planned behaviour, the current study found that those individuals who had attempted suicide at least once had higher levels of perceived behavioural control than those individuals who had never made a suicide attempt. Unfortunately, the relationship between intent and behaviour could not be assessed in the current study. However, in other studies of socially undesireable behaviour, intent did predict behaviour (see Beck & Ajzen, 1991, with respect to cheating, lying, and shoplifting, and Parker, Manstead, & Stradling, 1995, with respect to driving violations).

In order to consider the generalizability of the findings of the current study, it is important to first consider the demographics of the population of participants used in this study. About 32 % of participants reported a history of at least one suicide attempt, although the majority of these individuals did not intend to die when they made their attempts. Participants were simply asked how many times they had attempted suicide. Since no definition was offered as to what qualified as a suicide attempt, and since most people did not intend to die, it is likely that this number is much higher than is typically found (14-22%; Suicide Information and Education Centre, 2000) because of the varied

interpretation of what constitutes a suicide attempt. For example, for one person a suicide attempt might be taking 10 Tylenol pills while being very depressed (which is not life threatening), while for another a suicide attempt might mean that they had slashed their wrists.

It is also possible that self-selection could account for the higher number of participants with a history of suicide attempts. It is possible that people with no history of suicide were less likely to participate in or complete the survey.

With respect to the measure of intent, 8% of these individuals indicated a high level of intent with respect to suicide. Recent research at the University of Windsor indicates that between 12% to 16% of Introductory Psychology students admit to having made suicide attempts (Wallace, 1994). Although no data were collected to indicate what year the participants were in at university, participants in this study were recruited across a range of first, second, and third year classes. It is possible that the high number of individuals with a past history of suicide attempts reflect experiences beyond those of first year university students. Past experiences with suicide were demonstrated in this study to have an impact resulting in higher levels of intent, a higher sense of perceived behavioural control, and a more accepting attitude towards suicide. As such, the demographics of the population (when asked how many times they had made a suicide

attempt, 32% of respondents had a history of at least one suicide attempt) that participated in this study likely had an impact on the strength of the prediction model.

Despite the high levels of intent reported by participants, it is difficult to conclude that those participants with high levels of intent were in any immediate danger of making a suicide attempt. Intent is a significant risk factor for suicidal behaviour. Truant et al. (1991) identify ideation or intent as the second most important risk factor in predicting suicidal behaviour. Beck and Weishaar (1990) identified suicide ideation and intent as significant clinical predictors of suicide. Motto (1991) argued that every suicide risk assessment must include a direct inquiry regarding suicidal intent, as it is a major risk factor in predicting suicidal behaviour. Although intent was predicted by the variables with respect to the scenario, the level of specificity may not be generalizable beyond the scope of the scenario. Also, some difficulty arises regarding prediction of behaviour when actual behaviour is not measured, as in the case of research dependent on third-person vignettes, such as this one. Although it is possible, it is difficult to conclude based on this study that those reporting high intent with respect to the scenario are likely to make a suicide attempt in any other situation, or in a similar situation in their own lives.

To begin to understand if suicidal behaviour (as opposed to intent) is theoretically consistent with volitional control, research with suicidal populations is necessary. Studies using multiple scenarios with people who have demonstrated recent suicidal

behaviour can further enhance an understanding of the role of the theory of planned behaviour in predicting suicidal intent. However, longitudinal research with suicidal and non-suicidal populations that track suicidal behaviour is required. Some provinces, like Ontario, conduct regular surveys of population health factors, and monitor suicidal ideation, attempts, and completed suicides. Large-scale epidemiological surveys could incorporate theory of planned behaviour measures into its data collection. Since most of these surveys are comprehensive and include both interviews and self-report scales, questions could be included that measure attitude, subjective norm, and perceived behavioural control regarding suicidal intent and suicidal behaviour.

This study was a new application of the theory of planned behaviour, and a new approach to understanding suicide. Although most studies applying the theory of planned behaviour measure the specific behaviour under investigation, there were theoretical and practical reasons to focus on suicidal intent. With respect to the theory of reasoned action (TRA), Fishbein and Ajzen (1975) argued that intent is the immediate precursor to behaviour. In expanding the TRA into the theory of planned behaviour, Ajzen (1988, 1991) stated that the issue of choice was accounted for through the inclusion of perceived behavioural control. However, there are some theoretical arguments about the experience of crisis that did not allow for the unqualified assumption that suicidal behaviour is volitional. Specifically, some might question if a person who is in crisis really

experiences choice. Shneidman's (1985) identification of cognitive constriction as an element of the psychology of suicide seems to support the idea that an individual in crisis does not experience choice. However, the formation of suicidal intent is conceptually different from the act of suicide. It was argued that one's intention to commit suicide in a specific circumstance is determined well before the point of crisis. It was further argued that the crisis situation triggers one's already held beliefs regarding suicide. As such, only suicidal intent was considered to be under the individual's volitional control, as intent can be formed well in advance of a crisis situation. Longitudinal research and research with clinical and non-clinical respondents would be useful in exploring the volitional nature of suicidal intent and suicidal behaviour.

Applying the Theory of Planned Behaviour to Suicide Prevention

Parker, Stradling, and Manstead (1996) have stated that the ultimate test of the utility of the theory of planned behaviour is in its ability to guide the development of effective behaviour change interventions. In this case, the theory of planned behaviour has implications for not only understanding how suicide becomes a coping option, but also for how we can create an environment that leads to the prevention of suicidal behaviour.

In this application of the theory of planned behaviour to the development of suicidal intent, attitude towards suicide and one's subjective norms concerning suicide

have been argued to develop externally, through the actions of others, or the messages we receive about suicide from those who are important to us. Social interventions can be used to increase the likelihood that individuals in society hold more negative attitudes and subjective norms towards suicide. For example, recently, in a northern community in Canada, a young person committed suicide. A large body of students wanted to do something in their community to speak out against suicide, and drew nearly 100 posters concerning suicide. Some of the captions on the posters included things like "If you kill yourself, you won't get to go to your graduation," and "If you kill yourself, you will never fall in love with the right person." To dramatic effect, the posters were displayed in a local shopping mall and covered an entire wall in a highly visible area (E.Poirier, personal communication, October 26, 1998). This approach is very consistent with the application of the theory of planned behaviour to suicide prevention. The students identified less desirable outcomes of suicide, and by their high impact presentation, hopefully contributed to a subjective norm among their peers that was not supportive of suicide.

One application of this research would be to design a theory-based suicide prevention plan incorporating the theory of planned behaviour. It is recommended that a prevention strategy be built around identifying and addressing the attitudes, subjective norms, and perceived behavioural control of at risk youth. Specifically, suicide prevention staff could hold group discussions with students and have the group identify

the circumstances under which they might consider suicide, no matter how far-fetched the situation seems. The students could then generate the pros and cons of suicide (i.e., evaluate the outcomes of suicide), and in this way address the construct of attitudes towards suicide. Through the discussion itself, the influence of peers would create a subjective norm that inhibits suicide.

However, it is important to note that perceived behavioural control accounted for the greatest amount of variance in suicidal intent. As such, it would be the primary focus of prevention efforts. The implication for prevention efforts would be to focus on other ways of dealing with the situation contributing to suicidal intent. In this way, prevention efforts would be increasing the perceived behavioural control for other options. So, in discussing possible times that at risk youth would consider suicide, prevention efforts should focus on identifying other things that the person could do instead of attempting suicide.

It is not necessarily possible to decrease one's sense of perceived behavioural control for suicide. Primarily, this would involved trying to convince the suicidal individual that they can't commit suicide. This would be argumentative, and could have a rebound effect. In fact, in my experience as Executive Director of a suicide prevention centre, most crisis workers would indicate that this does not work; it may just cement why the individual knows they can do it. Crisis efforts often focus on examining other

options to suicide. Further, Schneidman (1996) suggested that work with suicidal people should focus on reducing the attractiveness of suicide while promoting other options to suicide.

Evaluating Prevention Efforts

Streiner and Adam (1987) identified a gap when looking for well-designed studies evaluating the effectiveness of suicide prevention programs. Lester (1997) found only 14 studies between 1969 and 1996 with sufficient data to report on the effectiveness of suicide prevention centres. Lester documented evidence for a preventative effect from suicide prevention centers. However, the preventative effect was not found for all methods of suicide nor for all populations at risk. He suggested that certain subgroups may show greater effects from suicide prevention efforts than others, although his research did not allow a clear conclusion as to which subgroups would benefit from more targeted approaches.

Tanney (1995) stated that in Canada, there is no dominant or widely accepted prevention model. The literature on the evaluation of suicide prevention faces many challenges; if there is no consistent model for suicide prevention, documenting and replicating any effects from suicide prevention is very difficult.

Typically, evaluations of suicide prevention, particularly public education efforts, take pre- and post-presentation measures of general attitudes towards suicide (assessing

myths of suicide is very common), knowledge about suicide in terms of statistics and risk factors, and skills regarding intervening if someone you know is suicidal. Although these prevention efforts may indeed increase help-seeking and help-giving behaviour, they do not address the core issue of suicide becoming a coping option.

The theory of planned behaviour offers a model that can be used not only to design prevention efforts, but also to evaluate them. A method similar to the one used in the current study could be devised as an evaluation model. Students could generate possible scenarios at an initial session, and measures of attitude, subjective norm, and perceived behavioural control can be compiled with respect to suicidal intent. A second measure could be completed at a later point in time, following suicide prevention efforts. Differences between the two time periods would reflect more or less positive ratings on the variables contributing to suicidal intent. Longitudinal research could track a sample of young people to see if they engage in suicidal behaviour during their lifetimes.

Theory of Planned Behaviour and Public Policy

At the macro level, the theory of planned behaviour leads to some interesting speculations about how public policy may effectively reduce suicide. The significant and sizeable role of perceived behavioural control in determining suicidal intent speaks to the need to limit accessibility to popular lethal means. If a person cannot find access to firearms, or if potentially lethal drugs are controlled, then perceived behavioural control

for many individuals may be reduced to such an extent that there is more time for other interventions to come into play. Public policy regarding public education or primary prevention could benefit from utilizing research on the effects of limiting popular lethal means of self-inflicted death. There is some evidence that suggests people do not tend to resort to alternative methods when the one they originally planned for becomes unavailable (Clarke & Lester, 1989).

Conclusion

Most research in suicide follows the medical model or an epidemiological approach to suicide, identifying correlates and risk factors without a theoretical framework within which to understand suicide. Frequently, the research in suicide either denies the role of choice, or does not explicitly address the role of choice.

However, many people have the "right" epidemiology for suicide in terms of a high number of risk factors, but they do not attempt suicide. So, suicide is not just the inevitable result of certain factors. How, then, are we to explain this?

Overall, the theory of planned behaviour provides a possible framework for better understanding suicide, and how the many correlates of suicide interact to develop a suicidal intention. Since perceived behavioural control accounted for even more variance than depression and hopelessness in this study, this finding could have important implications for a theory of suicide. Depression and hopelessness could be the triggers

that activate a pre-determined set of attitudes, subjective norms, and perceived behavioural control for suicidal intent.

Further research concerning the application of the theory of planned behaviour in conjunction with the existing approaches to understanding suicide may lead to a model that has applications at the prevention level, in counseling suicidal individuals, and in terms of designing public responses to suicide.

References

Abramson, L.Y., Alloy, L.B., & Metalsky, G.I. (1989). Hopelessness Depression: A theory-based subtype of depression. Psychological Review, 96, 358-372.

Abramson, L.Y., Alloy, L.B., & Metalsky, G.I. (1995). Hopelessness depression. In G. Buchanan and M.E. Seligman (Eds.) Explanatory Style (pp. 113-134). Hillsdale, NJ: Lawrence Eribaum.

Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Allebeck, P. (1989). Schizophrenia: A life-shortening disease. Schizophrenia Bulletin, 15, 81-89.

Alloy, L.B., Abramson, L.Y., Whitehouse, W.G., Hogan, M.E., Tashman, N.A., Steinberg, D.L., Rose, D.T., & Donovan, P. (1999). Depressogenic cognitive styles: predictive validity, information processing and personality characteristics, and developmental origins. Behaviour Research and Therapy, 37, 503-531.

Ajzen, I. (1988). Attitudes, personality, and behaviour. Chicago, IL: Dorsey Press.

Ajzen, I. (1991). The theory of planned behaviour. Organizational Behaviour and Human Decision Processes, 50, 179-211.

Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. Psychological Bulletin, 84, 888-918.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour. Englewood-Cliffs, NJ: Prentice Hall.

Ajzen, I., & Madden, T.J. (1986). Prediction of goal-directed behaviour: Attitudes, intentions, and perceived behavioural control. Journal of Experimental Social Psychology, 22, 453-474.

Asarnow, J.R., & Guthrie, D. (1989). Suicidal behaviour, depression, and hopelessness in child psychiatric inpatients: A replication and extension. Journal of Clinical Child Psychology, 18, 129-136.

Ashton, C. H., Marshall, E. F., Hassanyeh, F., Marsh, V. R., et al. (1994). Biological correlates of deliberate self-harm behaviour: A study of electroencephalographic, biochemical and psychological variables in parasuicide. Acta Psychiatrica Scandinavica, 90, 316-323.

Bagley, C., & Ramsay, R. (1985). Psychosocial correlates of suicidal behaviours in an urban population. Crisis, 6, 63-77.

Bagley, C., & Ramsay, R. (1989). Attitudes toward suicide, religion values, and suicidal behaviour: Evidence from a community survey. In R. F. Diekstra, R. Maris, S.

Platt, A. Schmidtke, & G. Sonneck (Eds.), Suicide and its prevention: The role of attitude and imitation (pp. 78-90). New York: Brill.

Barraclough, B., Bunch, J., Nelson, B., & Sainsbury, P. (1974). A hundred cases of suicide: Clinical aspects. British Journal of Psychiatry, 125, 355-373.

Beck, A. T. (1967). Depression: Clinical, experimental and theoretical aspects. New York: Harper & Row.

Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behaviour. Journal of Research in Personality, 25, 285-301.

Beck, A., Steer, R., Kovacs, M, & Garrison, B. (1985). Hopelessness and eventual suicide: A 10 year prospective study of patients hospitalized with suicidal ideation. American Journal of Psychiatry, 142, 559-563.

Beck, A. T., Steer, R. A., & McElroy, M. G. (1982). Relationships of haplessness, depression and previous suicide attempts to suicidal ideation in alcoholics. Journal of the Study of Alcohol, 43, 1042-1046.

Beck, A. T., Weissmann, A., Lester D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. Journal of Consulting and Clinical Psychology, 42, 861-865.

Bedrosian, R.C., & Beck, A.T. (1979). Cognitive aspects of suicidal behaviour. Suicide and Life-Threatening Behaviour, 9, 87-96.

Biblarz, A., Brown, R.M., Biblarz, D.N., Pilgrim, M., & Baldree, B.F. (1991). Media influence on attitudes toward suicide. Suicide and Life-Threatening Behaviour, 21, 374-384.

Boldt, M. (1989). Defining suicide: Implications for suicidal behaviour and for suicide prevention. In R. F. Diekstra, R. Maris, S. Platt, A. Schmidtke, & G. Sonneck (Eds.), Suicide and its prevention: The role of attitude and imitation (pp. 5-13). New York: Brill.

Brent, D.A., Kolko, D.J., Allan, M.J., & Brown, R.V. (1990). Suicidality in affectively disordered adolescent inpatients. Journal of the American Academy of Child and Adolescent Psychiatry, 29, 586-593.

Brevard, A., Lester, D., & Yang, B. (1990). A comparison of suicide notes written by suicide completers and suicide attempters. Crisis, 11, 7-11.

Bunce, D., & Birdi, K. S. (1998). The theory of reasoned action and the theory of planned behaviour as a function of job control. British Journal of Health Psychology, 3, 265-275.

Carlson, G. A., & Cantwell, D. P. (1982). Suicidal behaviour and depression in children and adolescents. Journal of the American Academy of Child Psychiatry, 21, 361-368.

Clarke, R.V., & Lester, D. (1989). Suicide: Closing the exits. NY: Springer-Verlag.

Davis, A.T. (1995). Attempted suicide and depression: Initial assessment and short term follow-up. In B. Mishara, (Ed.), The Impact of Suicide (pp. 130-141). New York: Springs Publishing.

Davis, F.D., & Warshaw, P.R. (1992). What do intention scales measure? The Journal of General Psychology, 119, 391-407.

Diekstra, R. F. W. (1985). Suicide and suicide attempts in the European Economic Community: An analysis of trends with special emphasis upon trends among the young. Suicide and Life-Threatening Behaviour, 15, 22-42.

Diekstra, R. F. W., & Kerkhof, J. F. M. (1989). Attitudes towards suicide: The development of a suicide-attitude questionnaire (SUIATT). In R. F. Diekstra, R. Maris, S. Platt, A. Schmidtke, & G. Sonneck (Eds.), Suicide and its prevention: The role of attitude and imitation (pp. 90-107). New York: Brill.

Doll, J., & Ajzen, I. (1990). The effects of direct experience on the attitude-behaviour relation: Stability versus accessibility. Psychological Review, 86, 452-264.

Domino, G., Gibson, L., Poling, S., & Westlake, L. (1980). Students' attitudes toward suicide. Social Psychiatry, 15, 127-130.

Domino, G., Moore, D., Westlake, L. & Gibson, L. (1982). Attitudes toward suicide: A factor analytic approach. Journal of Clinical Psychology, 38, 257-262.

Durkheim, E. (1951). Suicide: A study in sociology. (J. A. Spaulding & G. Simpson, Trans.) Glencoe, IL: Free Press. (Original work published in 1897.)

Dyck, R. J. (1991). Positive and negative attitudes mediating suicide ideation. Suicide and Life-threatening Behaviour, 21, 360-373.

Dyck, R.J., Bland, R.C., Newman, S.C., & Orn, H. (1988) Suicide attempts and psychiatric disorders in Edmonton. Acta Psychiatrica Scandinavica, 77 (Suppl. 338), 64-71.

Farber, M. L. (1968). Theory of suicide. New York: Funk & Wagnells.

Fishbein, M. (1967a). Attitude and the prediction of behaviour. In M. Fishbein (Ed.), Readings in attitude theory and measurement (pp. 477-492). New York: Wiley.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behaviour: An introduction to theory and research. Reading, MA: Addison-Wesley.

Gibbs, J. P. (1968). Suicide. New York: Harper Row.

Giles, M., & Cairns, E. (1995). Blood donation and Ajzen's theory of planned behaviour: An examination of perceived behavioural control. British Journal of Social Psychology, 34, 173-188.

Gould, M. S., Wallenstein, S., & Davidson, L. (1989). Suicide clusters: A critical review. Suicide and Life-Threatening Behaviour, 19, 17-29.

Hanson, M.J. (1997). The theory of planned behaviour applied to cigarette smoking in African-American, Puerto Rican, and Non-Hispanic white teenage females. Nursing Research, 46, 155-162.

Hasselback, P., Lee, K.I., Mao, Y., Nichol, R., & Wigle, T. (1991). The relationship of suicide notes to sociodemographic factors in Canadian census divisions. Canadian Journal of Psychiatry, 36, 655-659.

Health Canada (1994). Suicide in Canada: Update of the report of the Task Force on Suicide in Canada. Ottawa: Minister of National Health & Welfare.

Health Canada (1997). The Health of Canadians. Ottawa: Minister of National Health & Welfare.

Hewitt, P. L., Flett, G. L., & Turnbull-Donovan, W. (1992). Perfectionism and suicide potential. British Journal of Clinical Psychology, 31, 181-190.

Joffe, R. T., Offord, D.R., & Boyle, M.H. (1988). Ontario Child Health Study: Suicidal behaviour in youth aged 12-20 years. American Journal of Psychiatry, 145, 1420-1423.

Jurgens, D. W. (1998). Nurses' intentions to administer morphine for post-operative pain: An application of Ajzen's Theory of Planned Behaviour. Dissertation Abstracts International: The Sciences and Engineering, 58, 6869.

Kapci, E.G. (1998). Test of the hopelessness theory of depression: Drawing negative inferences from negative life events. Psychological Reports, 82, 355-363.

Krahe, B., & Reiss, C. (1995). Predicting intentions of AIDS-preventative behaviour among adolescents. Journal of Applied Social Psychology, 25, 2118-2140.

Kral, M., & Sakinofsky, I. (1994). A clinical model for suicide risk assessment. In A.A. Leenaars, J. T. Maltsberger, & R.A. Neimeyer (Eds.) Treatment of suicidal people (pp. 19-31). Washington, DC: Taylor & Francis.

Kraus, S.J. (1995). Attitudes and the prediction of behaviour: A meta-analysis of the empirical literature. Personality and Social Psychology Bulletin, 21, 58-75.

Kuda, M. (1990). Values, economic estimations, and suicide intent. Crisis, 11, 20-31.

Leahey, T.H. (1987). A history of psychology: Main currents in psychological thought. New Jersey: Prentice Hall.

Leenaars, A. (1988a). Are women's suicides really different from men's? Women and Health, 14, 17-33.

Leenaars, A. (1988b). Suicide notes: Predictive clues and patterns. New York: Human Sciences Press.

Leenaars, A.A., Lester, D., & Yang, B. (1992). Menninger's motives for suicide in the notes of completed and attempted suicides. Psychological Reports, 70, 369-370.

Lester, D. (1992a). State initiatives in addressing youth suicide: Evidence for their effectiveness. Social Psychiatry and Psychiatric Epidemiology, 27, 75-77.

Lester, D. (1992b). Why people kill themselves: A 1990s summary of research findings on suicidal behaviour (3rd ed.). Springfield, IL: Charles C. Thomas.

Lester, D. (1997). The effectiveness of suicide prevention centers: A review. Suicide and Life-Threatening Behaviour, 27, 304-310.

Lester, D., & Heim, N. (1992). Sex differences in suicide notes. Perceptual and Motor Skills, 75, 582.

Lester, D., & Leenaars, A. (1993). Suicide rates in Canada before and after tightening firearms control laws. Psychological Reports, 72, 789-790.

Lester, D., & Leenaars, A. (1998). Suicide in Canada and the United States: A societal comparison. In A. A. Leenaars, S. Wenckstern, I. Sakinofsky, R. J. Dyck, M. Kral, & R.C. Bland (Eds.) Suicide in Canada (pp. 108-121). Toronto: University of Toronto Press.

Levy, S.R., Jurkovic, G.L., & Spirito, A. (1995). A multisystems analysis of adolescent suicide attempters. Journal of Abnormal Child Psychology, 23, 221-234.

Madden, T. J., Ellen, P. S. & Ajzen, I. (1992). A comparison of the theory of planned behaviour and the theory of reasoned action. Personality and Social Psychology Bulletin, 18, 3-9.

Miles, C. P. (1977). Conditions predisposing to suicide: A review. Journal of Nervous and Mental Disease, 164, 231-247.

Minkoff, K., Bergman, E., Beck, A. T., & Beck, R. (1973). Hopelessness, depression, and attempted suicide. American Journal of Psychiatry, 130, 455-459.

Murphy, G. E., & Wetzel, R. D. (1990). The lifetime risk of suicide in alcoholism. Archives of General Psychiatry, 47, 383-392.

Nielsen, A. S., Senager, E., Brahe, U. B. (1993). Attempted suicide, suicidal intent and alcohol. Crisis, 14, 32-38.

Nunnally, J. C. (1978). Psychometric Theory. New York: McGraw Hill.

Ontario Ministry of Health (1992). Ontario Health Survey 1990: Highlights.

Parker, D., Manstead, A. S. R., & Stradling, S. G. (1995). Extending the theory of planned behaviour: The role of personal norm. British Journal of Social Psychology, 34, 127-137.

Petrie, K., Chamberlain, K., & Clarke, D. (1988). Psychological predictors of future suicidal behaviour in hospitalized suicide attempters. British Journal of Clinical Psychology, 27, 247-258._

Platt, S. (1989). The relationship between attitudes towards suicide and suicidal behaviour: Introduction. In R. F. Diekstra, R. Maris, S. Platt, A. Schmidtke, & G. Sonneck (Eds.), Suicide and its prevention: The role of attitude and imitation (pp. 71-77). New York: Brill.

Pritchard, C. (1992). Youth suicide and gender in Australia and New Zealand compared with countries of the Western world 1972-1987. Australian and New Zealand Journal of Psychiatry, 26, 609-617.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Ramsay, R.F., & Bagley, C. (1985). The prevalence of suicidal behaviours, attitudes, and associated social experiences in an urban population. Suicide & Life-Threatening Behaviour, 15, 151-167.

Rholes, W.S., Riskind, J.H., & Neville, B. (1985). The relationship of cognitions and hopelessness to depression and anxiety. Social Cognition, 3, 36-50.

Roberts, C. M. & Smith, P. R. (1999). Attitudes and behaviour of children towards peers with disabilities. International Journal of Disability, Development, and Education, 46, 35-50.

Salter, D., & Platt, S. (1990). Suicidal intent, hopelessness and depression in a parasuicide population: The influence of social desirability and elapsed time. British Journal of Clinical Psychology, 29, 361-371.

Sappington, A. A. (1990). Recent psychological approaches to the free will versus determinism issue. Psychological Bulletin, 108, 19-29.

Schlegal, R.P., D'Avernas, J.R., Zanna, M.P., DeCourville, N.H., & Manske, S. (1992). Problem drinking: A problem for the theory of reasoned action? Journal of Applied Social Psychology, 22, 358-385.

Segal, Z.V. (1988). Appraisal of the self-schema construct in cognitive models of depression. Psychological Bulletin, 103, 147-163.

Shneidman, E. S. (1976). The components of suicide. Psychiatric Annals, 6, 51-66.

Shneidman, E. S. (1985). Definition of Suicide. New York: Wiley & Sons.

Shneidman, E.S. (1996). The Suicidal Mind. New York: Oxford Press.

Showers, C.J., Abramson, L.Y., & Hogan, M.E. (1998). The dynamic self: How the content and structure of the self-concept change with mood. Journal of Personality and Social Psychology, 75, 478-493.

Silver, M.A., Bohnert, M., Beck, A.T., & Marcus, D. (1971). Relation of depression of attempted suicide and seriousness of intent. Archives of General Psychiatry, 25, 573-576.

Silverman, M.M., & Maris, R.W. (1995). The prevention of suicidal behaviours: An overview. Suicide and Life-Threatening Behaviour, 25, 10-21.

Simonds, J. F., McMahon, T., & Armstrong, D. (1991). Young suicide attempters compared with a control group: Psychological, affective, and attitudinal variables. Suicide and Life-Threatening Behaviour, 21, 134-151.

Singh, B. K., Williams, J. S., & Ryther, B. J. (1986). Public approval of suicide: A situational analysis. Suicide and Life-Threatening Behaviour, 16, 409-418.

Smart, R. G., & Mann, R. E. (1990). Changes in suicide rates after reductions in alcohol consumption and problems in Ontario, 1975-1983. British Journal of Addiction, 85, 463-468.

Spielman, L.A., & Bargh, J.A. (1990). Does the depressive self really exist? In C.D. MaCann & N.S. Endler (Eds.), Depression: New directions in theory, research, and practice (pp. 111-122). Toronto: Wall & Emerson.

Stack, S. (1990). Media impacts on suicide. In D. Lester (Ed.), Current Concepts of Suicide. Maryland: The Charles Press.

Stack, S. (1996). Culture and suicide: An analysis of 35 nations. Paper presented at the meeting of the American Association of Suicidology, St. Louis, MO.

Stack, S., Gundlach, J., & Reeves, J. L. (1994). The heavy metal subculture and suicide. Suicide and Life-Threatening Behaviour, 24, 15-23.

Stearns, A. W. (1921). Suicide in Massachusetts. Mental Hygiene, 5, 752-777.

Streiner, D. L., & Adam, K. S. (1987). Evaluation of the effectiveness of suicide prevention programs: A methodological perspective. Suicide and Life-Threatening Behaviour, 17, 93-106.

Strong, S., Yoder, B., & Corcoran, J. (1995). The 1993 Leona Tyler Award Address: Counseling: A social process for constructing personal powers. The Counseling Psychologist, 23, 374-384.

Tabachnick, B.G., & Fidell, L.S. (1989). Using Multivariate Statistics (2^{nd} ed.). NY:Harper & Row.

Tanney, B. L. (1992). Mental disorders, psychiatric patients, and suicide. In R. Maris, A. Berman, J. Maltsberger, & R. Yufit (Eds.), Assessment and prediction of suicide (pp. 277-320). New York: The Guilford Press.

Tanney, B. (1995). Suicide prevention in Canada: A national perspective highlighting progress and problems. Suicide and Life-Threatening Behaviour, 25, 105-122.

Terry, D. J. & O'Leary, J. E. (1995). The theory of planned behaviour: The effects of perceived behavioural control and self-efficacy. British Journal of Social Psychology, 34, 199-220.

Truant, G. S., O'Reilly, R., & Donaldson, L. (1991). How psychiatrists weigh risk factors when assessing suicide risk. Suicide and Life-Threatening Behaviour, 21, 106-114.

Vermette, L, & Godin, G. (1996). Nurses' intentions to provide home care: The impact of AIDS and homosexuality. AIDS Care, 8, 479-488.

Wambach, K.A. (1997). Breastfeeding intention and outcome: A test of the theory of planned behaviour. Research in Nursing and Health, 20, 51-59.

Wagner, A. W., & Linehan, M. M. (1994). Relationship between childhood sexual abuse and topography of parasuicide among women with borderline personality disorder. Journal of Personality Disorders, 8, 1-9.

Wallace, D. (1994). Sex differences, previous experience with suicide, and attitudes towards suicide. University of Windsor.

Windsor-Essex County Health Unit (1996). Health Status Report. Windsor, Ontario: Author.

World Health Organization (1999). World Health Statistics Annual 1999. Geneva: Author.

Appendix A

Demographics

Demographics

Please indicate the following (please circle the response):

Gender: Male Female

Romantic Relationships:

Please put a checkmark beside the most appropriate category. These categories apply to same sex or opposite sex relationships.

_____ Not currently in an exclusive romantic relationship.

_____ Currently involved in an exclusive romantic relationship.

Marital Status:

_____Single _____Married _____Divorced

_____Co-habitating _____Separated _____Widowed

Ethnicity:

____ Asian ____ First Nations ____ Hispanic

____ South Asian ____ African/Black ____ White

____ Middle Eastern

Appendix B

SUIATT

Attitudes toward Self Destructive Behaviour

DIRECTIONS FOR COMPLETING THIS QUESTIONNAIRE:

For all the questions you will have up to five alternative responses. Choose the one alternative that seems to be the best one for you. Please circle the letter indicating your choice. Remember, there are no right or wrong answers.

Choices:
A = Very Likely
B = Somewhat Likely
C = Don't Know/No opinion (Maybe/Maybe Not)
D = Probably Not Likely
E = Definitely Not Likely

How likely is it for people in general to commit suicide if:

1. They were old and crippled?	A B C D E
2. They suffered from severe and chronic pain?	A B C D E
3. Their partner left them?	A B C D E
4. If they became severly disabled?	A B C D E
5. If they became unemployed?	A B C D E
6. If they had a severly handicapped child?	A B C D E
7. If they were admitted to a mental hospital?	A B C D E
8. If it were impossible for them to have children?	A B C D E
9. If they suffer from an incurable illness?	A B C D E
10.If they suffered from a terminal illness?	A B C D E
11.If the person(s) most near and dear to them dies?	A B C D E
12.If they have Alzheimer's disease?	A B C D E
13.If they do not succeed in finding a life partner?	A B C D E
14.If they have killed someone else?	A B C D E
15.If they have AIDS?	A B C D E

16. In your opinion, do people commit suicide because they are mentally ill?
1. Always
2. Most of the time
3. Sometimes
4. Seldom
5. Never

17. Do you believe that one has the right to commit suicide?

1. Always
2. Most of the time
3. Sometimes
4. Seldom
5. Never

18. If people commit suicide, the consequences for society as a whole are:

1. Always negative
2. Often negative
3. Sometimes negative/Sometimes positive
4. Often positive
5. Always positive

Reminder of choices:

A = Definitely Yes
B = Probably Yes
C = Don't Know/No opinion or Maybe/Maybe Not
D = Probably No
E = Definitely No

The next five questions ask: Do you think that someone who makes a suicide attempt:

19. Intends to force or manipulate things in his/her way?	A B C D E
20. Intends to point out to others how big his/her problems are?	A B C D E
21. Intends to die?	A B C D E
22. Is mentally ill?	A B C D E

23. Write in any other reason you personally would also take into consideration. If none, please write NONE:

_____

_____

24. How likely do you think it is that you will end your life by suicide?

1. Very unlikely
2. Fairly unlikely
3. Don't know
4. Fairly likely
5. Very likely

25. If you were to commit suicide, would you find this:

1. Very cowardly
2. Fairly cowardly
3. Somewhat cowardly
4. Only a little cowardly
5. Not cowardly at all

26. If you were to commit suicide, would you find this:

1. Very brave
2. Fairly brave
3. Somewhat brave
4. Only a little brave
5. Not brave at all

27. If the person most near and dear to you would commit suicide, how would you feel about that?

1. That would be the worst thing that could happen to me.
2. That sould be one of the worst things that could happen to me.
3. That would be a bad thing for me.
4. I don't know how I would feel about that.
5. That would not be a bad thing for me.

28. Do you believe that if someone commits suicide, it:

1. Is a very deliberate act
2. Probably is a deliberate act
3. Don't know
4. Probably is an impulsive act
5. Is a very impulsive act

29. Would you be willing to help suicidal persons by talking with/contacting them?

1. Certainly
2. Probably
3. Don't know
4. Probably not
5. Certainly not

30. When someone commits suicide, the consequences of this act for those closest to him/her are:

1. Always negative
2. Often negative
3. Perhaps negative/perhaps positive
4. Often positive
5. Always positive

31. Do you think that in order to commit suicide, you have to be mentally ill?

1. Definitely Yes
2. Probably Yes
3. Maybe/maybe not
4. Probably No
5. Definitely No

Reminder of choices:

A = Definitely Yes
B = Probably Yes
C = Maybe/maybe not
D = Probably No
E = Definitely No

If the person most near and dear to you makes a suicide attempt, he or she:

32. Intends to force or manipulate things in his/her way?	A B C D E
33. Intends to point out to others how big his/her problems are?	A B C D E
34. Intends to die?	A B C D E
35. Is mentally ill?	A B C D E

36. Write in any other reason you would take into consideration. If none, please write NONE:

_____

_____

37. If the person most near and dear to you were to commit suicide, would you object to newspapers reporting it?

1. Definitely Yes
2. Probably Yes
3. Maybe/maybe not
4. Probably No
5. Definitely No

Reminder of choices:

A = Very Likely
B = Somewhat Likely
C = Don't Know/No opinion (Maybe/Maybe Not)
D = Probably Not Likely
E = Definitely Not Likely

How likely do you think it would be for the **person most near and dear to you** to commit suicide under the following circumstances:

38. If he/she were old and crippled?	A B C D E
39. If he/she suffered from severe and chronic pain?	A B C D E
40. If her/his partner left?	A B C D E
41. If she/he became severly disabled?	A B C D E
42 .If they have AIDS?	A B C D E
43. If she/he were unemployed?	A B C D E
44. If he/she were to have (had) a severly handicapped child?	A B C D E
45. If he/she were taken to a mental hospital?	A B C D E
46. If it were impossible for him/her to have children?	A B C D E
47. If she/he were to suffer from an incurable illness?	A B C D E
48. If she/he were to suffer from a terminal illness?	A B C D E
49. If the person(s) most near and dear to him/her dies?	A B C D E
50. If he/she did not succeed in finding a life partner?	A B C D E
51. If she/he had killed someone else?	A B C D E
52. If she/he had Alzheimer's disease?	A B C D E

53. Please write in your opinion of another reason/circumstance that might apply and then rate the likelihood of suicide:

_____

_____

Reminder of choices:

A = Very Likely
B = Somewhat Likely
C = Don't Know/No opinion (Maybe/Maybe Not)
D = Probably Not Likely
E = Definitely Not Likely

Under what circumstances might you commit suicide?

54. If you were old and crippled?	A B C D E
55. If you suffered from severe and chronic pain?	A B C D E
56. If your partner left you?	A B C D E
57. If you had AIDS?	A B C D E
58. If you became severly disabled?	A B C D E
59. If you became unemployed?	A B C D E
60. If you had a severly handicapped child?	A B C D E
61. If you were admitted to a mental hospital?	A B C D E
62. If it were impossible for you to have children?	A B C D E
63. If you suffered from an incurable illness?	A B C D E
64. If you suffered from a terminal illness?	A B C D E

Reminder of choices:
A = Definitely Yes
B = Probably Yes
C = Maybe/maybe not
D = Probably No
E = Definitely No

65. If the person(s) most near and dear to you dies?	A B C D E
66. If you do not succeed in finding a life partner?	A B C D E
67. If you had killed someone else?	A B C D E
68. If you had Alzheimer's disease?	A B C D E

69. Write in any other reasons that you think might cause you to commit suicide. If none, please write NONE:

_____

_____

70. How do you feel about putting an end to your own life?

1. That would be the worst thing I could do.
2. That would be one of the worst things I could do.
3. That would be a bad thing for me to do.
4. That would not be a bad thing for me to do.
5. Don't know/ No opinion.

71. Do you think that in order to commit suicide you have to be mentally ill?

1. Definitely Yes
2. Probably Yes
3. Maybe/maybe not
4. Probably No
5. Definitely No

Appendix C

Attitudes Measure

Please answer the following questions based on the scenario you just read. Remember to put yourself in the situation in the scenario. Circle the number that best represents your views.

1. What is the likelihood that the ending of unbearable psychological pain (that is, when it hurts really badly inside and you can't make it stop) was the reason for committing suicide in this situation?

1 2 3 4 5 6 7
Low High

2. The ending of unbearable psychological pain in this situation would be:

1 2 3 4 5 6 7
Good Bad

3. What is the likelihood that committing suicide in this situation was intended to result in pain for the people left behind?

1 2 3 4 5 6 7
Low High

4. If the people left behind felt pain in this situation, it would be:

1 2 3 4 5 6 7
Good Bad

5. What is the likelihood that committing suicide in this situation was intended to result in a sense of relief for the people left behind?

1 2 3 4 5 6 7
Low High

6. If the people left behind felt relief in this situation, it would be:

1	2	3	4	5	6	7
Good						Bad

7. What is the likelihood that committing suicide in this situation was intended to result in escaping from an intolerable situation (that is, a situation that you can't take anymore)?

1	2	3	4	5	6	7
Low						High

8. If you couldn't bear this situation any more, escaping from this situation through suicide would be:

1	2	3	4	5	6	7
Good						Bad

9. What is the likelihood that suicide is the best solution in this situation?

1	2	3	4	5	6	7
Low						High

10. Using suicide as a solution to this situation would be:

1	2	3	4	5	6	7
Good						Bad

Appendix D

Subjective Norm

Identify 5 people that you believe think most like yourself about suicide. This can include family members, friends, well-known people, celebrities, characters in a book, etc. If they are friends or family, do not use their last names, or anything that would identify you or them.

Name	Who they are to you:
Example:	
Donna	**My mother**
Steve	**My brother**
Emily Dickinson	**Favorite author**
Ms. Lorraine	**My old teacher**
Whoopi Goldberg	**Favorite actor**

1. One person who thinks like me about suicide is:

Name:

Who this person is to me:

How similar are your attitudes towards suicide to the attitudes of this person?

1	2	3	4	5	6	7
Not at all Similar						Very similar

2. Another person who thinks like me about suicide is:

Name:

Who this person is to me:

How similar are your attitudes towards suicide to the attitudes of this person?

1	2	3	4	5	6	7
Not at all Similar						Very similar

3. Another person who thinks like me about suicide is:

Name:

Who this person is to me:

How similar are your attitudes towards suicide to the attitudes of this person?

1	2	3	4	5	6	7
Not at all Similar						Very similar

4. Another person who thinks like me about suicide is:

Name:

Who this person is to me:

How similar are your attitudes towards suicide to the attitudes of this person?

1	2	3	4	5	6	7
Not at all Similar						Very similar

5. Another person who thinks like me about suicide is:

Name:

Who this person is to me:

How similar are your attitudes towards suicide to the attitudes of this person?

1	2	3	4	5	6	7
Not at all Similar						Very similar

In each of the following questions, when you are asked about the person who thinks most like yourself about suicide, think about the people you named above for each question.

1. The people who think most like me about suicide would likely:

Strongly Agree **Agree** **Disagree** **Strongly Disagree**

with my decision to commit suicide in this situation.

2. Most of the people important to me would likely

Strongly Agree **Agree** **Disagree** **Strongly Disagree**

with my decision to commit suicide in this situation.

3. The people who think most like me about suicide think that it is OK to commit suicide in this situation.

Strongly Agree **Agree** **Disagree** **Strongly Disagree**

4. No one important to me would likely think it is OK to commit suicide in this situation.

Strongly Agree **Agree** **Disagree** **Strongly Disagree**

5. The people who think most like me about suicide would likely look down on me if I committed suicide in this situation.

Strongly Agree **Agree** **Disagree** **Strongly Disagree**

Appendix E

Perceived Behavioural Control

Answer each question based on the scenario you read earlier. Read the scenario again now if you need to refresh your memory. Remember to put yourself in the situation in the scenario. Circle the number that best represents your views.

1. For me to commit suicide in this situation would be:

1 2 3 4 5 6 7

Easy Difficult

2. If I wanted to, I could commit suicide in this situation.

1 2 3 4 5 6 7
Agree Disagree

3. I can imagine times like this situation when I might attempt suicide.

1 2 3 4 5 6 7
Agree Disagree

4. Even if I had good reason, I could not bring myself to commit suicide.

1 2 3 4 5 6 7
Agree Disagree

5. How easy or difficult would it be to commit suicide in this situation?

1 2 3 4 5 6 7
Very easy Very difficult

6. How easy or difficult would it be to NOT commit suicide in this situation?

1 2 3 4 5 6 7
Very easy Very difficult

7. It is mainly up to me whether or not I commit suicide.

1	2	3	4	5	6	7
Agree						Disagree

Appendix F

Past Behaviour

These questions are NOT based on the scenario you read. These questions concern the experiences you have had with suicide. Please answer as honestly as you can, Remember, it will not be possible for anyone to identify your from your responses.
Circle the answer that best represents your experiences.

1. How often have you considered attempting suicide?

Never Once Twice Three or more occasions

2. How often have you made a suicide plan (that is, worked out how you would do it)?

Never Once Twice Three or more occasions

3. If you have ever made a suicide attempt, think now about your most recent attempt. To what degree did you intend to die?

1	2	3	4	5	6	7
I did NOT intend To die					I very much intended to die	

4. How many times have you attempted suicide?

Never Once Twice Three or more occasions

Appendix G

CES-D

CES-D

For each of the following, indicate how often you have felt this way during the past week.

DURING THE PAST WEEK:

1. I was bothered by things that usually don't bother me.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

3. I did not feel like eating; my appetite was poor

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

3. I felt that I could not shake off the blues even with help from my family or friends.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

4. I felt that I was just as good as other people.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

5. I had trouble keeping my mind on what I was doing.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

6. I felt depressed.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

7. I felt that everything I did was an effort.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

8. I felt hopeful about the future.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

9. I thought my life had been a failure.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

10. I felt fearful.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

11. My sleep was restless.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

12. I was happy.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

13. I talked less than usual.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

14. I felt lonely.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

15. People were unfriendly.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

16. I enjoyed life.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

17. I had crying spells.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

18. I felt sad.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

19. I felt that people dislike me.

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

20. I could not get "going".

_____less than 1 day _____1-2 days_____3-4 days_____5-7 days

Appendix H

Intent

1. How likely is it that you would commit suicide in the above situation?

1	2	3	4	5	6	7
Very likely					Very unlikely	

2. How likely is it that an occasion would ever arise over which you would commit suicide?

1	2	3	4	5	6	7
Very likely					Very unlikely	

Appendix I

Hopelessness Scale

1. I look forward to the future with hope and enthusiasm.

True False

2. I might as well give up because I can't make things better for myself.

True False

3. When things are going badly, I am helped by knowing that they can't stay that way forever.

True False

4. I can't imagine what my life would be like in 10 years.

True False

5. I have enough time to accomplish the things I most want to do.

True False

6. In the future, I expect to succeed in what concerns me most.

True False

7. My future seems dark to me.

True False

8. I expect to get more of the good things in life than the average person.

True False

9. I just can't get the breaks, and there is no reason to believe I will in the future.

True False

10. My past experiences have prepared me well for my future.

True False

11. All I can see ahead of me is unpleasantness rather than pleasantness.

True False

12. I don't expect to get what I really want.

True False

13. When I look ahead to the future, I expect I will be happier than I am now.

True False

14. Things just won't work out the way I want them to.

True False

15. I have great faith in the future.

True False

16. I never get what I want so it's foolish to want anything.

True False

17. It is very unlikely that I will get any real satisfaction in the future.

True False

18. The future seems vague and uncertain to me.

True False

19. I can look forward to more good times than bad times.

True False

20. There's no use in really trying to get something I want because I probably won't get it.

True False

VITA AUCTORIS

Name:	Gail Anne Matheson
Place of Birth:	Winnipeg, Manitoba
Year of Birth:	1968
Education:	University of Winnipeg Bachelor of Arts (Honours), Psychology 1985-1990
	University of Windsor Master of Arts, Psychology 1990-1992
	University of Windsor Doctorate, Psychology 1992-2000