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Attitudes towards suicide: A structural model and its relationship to experience with suicide.

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ATTITUDES TOWARDS SUICIDE:

A Structural Model

and its Relationship to Experience with Suicide

by

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ABSRACT

Two of the main approaches to understanding suicide are the sociological and the psychological. The former explains suicide as a consequence of social factors; the latter explains suicide as a consequence of individual factors. Through an examination of both social (i.e., participants' exposure to the suicidal ideas and behaviour of others) and individual (i.e., participants' own attitudes and experience with suicide) factors this study is one attempt to bridge these two approaches. A tripartite model of attitudes towards suicide was proposed, comprised of cognitive, affective, and conative components. A sample of 602 university students rated their attitudes towards suicide on three scales (Suicide Opinion Questionnaire; Domino, Moore, Westlake, & Gibson, 1982; Multi-Dimensional Suicide Attitude Scales and Vignettes; Stillion, 1992; Suicide Attitude Questionnaire; Diekstra & Kerkhof, 1989) as well as their past experience with suicide. Several findings were indicated. First, five factors were found to underlie suicide attitudes: Cognitive Aspects, Suicide Intent, Sympathy, Likelihood of Suicide (Others), and Likelihood of Suicide (Closest). Second, support was found for the tripartite attitudinal model. Third, having either other-experience (social) or self-experience (individual) with suicide was found to be predictive of one's attitudes towards suicide. Fourth, new data on the prevalence of specific types of suicidality are provided, reinforcing the conclusion that suicidal ideation and behaviour are very common among university students. Overall, the data support the proposition of a new classificatory system for suicidal behaviour.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

In 1968, a World Health Organization report indicated that more than one thousand persons a day commit suicide. Even at that time, more than half a million suicides were being registered each year. And this number may be a large underestimate due to inadequacies and variations in the registration process of death reports across countries (O'Carroll, 1989; Small & Opler, 1971). Moreover, for many age groups the suicide rate has been increasing (Bongar, 1991). In effect, it is likely that somewhere between 50 and 100 million people will have taken their own lives in the twentieth century alone.

Suicide is currently the third leading cause of death for those aged 15 to 24 in the United States (Silverman, 1996) and second leading cause of death for those aged 15 to 29 in Canada (Health Canada, 1995). The suicide rate for young Canadians, following significant increases through the 1960s and 1970s, has since levelled off at 12.9 per 100,000 for those aged 15 to 19 and 17.9 per 100,000 for those aged 20 to 24 (Health Canada, 1995). The suicide rate for females aged 15 to 19 is 5.4 per 100,000, and for those aged 20 to 24 the suicide rate is 6.6 per 100,000. For males, suicide continues to be a larger problem; the rate for those aged 15 to 19 is 20.1 per 100,000 and for those aged 20 to 24 the rate is 29.0 per 100,000 (Health Canada, 1995).

Such statistics highlight the large number of young lives that suicide claims each year. In fact, in some nations (e.g., the United States) more people die by their own hand than by the hand of others (Silverman, 1996). Given the focus of our media, however, it is difficult for many to believe that suicide kills more than does homicide. But the idea that this many people choose to take their own lives is perhaps most astounding.

It is a mistake to believe that few young people have seriously considered suicide as an option. The prevalence of suicidal ideation among adolescents has been reported to be about 19% (King, 1996); for college-aged students, the lifetime prevalence has been estimated to be even higher at 29% (Wallace & Kral, 1994). Moreover, college students are at particular risk for suicide and have been found to be more accepting of suicide than non-college individuals (King, Hampton, Bernstein, & Schichor, 1996). For those who teach college students, it may be worth remembering that almost one in three students has seriously considered suicide at least at one point in their lives, and some may be considering it presently.

Why do so many people consider suicide as a viable option, and why do some go on to take their own lives? There are a number of approaches to answering these questions.

Approaches to Understanding Suicide

Much research in suicidology has focussed on psychological factors related to suicide and parasuicide (i.e., using non-lethal means). Menninger (1938), for example, was one of the first to note that suicide seems to involve an "escape" from an

"unbearable" situation. Yet, Menninger's emphasis on the individual and psychological aspects of suicide can be seen in his argument that:

> the individual always, in a measure, creates his own environment, and thus the suicidal person must in some way help to create the very thing from which, in suicide, he takes flight (p. 18).

Menninger emphasized that it is the psyche of the individual that must be understood in order to understand suicide, rather than the social context. From the perspective of Menninger, the social factors, whether they be divorce, unemployment, or degree of integration into society, are brought about by the suicidal individual. In sum, he wrote:

> if for one's own unconscious purposes, one brings about an apparent justification in external reality for self-destruction, the unconscious purposes are of more significance in understanding the suicide than the apparently simple, inevitable external circumstances (p. 18).

Considered the father of suicidology, Shneidman (1985) has also stressed the psychological approach to understanding suicide. His primary assertion has been that suicide is best understood in terms of psychological pain, as related to unmet psychological needs (Shneidman, 1985). Shneidman (1993) has further argued that "suicide is caused by psychache" (p. 52), and that suicide occurs when this psychological pain becomes unbearable for the individual.

Shneidman (1993) has suggested that although "biological, cultural, sociological, interpersonal, intrapsychic, logical, conscious and unconscious, and philosophical

elements," are involved with suicide the essential element is *psychological*, taking place in the mind of a "unique" individual (p. 3). Shneidman has said that two continua are important in the understanding of the suicidal act: lethality and perturbation. Lethality refers to the degree of orientation towards death that an individual has, and perturbation refers to how upset an individual is. In effect, despite acknowledging that other approaches are related to the act of suicide, psychological approaches have primarily emphasized the individual nature of the suicidal act, namely the psychological components associated with the decision and action of killing oneself.

Biological markers have also been examined in the effort to better understand the suicidal mind. Investigations of the brains of people who have suicided have found a number of anomalies. For example, studies of amine metabolism have found lower than expected levels of serotonin (e.g., Åsberg, Träskman, & Sjostrand, 1976) as well as its metabolites. In fact, it has been reported that lower concentrations of 5-hydroxyindoleacetic acid (5-HIAA) are found in the spinal fluid of violent suicide attempters in comparison to depressive and non-depressive controls (Bronisch, 1996).

Other biological markers of suicide and suicide attempts have also been examined, including tritiated imipramine bonding, the level of urinary 17-hydroxycorticosteroids, urinary norepinephrine to epinephrine ratio, cortisol levels, homovanillic acid (HVA) and 3-methoxy-4-hydroxyphenol-glycol (MPHG), and many others (for a review, see Slaby, 1995). Yet, evidence for such markers as explanations for suicide remains inconclusive and at best tentative. In his comprehensive review of the

research on biological markers of suicidal behaviour, Motto (1996) concluded that

research in this area is "couched more in terms of supporting evidence than confirmation

of hypotheses" (p. 70).

In addition to the examination of biological factors and psychological factors,

some research has also examined social factors that may ultimately contribute to suicide.

Durkheim (1897) proposed that social factors, rather than individual psychological or

physiological factors, lead to suicide. He stated, for example, that:

> ...there is a specific tendency to suicide explained neither by the organic-
>
> psychic constitution of individuals nor the nature of the physical
>
> environment. Consequently, by elimination, it must necessarily depend
>
> upon social causes... (p. 145).

Although Durkheim did acknowledge that "suicide is impossible if the individual's

constitution is opposed to it" (p. 102), he maintained that the social element underlies

suicide. In essence, Durkheim suggested that the private experiences of the individual,

often thought to be the proximal cause of the suicide, impact only to the level reflecting

the individual's moral predisposition, which in turn is simply an "echo of the moral state

of society" (p. 300). In sum, Durkheim proposed that there is a "collective force" that

underlies the problem of suicide, and this force is a reality external to the individual.

Others have also argued that suicide can best be understood as a social problem.

In 1967, Douglas extended the views of Durkheim, stating that suicidal actions can best

be understood as socially meaningful actions. Henry and Short (1954) also stressed the

important effects of social factors on suicide risk. They proposed that there are vertical restraints and horizontal restraints. Vertical restraints are related to one's position in the status hierarchy, and are suggested to be inversely related to suicide risk. Horizontal restraints derive from the depth of one's social network, where those with stronger interpersonal bonds are proposed to be at lesser risk for suicide. In effect, Henry and Short suggested that violence, both suicidal and homicidal, reflects the extent to which these social restraints are operative.

There has been relatively little research conducted, however, on suicidology from the social psychology perspective. In 1979, Hoelter summed up the approaches to suicidology research to date, noting that:

almost all suicidological theories have taken either a sociological,

psychoanalytic or psychological approach to unravelling the mystery of

self-destruction. Despite interdisciplinary interest, relatively few social

psychological theories of suicide have appeared in print (p. 163).

Since that time, however, new trends in suicidology research have emerged. Most notably, there has been massive growth in both biological and psychiatric research and a drop in social research on suicide. A few significant lines of social research on suicide exist (e.g., Kral, 1994; Maris, 1981, 1997; Phillips, 1974; Stack, 1996a,b); however, Potter (1996) has recently noted that the majority of the focus of suicidology has been on understanding and thus preventing suicide through examining the individual.

Potter (1996) further suggested that insufficient attention has been spent examining suicide from the broader perspective of the community. This view echoes that

of the Centers for Disease Control (CDC) in the United States, which has issued a statement that social and societal factors need greater examination, in addition to the massive attention to individual factors, if we as a society are to address the issue of suicide (Rosenberg, O'Carroll, & Powell, 1992; see also Foege, Rosenberg, & Mercy, 1995). Yet, I question whether psychological and social approaches to suicide must be separated. It is in this arena that social psychology may step up to the plate, by investigating some of the social factors that may interact with the individual factors that push some towards suicide. For example, Boldt (1983) has stated that "cultural and subcultural normative evaluations of suicide and death represent important variables in an individual's decision to choose the suicidal option" (p. 145). At issue in this view is the interaction of the individual and the social context. This is not to argue that social psychology offers the best method with which to understand suicide; rather, social psychology research can provide an under-researched piece of the puzzle of suicide. By examining suicide through both social and individual factors a social psychological approach may help to illuminate how both social and individual factors interact in the suicidal process.

<div align="center">Social Psychology & Suicide</div>

Within the realm of sociology and social psychology, it has long been suggested that the degree of societal acceptance of suicide is related to the incidence of suicide. As early as 1921, Stearns pointed to the "pressure of public opinion" as having a "restraining influence" on suicide. More formal hypotheses followed that the frequency of completed suicide varies with the degree of social condemnation (e.g., Dublin & Bunzel, 1933;

Farber, 1968; Gibbs, 1968; for a review see Platt, 1989).

In the Swedish national programme for suicide prevention, the importance of

cultural factors has also been expressed, as can be seen in the argument that:

suicide, attempted suicide and suicidal thoughts have been subject to

powerful religious and legal sanctions for 1,500 years. Since the end of

the 17th century, a gradual liberalisation has taken place...[where]

traditional cultural and religious ideas about death and suicide have been

weakened. Society has evolved towards increased individualisation and

ideological disarray (Dreber, Wasserman, & Örtendahl, 1996, p. 21).

It can be argued that this analysis holds some truth for many nations in the world besides

Sweden.

Recently, the CDC has similarly suggested that an important approach to public

health and violence (including suicide) prevention is to better understand and address the

cultural acceptance of various forms of violence (Foege et al., 1995). Specifically,

attitudes, of which acceptability is but one example, are a largely unexplored social

psychological factor that may have the potential to help society better understand and

prevent suicide.

Knowledge regarding societal attitudes may be useful because of this suggested

relation between such attitudes and the suicide rates. For example, Boldt (1983) has

contended that the increase in youth suicide rates is a function of more accepting attitudes

towards suicide and death by modern youth. Further, societal attitudes towards suicide

have been demonstrated to be related to suicide rates, where countries with more

accepting attitudes towards suicide tend to have higher suicide rates (Stack, 1996b).

Nomothetic approaches to suicide can be criticized for overlooking the fundamental fact

that it is *individuals* who commit suicide. Yet, knowledge regarding how various

societies view suicide may do far more than simply explain trends in the suicide statistics.

It has been argued, for example, that "society may affect an individual's likelihood of

committing or attempting suicide through the attitudes it inculcates towards it" (Diekstra

& Kerkhof, 1989, p. 91). Thus, societal attitudes may also moderate the degree to which

an individual is at risk for suicide.

Attitudes allow for not only greater knowledge about suicide on a macro level, but

also greater insight at the micro level by allowing us to delve into the suicidal mind.

Specifically, it has been theorized that for individuals with a past history of suicide,

attitudes towards suicide may be reflective of future suicidal behaviour (e.g., Diekstra &

Kerkhof, 1989; Kerkhof & Nathawat, 1989).

The Psychology of Attitudes

The following section will briefly explore the long standing debate over how to

define attitudes, in order to provide a working definition of attitudes for the present study.

A second section will examine the difficulty in predicting behaviour from attitudes,

followed by an exploration of the manner in which different attitudinal models have

attempted to address this problem.

A Definition

Although attitudes have long been an area of study in social psychology, varying

conceptualizations of attitudes have been embraced. In 1935, Allport proposed that an

attitude has five aspects: (1) a mental or neural state, (2) a readiness to respond, (3)

organization, (4) is based on experience, and (5) exerts an influence on behaviour.

Allport (1954) later noted that an attitude "connotes a *neuropsychic state of readiness for*

mental and physical activity" (cited in Jahoda & Warren, 1966, p. 16). This definition is

noteworthy in its proposal that attitudes are internal, inferred states that mediate the

stimulus-response process. Yet, Allport's definition of attitudes has been criticized for

not distinguishing attitudes from traits, moods, habits, or even other action tendencies

(e.g., Eagley & Chaiken, 1993).

The degree to which attitude theorists agree with this conceptualization varies (see

McGuire, 1969), and different theorists have gone on to characterize attitudes as being

organized in different ways. Newcomb (1964), for example, argued that an attitude is an

"individual's organization of psychological processes" that is "inferred from his

behaviour" (p. 22). Attitudes are carried over from old situations into new situations in

the form of residues, argued Newcomb. In addition, attitudes change to reflect new

experiences whereby new residues are acquired. In short, Newcomb's approach to

attitudes emphasizes their organizational function.

In 1952, Solomon Asch similarly posited that attitudes are mainly organizations

of experience with reference to an object. That Asch viewed attitudes as being

cognitively based is reflected in his statement that an attitude "contains a more or less

coherent ordering of a variety of data" (Asch, 1952, p. 32). Because attitudes are

structured cognitively, the study of attitudes should thus assume "that a given view is

relatively unified, consisting of interdependent parts in mutual relation" (Asch, 1952, p.

33). In other words, Asch argued that attitudes are composed of interdependent cognitive beliefs.

Asch further contended that attitudes themselves form an interrelated pattern of beliefs. For example, if one has three related beliefs about an object (e.g., "the Detroit Pistons are a hard working basketball team," "they never give up," and "they don't resign themselves to lose when they're down points") then the strength of the attitude derives from the mutual support that the assertions offer. If one were to change one of these interrelated beliefs (e.g., "the Pistons do *not* work hard"), to continue our example, then this would have strong implications for the other beliefs.

It is therefore important to "understand the major directions or premises of the individual's outlook, the cleavages that may exist, and the function of the attitudes within a given context" (Asch, 1952, p. 33). The implications for the present study are that attitudes should not be inferred from isolated statements of beliefs about something. Rather, an attitudinal study should inquire about attitudes in a number of ways in order to detect any "cleavages" that may exist, and to better understand the context of the inter-relational attitude structure.

Thurstone (1946) provided a more specific definition of an attitude as the intensity of positive or negative affect for or against a psychological object (cited in Worchel, Cooper, & Goethals, 1989). In effect, Thurstone emphasized three aspects of attitudes: a) affect, b) direction, and c) intensity. The emphasis on affect, termed affective salience by Scott (1969), is notable in its view of attitudes as being dominated by affect-laden content and thus having an evaluative aspect. This approach contrasts

sharply with that of Asch in that for Thurstone attitudes are reflected in affect, rather than as organized cognitive structures of beliefs.

Later, Scott (1969) described an attitude as being "less enduring... than temperament, [and as] somewhat more enduring than a motive or a mood" (p. 204). Scott goes on to note that attitudes embody both an affective and an action tendency. Perhaps influenced by Thurstone, Scott distinguishes attitudes from cognitions and beliefs, in which the latter lack the affective component of attitudes. In addition, however, Scott emphasized yet another quality of attitudes: their tendency to influence future action.

Even more recent attitude research has defined attitudes in different ways. For example, Petty and Cacioppo (1981) distinguished attitudes from beliefs and behaviours, and defined attitude as referring to a general and enduring feeling about a person, object, or issue. These authors reserved the word "belief" for "information that a person has about other people, objects, and issues" (p. 7). Although there continues to be debate about what composes an attitude, as will further be discussed below, it is now generally accepted that attitudes: (1) are evaluative; (2) refer to specific objects, events, people, or issues; and (3) are guides as to how people should act with respect to such objects or people (Eiser & van der Pligt, 1988).

The present study will follow this norm by maintaining Thurstone's emphasis on the evaluative dimension by defining an attitude as "an individual's disposition to respond favorably or unfavorably to an object, person, institution, or event" (Ajzen, 1989, p. 241). The object, person, institution, or event is usually referred to as the 'attitude object.' In this definition the assumption is that attitudes have an evaluative dimension embedded,

whereby a favourable response suggests a positive attitude, and an unfavourable response suggests a negative attitude.

This definition does more than simply define attitudes as organizations of experience (Asch, 1952) or psychological processes (Newcomb, 1964) or neuropsychic states of readiness (Allport, 1954). Thurstone's approach stresses that attitudes can be seen in one's responses to an attitude object. Other recent definitions of attitudes are similar; for example, Eagley and Chaiken (1993) defined an attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p. 1). Given that in the present study I am interested in assessing attitudes towards suicide and the suicidal, this definition of attitude lends itself more readily to experimentation in this area. Namely, these definitions are better suited for research in suicidology as they neither delimit attitudes as being composed of only beliefs or feelings nor view attitudes as only being deduced from actual behaviour.

The present study will apply this broader definition also in part to allow attitudes to be examined from a variety of perspectives. Asch (1952) wrote that if "attitudes are structured cognitively definite consequences follow for investigation. It becomes necessary to describe their main lines of organization" (cited in Jahoda & Warren, 1966, p. 32).

Yet, even if one counter-argues that attitudes are composed of more than simply cognitive organizational schemata, in essence the question remains: What is the structure of attitudes? A major goal of the present study is to outline the structure of attitudes with respect to suicide. I am arguing that the question of attitude structure is an empirical one,

whereby it will be examined whether suicide attitudes are primarily composed of affect

(e.g., Petty & Cacioppo, 1981; Thurstone, 1946), cognition (e.g., Asch, 1952; Fishbein &

Ajzen, 1975; Pratkanis, 1989), an action tendency or behavioural disposition (e.g.,

Campbell, 1963), some combination of these factors (e.g., Rosenberg & Hovland, 1960;

Scott, 1969), or some combination of other factors.

Ultimately, this process will allow the various components of attitudes to be

compared to actual behaviour in an empirical manner, in addition to reflecting on the

'organizational' components of attitudes. In effect, the present study will also examine

the extent to which various components of attitudes are reflective of prior suicidal

behaviour, as will be discussed further in the following section.

Predicting behaviour

Within the broad area of attitudes, much research has focussed on the degree to

which attitudes predict behaviour. No clear conclusions, however, have been reported

(e.g., Ajzen, 1996; Eiser, 1994; Eiser & van der Pligt, 1988; Fazio & Zanna, 1978;

Jackson et al., 1996; Kraus, 1995; Millar & Millar, 1996; Petty & Cacioppo, 1981;

Sherman & Fazio, 1983; Trafimow & Finlay, 1996).

A classic study conducted by LaPiere (1934) found that out of 250 restaurants

visited, services were only refused once on the basis of racism against people of Chinese

descent. Yet, when queried through mail surveys, 90 percent of those restaurants said

that they abided by a policy of non-acceptance of racial minorities. On the basis of these

results, it was suggested that the behaviour of most people could differ greatly from their

stated attitudes.

Other empirical studies suggesting weak relations between attitudes and behaviours followed suit (e.g., Deutscher, 1966; Kutner, Wilkins, & Yarrow, 1952), strengthening the position that overt acts can and often do differ from stated intentions. Finally, in 1969, Wicker conducted an extensive review of the attitude-behaviour literature to date. He reviewed 42 empirical studies, and found the average attitude-behaviour correlation to be about .15. With his conclusion that attitudes are at best only slightly related to behaviour, Wicker provided a knockout blow, albeit a temporary one, to this area of research (Eagley & Chaiken, 1993).

At issue is the concept of *salience*, which refers to the readiness of an individual to translate one's attitude into overt action in relation to an attitude object (DeFleur & Westie, 1958). From this perspective, errors in the prediction of future behaviour on the basis of attitudes occur due to the lack of salience between the expressed attitudes and the actual behaviour.

Yet, several alternate explanations for attitude-behaviour discrepancies have been proposed. First, it has been proposed that different categories of responses exist with respect to attitudes. Green (1954) proposed that there are two types of attitude universes: verbal and action. The verbal attitude universe is composed of verbal or written attitudes; the action attitude universe is composed of actual overt behaviour towards an attitude object (cited in DeFleur & Westie, 1958). From this view, the validity of the attitude-behaviour relationship is a consequence of the degree to which the measured attitude and the measured behaviour are in the same attitude universe. In short, it has been argued that there may exist different universes (i.e., classes) of attitudes towards a

given object, such as verbal attitudes and action attitudes in this example, which do not

necessarily correspond (see Cook & Selltiz, 1964).

In addition, inaccurate prediction of behaviour may result from narrow definitions

of attitudes. In other words, by defining attitudes in an overly narrow fashion we may

overlook the complexity of people's attitudes. One may *believe*, for example, that

physician-assisted suicide is a moral and legitimate way for a person to choose to end his

or her life, and yet *feel* strong negative emotions reading about or watching on television

someone going through the process of physician-assisted suicide.

In effect, if a survey only inquires about one's *thoughts/beliefs* about suicide,

which may or may not be consistent with one's *feelings*, and may or may not be

consistent with one's actual *intent*, then a biased representation of one's attitudes will be

produced. As Henerson, Morris, and Fitz-Gibbon (1987) have argued,

> behaviors, beliefs, and feelings will not always match, even when we
>
> correctly assume that they reflect a single attitude; so to focus on only one
>
> manifestation of an attitude may tend to distort our picture of the
>
> situation... (p. 13).

For example, one may *intend* to commit suicide despite *believing* that is morally wrong

and one will not go to heaven as a result. False negatives can then result where the

attitude-behaviour relationship is concluded to not hold, even though possible

"inconsistencies" are actually reflecting the complex nature of attitudes.

Third, a related methodological argument suggests that given the complex nature

of attitudes they should not be assessed on the basis of single item responses. Single item

responses are more likely to lack reliability, whereby repeated measures of the same attitude often are only moderately correlated. It is easy for the participant to misread the question, for example, or to circle an unintended response. Using multiple items to assess an attitude lowers this potentiality and thus increases reliability.

A similar argument contends that even though attitudes sometimes do not correlate highly with specific behaviours, significant correlations are reported when the behavioural measure is aggregated across a number of specific behaviours (e.g., Fishbein & Ajzen, 1974). The presence of a behaviour on one occasion is much more difficult to predict on the basis of attitudes than is the prediction of general frequency of a behaviour. If a female participant rates her attitude towards eating at restaurants as being negative, for example, this does not mean that she will *never* eat out; nor does it even mean that she may not join a birthday dinner for a friend that very same night. Yet, on the whole it is more likely that this participant will go to restaurants fewer times than would a participant who rates eating at restaurants as being "very desirable" and "commonly" done. In short, using multi-act criteria of the behaviour coupled with multi-item assessment of the attitudes in question provides a more reliable examination of the attitude-behaviour relationship.

Finally, it is possible that there exist other intervening variables that complicate the prediction of behaviour from attitudes. For example, in their analysis of the relationship between verbal attitudes and overt behaviour, DeFleur and Westie (1958) recommend that attitude scales include a "systematic categorization of the system of social constraints within which ordinary behavior takes place" (cited in Jahoda & Warren,

1966, p. 221). In effect, the researchers argue that better prediction can be made of behaviour by examining the beliefs of the individual about the attitudes, norms, and values of his or her reference group and significant others.

This view likely influenced Fishbein and Ajzen (1975), who later proposed in their theory of reasoned action that subjective norms may influence the attitude-behaviour relationship (see also Ajzen & Fishbein, 1980). Subjective norms refer to beliefs about how other people would regard one's performance or non-performance of a given behaviour. This theory was later revised by Ajzen (1985), who proposed a theory of planned behaviour. This theory added an additional aspect, perceived behavioural control, in an effort to strengthen the attitude-behaviour relationship. This concept is defined as a person's sense of how easy or difficult it would be to perform a given behaviour. In effect, Ajzen (1985) argued that the amount of control that one felt one had over the behaviour would impact on the intent to perform the behaviour. These, and other structural models that have attempted to improve attitude-behaviour consistency, will be discussed in further depth below.

The overall idea that there may exist other factors (i.e., intervening variables) that mediate the attitude-behaviour relationship is an important one. In short, the approaches of Green (1954), Fishbein (1967), Fishbein and Ajzen (1975), and Ajzen (1980) suggest that other factors may be important in understanding the attitude-behaviour relationship. Moreover, other variables have been proposed as mediating the attitude-behaviour link, including the temporal stability of intentions (Sheeran, Orbell, & Trafimow, 1999), vested interest (e.g., Crano, 1997a,b; cf. Sears, 1997), attitude strength (e.g., Lavine,

Huff, Wagner, & Sweeney, 1998), and willingness (e.g., Gibbons, Gerrard, Blanton, &

Russell, 1998).

Yet, even without considering other variables that moderate the attitude-behaviour

relationship, Kraus's (1995) meta-analysis of the literature to date revealed that "attitudes

significantly and substantially predict future behavior" (p. 58), with a average correlation

of .38. He noted that when the attitude and behaviour are measured at corresponding

levels of specificity this correlation jumps to over .50.

Although the present study will not attempt to predict future suicidal behaviour on

the basis of rated attitudes towards suicide, it will examine links between attitudes

towards suicide and prior experience with suicide. Researchers have stressed the

importance of appreciating the impact of behaviour on attitudes (see Eagley & Chaiken,

1993, for a review). Because prior behaviour has an important role in both attitude

formation and attitude change in particular (Millar & Millar, 1996), it is especially

important when looking for group differences in attitudes that the behavioural component

not be ignored.

However, few studies in the area of suicide attitudes that have suggested that

various group differences exist in attitudes towards suicide have controlled for prior

experience with suicide. For example, it is possible in studies that report sex differences

in attitudes towards suicide (e.g., Deluty, 1989; White & Stillion, 1988) such attitudes

may differ due to differences in experience with suicide, rather than sex differences alone

(Wallace & Kral, 1994). In sum, it is important when studying attitudes to also examine

prior behaviour due to its potential impact on attitude formation and attitude change.

Given the impact of prior behaviour on both attitudes and future behaviour, it is

important that the explanations for attitude-behaviour inconsistency noted above be

addressed in the present study. It will thus be important that the present study: a)

provide a precise yet broad definition of attitudes; b) use multiple-act criteria rather than

simply one specific behaviour when examining the behaviour dimension; c) use a number

of items, and even scales if possible, in order to more thoroughly assess attitudes; and d)

be aware of various structural theories of attitudes and their potential to apply to the area

of suicide attitudes.

Models of Attitudes

Although some research has concluded that attitudes cannot be used to predict

behaviour with any accuracy (Kutner et al., 1952; LaPiere, 1934), more recent research

has proposed structural models of attitudes that strengthen the attitude-behaviour link

(e.g., Ajzen, 1988; Azjen & Fishbein, 1980; Fazio & Zanna, 1981; Zajonc, 1980), as will

be discussed below. With the application of these new models it is argued that more

reliable predictions of behaviour can be made on the basis of attitudes (Eagley &

Chaiken, 1993).

The assumption that attitudes are latent variables inferred from measurable

responses (e.g., Allport, 1954; Hilgard, 1980; Rosenberg & Hovland, 1960) argues in

favour of a structural model of attitudes. As Himmelfarb (1993) has noted,

Attitudes are not directly observable; their existence can only be inferred

from overt responses or *indicators*. Attitudes as evaluative tendencies

manifest themselves in three general classes of indicators: cognitive,

affective, and behavioral (p. 23).

It is thus important for the present study to account for the multifaceted nature of attitude structure in order to make more valid conclusions about people's attitudes towards suicide. One's views about an attitude object, for example, may differ according to whether one is being questioned about thoughts, feelings, perception, or knowledge. In short, given that attitudes are latent variables, it is important that the present study apply an attitudinal model that allows for the possibility that cognitions, emotions, and behaviour with respect to suicide attitudes may differ.

Ajzen (1989) has outlined such a structural model of attitudes. In this tripartite model, attitudes are based on three factors: cognitive, affective, and conative.

The cognitive component of attitudes is composed of one's *knowledge* and *beliefs* about an attitude object. Although on the surface it is easy to view knowledge as having its roots in cognition, some may question whether or not beliefs are solely based on cognition. It has been argued, however, that a belief is an attitude that is composed of "cognitive structuring" (Cooper & McGaugh, 1964, p. 26). The present study will accept this definition, and will operationally define the cognitive component as those attitudes that are beliefs (including conclusions based on reason) or knowledge. Thus, rating the extent to which one believes that capital punishment deters crime (i.e., knowledge), for example, or whether or not one believes that suicide is acceptable under certain circumstances (i.e., belief), reflects the cognitive dimension of attitudes.

The affective dimension of attitudes is composed of, and will be defined as, our *feelings* about an attitude object. Rating the extent to which one feels sadness for a

victim of spousal assault, for example, reflects the affective dimension of attitudes. An

example relating to suicide attitudes would be rating the extent to which one is annoyed

by suicide attempts. The issue of the inclusion of affect in the measurement of attitudes,

and its distinction from cognition, will be explored further below.

Finally, the conative dimension reflects one's behavioural intentions and

inclinations to act vis-à-vis an attitude object. The conative component is said to include

a behavioural component itself; however, given that this study will include a written

assessment of suicide attitudes ("verbal responses"), it will be operationally defined for

the present study as intentions and inclination to act (Ajzen, 1989). An example of a

verbal response of a conative nature would be rating whether or not one would assist a

particular individual who had collapsed on the sidewalk, or whether one would help by

calling 911 for someone whom disclosed plans to commit suicide.

It is noteworthy that this model allows for thoughts (i.e., cognitions) and feelings

(i.e., affect) to differ. Thus, this model is able to account for the fact that one can engage

in behaviours that one knows to be disadvantageous. For example, one can continue to

smoke (behaviour) even though one knows that smoking causes health problems

(cognition), as one enjoys (affect) the sensation involved with smoking. Similarly, one

may not intervene when they see someone fall on the sidewalk (behaviour) even though

one knows that the person is bleeding, has taken first-aid, and believes in helping people

who are hurt (cognition), as one may be afraid to intervene in case of making a mistake

(affect).

Thus, this model can account for the fact that one may rate social helping as

desirable behaviour and yet still not help another. Rather than being a reflection of attitudes not predicting behaviour with any measurable accuracy, this model views such inconsistencies in the attitudinal dimensions as reflecting the complexities of attitude assessment. Namely, the process of assessment is made more difficult by the existence of different *types* of attitudes.

This model would argue, for example, that someone who: a) *believes* smoking is unacceptable, b) *feels* unhappy about smoking, and c) who fully *intends* to stop smoking is more likely to stop than is someone who *believes* that smoking is unacceptable but for whom a cigarette is still an enjoyable (i.e., feels happy) experience.

Similarly, intent can also differ from the cognitive and affective dimensions of attitudes. For example, even though one *knows* that smoking is exacerbating one's cancer, and one *feels* mostly unpleasant from smoking, one still may not *intend* to quit smoking (e.g., nicotine addiction).

In this model these three factors are outlined as being three *components* of attitudes (Ajzen, 1989). Thus, research on attitudes is advised from this approach to apply a multi-modal model to attitude measurement as these components of attitudes are often rated in differing ways. It has been further been proposed that a hierarchical model of attitudes exists, whereby these three components (i.e., cognitive, affective, and conative) are parallel first-order factors while the overall attitude is a second-order factor (Rosenberg & Hovland, 1960). In effect, the overall attitude is a function of the individual three components. Following this hierarchical model, a measure should include all three types of responses to the attitude object, both to provide a greater breadth

of understanding and to more accurately predict behaviour.

Yet, a primary aim of this study is an exploratory examination of factors that underlie suicide attitudes, whatever their nature. In effect, while it is possible that these three dimensions may be found to underlie suicide attitudes, other possibilities are also present. In consideration of how this and other attitudinal models may apply to suicide attitudes, pragmatic, theoretical, and empirical considerations will all be discussed, with the former being addressed first.

Despite the diverse views expressed regarding the definition of attitudes, the choice of models to apply to suicide is limited by the fact that little research has examined the issue of attitude structure (Ajzen, 1989; Saucier, 2000). Attitude structure refers to theories regarding the components that underlie attitudes. In essence, there has been much attention paid to the nature (i.e., definition) of attitudes, but little attention to the related question of what factors compose attitudes. Consequently, there have been few alternative structural models of attitudes that apply to the area of suicide attitudes.

Indeed, much of the recent attitude research has steered away from attitude structure. Instead, current popular lines of research have focussed on issues such as personal relevance (e.g., Liberman & Chaiken, 1996; Millar & Millar, 1996); accessibility (e.g., Fazio, 1990; Fazio, Ledbetter, & Towles-Schwen, 2000; see Ajzen, 1996, for an excellent review), embeddness (i.e., the relationship between attitudes and other attitudes/cognitions; e.g., Prislin & Ouellette, 1996); attitude strength (e.g., Haddock, Rothman, & Schwarz, 1996); temporal stability (e.g., Prislin, 1996); subjective experience (e.g., Haddock, Rothman, Reber, & Schwarz, 1999; Wänke, Bless, & Biller,

1996); cognitive processing (e.g., Biek, Wood, & Chaiken, 1996); attitude change (e.g.,

Fazio, 1990; Wilson, Lindsey, & Schooler, 2000); and attitudes as behaviour (e.g.,

Guerin, 1994; Guerin & Foster, 1994; Lloyd, 1994; Street, 1994)

A few other structural models of attitudes, however, have been proposed. For

example, models have addressed such issues as the extent to which propositional

networks can account for the interrelationship of certain attitudes in the memory process

(e.g., Anderson, 1985) and to what extent Heider's (1946) balance theory accounts for

attitude consistency. Yet, such "structural models" of attitudes are of less relevance to

the present study as these theories emphasize aspects of attitude theory such as attitude

change and how attitudes are represented cognitively, for example, and de-emphasize the

nature of the components of attitudes.

Nevertheless, some relevant approaches to attitude structure have been proposed.

Fishbein (1967), for example, advocated a one-component model of attitudes in place of

the three-component model. Fishbein argued that all attitudinal measures (cognitive,

affective, and behavioural) place individuals along an evaluative continuum, and

therefore all measures of attitudes assess evaluations. Given that the makeup of the

questionnaires to be used in the present study to assess attitudes towards suicide ask

participants to make a series of evaluations of their attitudes on continua, Fishbein's

(1967) theory would predict that a one-component model of attitudes would be found. In

short, this would mean that an examination of suicide attitude scales should produce a

single underlying factor (e.g., suicide as good/bad) to account for attitudes towards

suicide.

Cacioppo, Petty, and Geen (1989) have proposed a homeostasis model of attitudes in place of the tripartite model, based on a connectionist paradigm. This model suggests that attitudes exist in a homeostasis, whereby attitudes are the "summary statistics" for people's beliefs about and experiences with an attitude object, stored in a form analogous to semantic networks. In effect, these networks are composed of nodes, representing various constructs, and when "an attitude is activated...excitation is transferred to nodes constituting the stimulus category" (p. 299). They theorize that an individual's system of attitudes represents "a dynamic process by which generally constant conditions of an individual's physical and social world are achieved" (p. 299). This information processing approach, in essence a connectionist model, uses physiological data to support its contention that attitude structure involves a process of the excitation process of nodes.

Although this approach is offered by Cacioppo et al. (1989) as an alternative to the tripartite model of Rosenberg and Hovland (1960), Cacioppo and colleagues have noted that "the homeostasis model of attitudes clearly embraces the notion that the tripartite of cognition, affect, and behaviour is fundamental to the attitude concept" (p. 304). Of most relevance to the present study is the authors' suggestion that the components themselves be redefined. Cacioppo et al. (1989) note that the cognitive component refers to "cooly calculated appraisals," the affective component to emotions, and the conative component to primitive reflexes and habits.

In addition, Ajzen and Fishbein have proposed alternative structural models of attitudes. For example, in the theory of reasoned action (Ajzen & Fishbein, 1980) the most proximal cause of behaviour is one's intention to conduct the behaviour. One's

intention is in turn a function of two factors: a) one's attitude towards the behavioural act, and b) one's perceptions about whether their significant others would want them to engage in the behaviour (i.e., subjective norms). The latter concept is actually borrowed from sociology, where the symbolic interactionist perspective argues that "perceived social definitions of actions by significant others, as positive or negative, are the major reason why individuals perform or demur from performing actions" (Boldt, 1983, p. 152). Reflective of a cognitive slant being taken on their view of attitudes, attitudes are said to be the result of the evaluative beliefs about the consequences of the behaviour. Because attitudes are defined solely on the basis of beliefs, attitudes in this model are argued to be unidimensional (e.g., Jackson et al., 1996).

Yet, the degree to which the theory of reasoned action is applicable to the area of suicide attitudes is debatable. In this theory, people are assumed to behave in the manner in which they intend to behave. Further, people are assumed to behave in ways that "allow them to obtain favorable outcomes and that meet the expectations of others who are important to them" (Eagley & Chaiken, 1993, p. 173). It is implausible that people commit suicide largely because they believe that important others want them to do so, for example. It would seem that this theory may not be applicable to 'deviant' acts (i.e., statistically deviant and/or socially unacceptable acts); for example, Eagley and Chaiken (1993) similarly point out that the theory of reasoned action does not apply to criminal behaviour. Finally, later research done using this model has found only very limited support for it, often finding that attitudes and behaviour predict subsequent behaviour directly (see Eiser & van der Pligt, 1988) and that attitudes (defined with a cognitive

emphasis) are strongly related with intention, much more-so than subjective norms (see

Trafimow & Finlay, 1996). Trafimow and Finlay (1996) noted that "most behaviors tend

to be under attitudinal control rather than normative control" (p. 820). In addition to

noting the inadequate attention to attitudes in their prediction of behaviour, Eagley and

Chaiken (1993) summarized that the "...limited range of the theory of reasoned action is

now fully appreciated, and the approach no longer appears viable except for relatively

simple and easily executed bahaviors that are under one's own control but are not

strongly habitual" (p. 216).

A revision of the theory of reasoned action was proposed by Ajzen (1985, 1991)

in his theory of planned behaviour. While still maintaining that the theory of reasoned

action held for behaviours under volitional control, Ajzen attempted to find a model to

explain behaviours that are not entirely under volitional control (see Eagley & Chaiken,

1993). Noting that people are less likely to engage in behaviour over which they perceive

themselves as having no control, Ajzen has proposed that perceived controllability is an

important component in the understanding of the attitude-behaviour relationship. This

new variable, perceived behavioural control, was proposed to be determined by control

beliefs, which refer to the beliefs about the likelihood of having the resources and

opportunity to perform the given behaviour. Evidence suggests that the theory of planned

behaviour is superior to the theory of reasoned action, particularly when the behaviour in

question is not under volitional control (e.g., Madden, Ellen, & Ajzen, 1992).

Note that this structural model continues in the vein of the theory of reasoned

action to view behaviour as the product of a rational will. In **Attitudes, Chaos and the**

<u>Connectionist Mind</u>, Eiser (1994) noted that the rational will is supposed to operate "by building up global attitudes and norms from more specific beliefs concerning personal and social consequences" (p. 23). Because these two models are unable to account for how this structural system of attitudes maintains itself over time, this model is argued to be suited only for the prediction of discrete decisions, isolated in both time and space (Eiser, 1994). By viewing attitudes as being the result of evaluative beliefs about the consequences of the actions, these two theories also rule out the possibility of an affective component to attitudes being present. Thus, a finding of no affective attitudinal dimensions would be consistent with either of these theories. In essence, such a finding would suggest that feelings are not one of the constructs that are important in understanding the nature of attitudes towards suicide.

With respect to the importance of intent (i.e., conation), additional variables that may improve on these models and thus improve the attitude-behaviour relationship have been suggested. For example, Sheppard, Hartwick, and Warshaw (1988) proposed that behavioural intention be distinguished from behavioural expectation. Whereas the former is the extent to which one plans on engaging in the behaviour, the latter is the perceived likelihood that one will engage in a behaviour. This approach has the advantage of being less affected by social desirability in the responding of participants, particularly with a behaviour that is seen as less socially acceptable (Gibbons et al., 1998). There is a difference, for example, between asking how likely it is that one will drive home drunk from the party versus whether they intend to drive home.

A second suggested addition is to assess for willingness to engage in a behaviour

(Gibbons et al., 1998). These researchers proposed, and cite evidence to support, the important difference between asking about one's intention and one's willingness. For example, a young person may not intend to have unprotected sex, but may nevertheless be willing to under certain situations. Thus, given the possible existence of these additional aspects of attitudes, the present study should include items regarding intent, plans, likelihood, and willingness.

Second, the roots of the tripartite model have a strong theoretical and historical foundation. McGuire (1969) noted that across history and culture "there are basically three existential stances that man can take with respect to the human condition: knowing, feeling, and acting" (p. 155). Eagley and Chaiken (1993) also noted that both philosophers and psychologists tend to communicate in terms of the trinity of cognition, affection, and behaviour, and point to its heuristic value.

Similarly, it has been contended that the tripartite classification of mental activities in general into cognition, affect, and conation continues to be a useful approach to contemporary psychology (Hilgard, 1980). Moreover, Hilgard (1980) proposed that contemporary psychology has over-emphasized the cognitive aspect to the neglect of affect and conation, emphasizing that the latter two not be overlooked. From this viewpoint, a broader approach to psychology incorporating the role of thought, beliefs, and knowledge, emotions and gut feelings, and finally intentionality and behaviour is more representative not only of attitudes, but of human mental activity in general.

But having tradition and heuristic value alone are insufficient to justify predicting that this model may apply to suicide attitudes, and validity for these three factors should

be supported through research. Indeed, research evidence has supported these divisions.

For example, it has been reported that cognitive attitudes intercorrelate even when they

appear to be contradictory on the surface (McGuire, 1969). As one example of evidence

McGuire reported Campbell's (1947) finding that perceptions of immorality,

incompetence, and threat of a minority group were all intercorrelated, even though

incompetence and threat seem almost contradictory in nature.

Other empirical examinations of the tripartite model have been conducted

supporting the existence of three dimensions. Ostrom (1969) was the first to examine the

construct validity of the cognitive, affective, and behavioural components of attitudes.

Using a multitrait-multimethod matrix procedure (Campbell & Fiske, 1959), Ostrom

found that each of the three components possessed unique variance, suggesting that

"there are independent causal factors underlying responses within each of the

components..." (p. 26).   He also noted, however, that while the reliability of the

finding was strong, the actual magnitude was "relatively small" (p. 26) due to high

intercorrelations among the three components. In short, Ostrom's data provide some

support for both the construct and discriminant validity of the tripartite distinction of

attitudes.

It was noted by Ostrom (1969), however, that the low magnitude of unique

variance accounted for by the three factors may have been due to the nature of the attitude

topic selected. Ostrom argued that a topic such as church may evoke homogeneous

attitudes in certain groups of people. In other words, subjects had similar large amounts

of exposure to the relatively non-controversial issue of church where subjects were likely

to have already spent much time ruminating on in the past, resulting in greater likelihood

of homogeneous attitudes. Indeed, when Kothandapani (1971) used a similar procedure,

but with a more controversial topic (e.g., contraceptive use) coupled with a heterogeneous

population, including both users and non-users of contraceptives, the convergent and

discriminant validities of the tripartite classification were confirmed.

Later, Breckler (1984) conducted a more stringent test of the tripartite model

using LISREL analytic procedures, finding support for the division of three components

of attitudes. Breckler (1984) also reported, however, moderate correlations (e.g., .38 < r

< .71) between the three components. Yet, given that "consistency might be expected

because all three components represent the experience of a single individual" (Breckler,

1984, p. 1193), some degree of positive correlation was expected. Moreover, it is quite

possible that a single experience could affect all three components of attitudes in a similar

direction and also produce inter-factor correlations.

In short, because of the low to moderate intercomponent correlations, some have

suggested that only weak to moderate support exists for the discriminant validity of the

three components of attitudes (e.g., Ostrom, 1969). Yet, the hierarchical model proposed

by Rosenberg and Hovland (1960), by suggesting that cognition, affect, and conation are

first-order factors and the overall attitudes is the second-order factor, expects the three

factors to be positively correlated. As Ajzen (1989) has argued, "given that the three

components reflect the same underlying attitude, they should correlate to some degree

with each other" (p. 246).

Eagley and Chaiken (1993) noted that different conclusions have been reached on

the very same sets of data as to the discriminant validity of the tripartite model,

depending on what type of data analysis was used. They concluded their examination of

this issue by stating that "...evidence supports the empirical separability of three classes

of evaluative responses under some but not all circumstances" (p. 13). In particular, as

has been pointed out by Ostrom (1969) and Kothandapani (1971), the nature of the topic

as well as the makeup of the sample will influence the degree of support that the model is

found to have.

Finally, more recent evidence has supported the tripartite model of attitudes. In

contrast to approaches that argue that attitudes are derived from beliefs (i.e., cognitions)

about an attitude object (e.g., Ajzen & Fishbein, 1980; Fishbein, 1967), recent research

has highlighted the importance of the inclusion of affective aspects of attitudes (e.g.,

Breckler & Wiggins, 1989; Cacioppo, Gardner, & Bernston, 1999; Fabrigar & Petty,

1999; Jackson et al., 1996; Millar & Millar, 1996; Simons & Carey, 1989).

In a classic paper entitled "Feeling and Thinking: Preferences Need No

Inferences," Zajonc (1980) presented a strong case that affective reactions are quick,

spontaneous, and unmediated by cognitive processes. Citing a plethora of research,

covering areas such as preference, impression formation, decision making, attitudes, and

clinical work, Zajonc strongly argued that affect and cognition are distinct constructs.

For example, research using path analysis to examine the relationship between cognition,

affect, and a given stimulus has found strong links between exposure to a given stimulus

and affect, and has found these links to be independent of cognition (e.g., Moreland &

Zajonc, 1979). Zajonc (1980) also asserted and cited evidence for the fact that people are

often unaware of their gut reactions to various situations and behaviours. For example, predicting the response of my landlady, who tends horses, to her being asked to shovel horse manure might evoke both an affective attitude (e.g., "bleh"), of which she may or may not be aware, as well as a cognitive attitude (e.g., "no big deal, done it a thousand times").

Specifically, Zajonc (1980) has argued, with accompanying evidence, that affective processes are not involved in cognitive processes of content discrimination (see Eiser, 1994), and neither are cognitive processes (i.e., thinking) involved in certain affective processes (e.g., listening to one's favourite piece of music, selecting a colour preference). Later research has provided further evidence of the distinct importance of affect in attitudes by finding a different neural activation pattern in the brain for affective versus non-affective categorizations (e.g., Cacioppo, Crites, & Gardner, 1996).

Because of the importance of affect in attitudes, many behaviours can be argued to be neither reasoned actions nor planned behaviours. In fact, research has shown that affect can be elicited quickly and automatically on exposure to a stimulus (e.g., Pratto & John, 1991). Such an argument is, at least in this aspect, more consistent with the MODE model of attitudes (Fazio, 1990), whereby attitudes guide behaviour in a manner that that occurs automatically, requiring little cognitive effort. Fazio (1990) has argued that attitudes that strong are easily accessible to memory, as they have a well-established connection with the attitude object. Citing supporting evidence, he has argued that attitudes (particularly strong ones) are activated automatically in the presence of the object, whereby the attitudes influence perception of, and greatly influence behaviour

towards, the object. A great deal of research has found support for Fazio's MODE model

(see Fazio et al., 2000; cf. Ajzen, 1996). This approach is consistent with the suggestion

that our attitudes and reactions, and their impact on behaviour, are not solely in the form

of carefully reasoned thought (i.e., cognitive) processes. Noted Zajonc (1980) in

conclusion, "People do not get married or divorced, commit murder or suicide, or lay

down their lives for freedom upon a detailed cognitive analysis of the pros and the cons

of their actions" (p. 172).

In short, considerable theoretical and empirical research has found a difference

between cognitive and affective components of attitudes (e.g., Ajzen, 1989; Breckler &

Wiggins, 1989; Cacioppo et al., 1996, 1999; Eagley & Chaiken, 1993; Millar & Millar,

1996; Simons & Carey, 1998; Zajonc, 1980). In their review of the attitude research

entitled, "On defining attitude and attitude theory: Once more with feeling," Breckler and

Wiggins (1989) noted the limitation of viewing behaviour as being rationally determined,

an assumption of both the theories of reasoned action and planned behaviour. They

highlight that "emotion theory can offer significant insight into attitude structure and

function" (p. 412). Further, Breckler and Wiggins (1989) stressed the important place

that affect has in attitude research—whether in attitude measurement, structure, function,

or change research.

Consistent with this call for increased attention to affect in attitude research, more

recent studies have found that the inclusion of both affective and cognitive measures is

warranted. For example, the research of Jackson et al. (1996) and Millar and Millar

(1996) supports the contention that the affective and cognitive components are not only

found when assessing attitudes, but that they can be distinguished.

Further, research also has supported the connection of the tripartite model with behaviour. In fact, Millar and Millar (1996) even suggest that the impact of prior experience with the attitude object may vary depending on the nature of the experience, and accordingly the impact will also vary on the attitude component that is affected. Namely, these researchers found that cognitive attitudes are impacted more strongly by indirect experience with an attitude object, whereas affective attitudes are impacted more strongly by direct experience. This finding provides further support for the tripartite model of attitudes. This would also suggest, as was proposed earlier by Fazio and Zanna (1981), that not only should prior experience with the attitude object be examined, but it also should be broken into both direct experience (e.g., solving a puzzle by hand) and indirect experience (e.g., watching others solve a puzzle). Millar and Millar (1996) summarized by noting that their findings "are consistent with a growing body of research indicating that attitudes, particularly group attitudes, cannot be understood in terms of cognitions alone" (p. 313).

Finally, Simons and Carey (1998) found discriminant validity for the components of the tripartite model in an examination of attitude towards and behaviour with drug use. Consistent with Ajzen (1989), they found that the individual components of attitudes, along with the global attitude (a composite of the separate components), were all individually significantly related to behaviour. In short, "attitude components were found to have unique relationships with behavior, suggesting that attitude structure is an important avenue towards understanding relationship between attitudes and drug use" (p.

732).

In sum, in a recent examination of the issue of models of attitude structure,

Saucier (2000) noted that "there is no generally accepted multivariate framework of

organizing differences in individuals' social attitudes and beliefs" (p. 367). The question

then arises as to how well this trilogy will apply to the area of suicide, as the prior debate

regarding the structure of attitudes is an empirical one. If the three attitudinal

components are found but appear to be very highly interrelated, then perhaps Occam's

razor can be applied and a unidimensional model may be appropriate for suicide attitudes,

such as the model proposed by Fishbein (1967). Or, if other attitudinal dimensions help

to account for suicide attitudes, then a different structural model of attitudes can be put

forth for the area of suicidology. The main research question to be addressed in the

present study is what are the factors that underlie attitudes towards suicide.

Attitudes and Suicide

But why study attitudes towards suicide? There are several reasons why studying

attitudes and suicide is important. Greater knowledge of attitudes about suicide can help

to: 1) explain demographic suicide rate differences; 2) predict future behaviour; and 3)

direct future primary prevention efforts.

Suicide rate differences

While a considerable amount of research has examined the demographics of

suicide, few studies have investigated the attitudes of various groups. Theoretically, any

group difference in attitudes may help to account for group differences in suicide

completion rates.

For example, research has consistently noted the sex difference in rates of completed suicide, whereby male completed suicides outnumber female completed suicides by over four to one (e.g., Bongar, 1991; Clark & Fawcett, 1992; Health Canada, 1995). There are two ways in which attitudes may help explain the sex difference in suicide completion rates. First, research on attitudes can help predict how others might respond to an individual who is considering suicide. For example, do males and females have different attitudes towards a peer who mentions suicidal intentions to them? If there is a sex difference in attitudes, then this difference might be reflected in the approach that males and females take towards helping a suicidal peer.

Less supportive attitudes may be less likely to dissuade one from committing suicide. Indeed, research has suggested that males have less supportive attitudes towards a suicidal peer than do females, and that male suicides are more likely to be viewed as acceptable by both males and females than are female suicides (e.g., Deluty, 1988, 1989; White & Stillion, 1988). In effect, suicidal males receive less support during times of crisis than do suicidal females, and people view the male loss of life by suicide as less important than that of females. This difference could well be the difference between life and death for some individuals.

And second, a study of attitudes is useful for it allows for a comparison between groups who are at different levels of risk for completed suicide, to see if their respective attitudes towards suicide differ. Perhaps it is not just the attitudes of people towards high-risk groups that puts such groups at higher risk. It may also be that the attitudes of these higher-risk groups puts them at greater risk to commit suicide. For

example, perhaps it is not that individuals are less sympathetic towards males who are considering suicide, but rather that males, themselves, view suicide as a more acceptable option. Indeed, some research has found that this is in fact the case (e.g., Deluty, 1989; Stillion, McDowell, Smith, & McCoy, 1986; cf. Wallace & Kral, 1994).

In sum, additional research is suggested in order to examine whether group attitudinal differences (e.g., males and females) place high-risk groups at greater risk for suicide. For example, research is needed to examine the attitudes of high-risk groups, such as Natives, homosexuals, and alcohol and drug abusers, to name only a few.

Predicting future behaviour

One of the central aims in suicidology research has been to gather knowledge in order to better predict the occurrence of suicidal behaviour (van Egmond & Diekstra, 1989). It is hoped that by examining an individual's attitudes towards suicide it may be possible to better predict whether or not that individual may engage in suicidal behaviour in the future. For example, research has examined the degree to which individuals find the concept of suicide acceptable (e.g., Deluty, 1989; Domino, Gibson, Poling, & Westlake, 1980). It is thought that individuals who find suicide more acceptable may themselves be at greater risk for suicide.

Only a handful of studies have examined the relationship between personal experience with suicide and attitudes towards suicide (e.g., Diekstra & Kerkhof, 1993; Gutierrez, King, & Ghaziuddin, 1996; King et al., 1996; Limbacher & Domino, 1986; Wallace & Kral, 1994). These studies do suggest that attitudes towards suicide differ among individuals with different personal experiences with suicide. For example,

Wallace and Kral (1994) report that suicide attempters with a reported intent to die,

suicide attempters without a reported intent to die (i.e., parasuicides), and suicidal

ideators (i.e., those who have "seriously" considered suicide) have differing attitudes

towards suicide. It is thus suggested that perhaps attitudes can be used as a means to alert

us to those at higher risk for suicide. For example, those who rate suicide as a more

acceptable solution to life's problems may themselves be at more risk to take their own

lives when life's inevitable problems hit.

Direct primary prevention efforts

Knowledge regarding attitudes might in turn be used to help direct future primary

prevention efforts. For example, if suicide is viewed as more acceptable by a certain

group (e.g., Natives), then prevention efforts could emphasize alternative solutions

focused specifically at these groups. Current efforts at the primary prevention of suicide

have mainly been composed of fishing expeditions aimed at vast numbers of students.

Yet, it has been found that different risk groups respond differentially to such programs

(e.g., Overholser, Evans, & Spirito, 1990; Overholser, Hemstreet, Spirito, & Vyse, 1989),

which may account for their questionable success, as individuals who are at higher risk

are often not being reached by such programs.

Information that cues us to the attitudes of such groups could then be used to

inform our future prevention efforts. To continue with the example of sex differences, if

both suicidal men and elderly women are viewed with less sympathy, as research has

found (e.g., Stillion et al., 1986), prevention programs could focus more on altering this

harmful attitude. Or, if male evaluators have more negative attitudes towards suicidal

targets and are less likely to help, then a new focus might stress teaching males to respond to a suicidal cry and not ignore it. The prevention programmes in schools might more strongly emphasize that talk about suicide is to be taken very seriously, for example. In sum, attitudinal research can pick out certain groups that have more negative attitudes towards suicidal peers as well as those groups that view suicide as more acceptable and thus help prevention efforts focus on particular groups more carefully.

Rationale

This study will attempt to address two central questions. First, what are the factors (i.e., meanings) that underlie suicide attitudes? Second, what is the relationship between one's experience with suicide and one's own attitudes towards suicide?

An Attitudinal Model of Suicide

This focus comprises a search for underlying factors among popular suicide attitudes scales. Typically, attitudes towards suicide have been examined with little emphasis on theory or the underlying meaning behind the measures. In other words, as Danzinger (1997) has noted of much prior attitude research,

> Attitudes were whatever it was the attitude scales measured, just as
>
> intelligence was whatever intelligence tests measured. The question of the
>
> meaning of such measures was not often addressed (p. 152).

Moreover, prior research in the area of suicide attitudes suffers from a number of limitations, as outlined below, that the present study will attempt to address in part through the application of this model.

First, many studies have examined relatively few questions about attitudes towards

suicide. Some, in fact, have only used one item in order to deduce the participants' suicide attitudes (e.g., Feifel & Schag, 1980; Johnson, Fitch, Alston, & McIntosh, 1980; Sawyer, 1982; Stack, 1996b). Single item assessments of attitudes have been criticized as being too subject to random response error (Scott, 1969, p. 211), and this criticism also applies to questionnaires that ask very few questions (e.g., Deluty, 1989; Hoelter, 1979; Sawyer & Sobal, 1987). Although there is no specific number of items that serves as a minimum when assessing attitudes, in general, the fewer the items used the lower the reliability (Anastasi, 1988; see also Ajzen, 1988).

Further, given that people rarely have black-or-white attitudes on a given issue, their rated attitudes will differ according to the particular circumstances surrounding the issue. For example, someone's rating of their view on capital punishment for a specific criminal may differ according to the nature of the crime (e.g., accidental, planned, alcohol/drug involvement), the victim (e.g., age, sex, occupation), and many other variables. One may rate capital punishment as a less desirable option for a single mother of four than for a man with no relatives. In short, if only one set of the circumstances surrounding the suicide is to be rated, then the conclusions drawn should be stated in terms of those circumstances and not generalized as being attitudes towards suicide.

At stake is reliability (i.e., the degree to which ratings are unaffected by chance errors), which in attitude research can be improved by asking a number of questions about a number of circumstances, and then computing the aggregates. Thus, research that draws conclusions about suicide attitudes on the basis of subjects rating a single vignette, even if making use of multiple items (e.g., Wallace & Kral, 1994), overlooks the fact that rated attitudes can differ greatly according to the circumstances surrounding the suicide.

Although including numerous attitude items to be rated on a given vignette will increase

the reliability of responses given to that scenario, it is questionable as to how well the

responses may apply to other scenarios. While one, for example, may rate an elderly

person's suicide as acceptable when he or she is chronically ill, one may not rate the

suicide as acceptable in the absence of a chronic illness or if the person is young.

Although important commonalities are argued to exist in nearly all suicides (e.g.,

Shneidman, 1985), prior attitude research has demonstrated that rated attitudes towards a

target can differ greatly according to a host of demographic factors (e.g., age, sex, etc.)

(e.g., Marks, 1989).

Indeed, Diekstra and Kerkhof (1989) have indicated that attitudes towards suicide

are complex phenomena. They have noted, for example, that one's attitudes may differ

according to whom the (suicidal) target is to be rated. One should therefore:

> ...speak of attitudes towards suicides, since individuals appear to have
>
> different feelings, cognitions and action tendencies with regard to suicide
>
> as an act (to be) committed by themselves, the person most near and dear
>
> to them and people in general (p. 105).

In effect, there is some danger in "averaging" across circumstances, as important

information that is specific to certain circumstances may be lost (i.e., "washed out"). One

solution to this potential pitfall is to analyze the data in varying degrees of depth. It may

be more accurate to speak of specific aspects (i.e., underlying meanings) of a person's

attitudes rather than referring to one's "attitudes towards suicide" in general. In addition,

it will be important to be aware that a given person or group's attitudes towards suicide,

along a given attitudinal dimension, may differ according to whom they are rating. This idea will be further explored below.

Third, there has been a notable absence of the use of theory in the prior research on suicide attitudes. Theory provides a foundation for scientific research. As Kerlinger (1986) has stated, "the basic aim of science is theory" (p. 8). The relative oversight of published attitude theory by much of the research on attitudes towards suicide (e.g., Deluty, 1989; Domino, Moore, Westlake, & Gibson, 1982; Marks, 1989; Stillion, White, Edwards, & McDowell, 1989; Wellman & Wellman, 1986) weakens the strength of the conclusions that can be drawn from such studies.

More specifically, the vast majority of prior research has not clearly defined the nature of attitudes, and thus has not clearly outlined that which they have studied. Some studies have made reference to "community reactions" (e.g., Range & Kastner, 1988), "public attitudes" (Sawyer, 1982; Sawyer & Sobal, 1987), and many others more simply refer to the attitudes of various groups, including nations (e.g., Domino, MacGregor, & Hannah, 1989; Domino & Leenaars, 1989; Kerkhof & Nathawat, 1989; Leenaars & Domino, 1993; Leenaars & Lester, 1990), sex (e.g., Lester, Guerriero, & Wachter, 1991; Stillion, McDowell, & May, 1984), gender, (e.g., Stillion et al., 1986), age (e.g., Deluty, 1989), and many others. Yet, few studies actually state what attitudes *are*. Presumably, the reader is to assume that whatever questions the researchers decided to ask is what encompasses that group's attitudes.

Relatedly, prior research has also paid little attention to the question of the structure of attitudes. Consequently, differing results have been reported in the literature,

as researchers have emphasized differing aspects of attitudes towards suicide. For

example, the Suicide Opinion Questionnaire (SOQ; Domino et al., 1982) is primarily

composed of questions that assess the participant's beliefs and knowledge (i.e., cognitive

aspects) of suicide. For example, typical items are whether gunshot is the most common

method of suicide in the US, and whether those who "threaten to commit suicide rarely

do so."

In contrast to the approach of Domino et al. (1982), the Suicide Attitude Vignette

Experience (SAVE; Stillion, McDowell, & Shamblin, 1984), has a strong affective aspect

of suicide attitude assessment. For example, on the SAVE participants rate the degree to

which they sympathize and empathize with the persons considering suicide. Whereas

research using the SOQ reports no evaluator sex differences in attitudes towards suicide,

studies using the SAVE consistently have found that females have more compassionate

attitudes towards suicidal individuals than do males (e.g., Stillion, McDowell, & May,

1984; Stillion et al., 1989; White & Stillion, 1988; cf. Lester et al., 1991). Limited

evidence to support this hypothesis can be found in that whereas sex differences in

affective attitudes were found towards suicidal persons, no sex differences were found in

cognitive attitudes (Wallace & Kral, 1994).

The relative lack of operationalization of variables, coupled with the de-emphasis

on theory, detracts from the strength of the conclusions that can be made from many prior

studies. It is therefore difficult to know whether reported differences in the research

findings are due to the reasons cited or due to methodological and unstated theoretical

differences. In short, some of the differences in reported findings may reflect differing

conceptualizations of attitudes rather than actual attitudinal differences between groups.

By allowing participants to rate their attitudes across several scales the present study will

allow for attitudes to be examined in a broader fashion.

In addition, many of the approaches to suicide attitudes have rated what I will call

"distant" attitudes, whereby participants are asked to rate their attitudes in a more

removed and detached manner. Many of the items on the SOQ, for instance, have

participants rate their attitudes towards suicide in a generic manner. To rate on a scale to

what degree one believes that "suicide is acceptable for society" is not the same as rating

the degree to which suicide is acceptable for a given group of people (e.g., the elderly),

which in turn is not the same as reading a vignette describing the detailed circumstances

surrounding an individual ("John") committing suicide and then rating whether "John's"

suicide is acceptable. I will refer to the latter style of questions as "close" attitudes,

whereby participants rate whether or not a case of suicide, with enough information to

make it more "realistic" (i.e., easier for the participant to identify with the person), is

acceptable. Distant attitudes are nomothetic (i.e., group) related; close attitudes are

idiographic (i.e., individual) related. It is possible, for instance, that an individual could

rate suicide in general as acceptable, and even view it as perfectly acceptable for the

elderly, but not for a given person described in a vignette.

In addition, I further propose that a distinction can be made within both the distant

and close attitude categories between those that are "general" and those that are

"specific." General attitudes are those that are rated in a broad or comprehensive fashion,

whereas specific attitudes are those that are rated in a much more narrow or restricted

fashion. For example, rating the acceptability of suicide for society is a distant-general

attitude, while rating the acceptability of suicide for Native Canadians is a distant-specific

attitude. In this example, rating acceptability for Native Canadians is assessing a more

specific attitude on the part of the participant. Both are still *distant* as the items provide

no information about an individual, and thus leave the person with a nomothetic (i.e.,

grouped based) assessment. Similarly, rating the acceptability of suicide for a person

named "John Doe" after reading about the circumstances is a close-general attitude, while

rating the acceptability of suicide for one's sibling would be a close-specific attitude. In

the latter example, the acceptability for "John Doe" is *close* because it contains details

regarding his life, and thus brings the example closer to home for the participant. Yet, it

is still *general*, as "John Doe" could literally refer to anyone. One's sibling, on the other

hand, is both an individual known to the person, and a specific person (see Table 1).

Table 1

An Example of Categorization of Attitude Types

	General	*Specific*
Distant (Nomothetic)	Society	Native Canadians
Close (Idiographic)	"John Doe"	Sibling

Such distinctions parallel the argument of compatibility made by Fishbein and

Ajzen (1975). This view proposes that attitudes and behaviours must be *compatible* in

order to show a strong relation; in other words, specific attitudes tend to be good

predictors of specific behaviours, while general attitudes tend to be good predictors of

general behaviours. Fishbein and Ajzen proposed that attitudes and behaviours should be defined on a similar level of generality in order to more accurately examine the attitude behaviour relationship.

Moreover, given the well-documented problem in attitude research that a participant's rated attitudes may or may not be consistent with his or her behaviour (e.g., Rosenberg & Hovland, 1960), it is important to include both "close" and "distant" attitudinal ratings in order to get a better overall evaluation of attitudes. Underscoring this point is the finding of Droogas, Siiter, and O'Connell (1982), who report that participants are "more likely to display some acceptance of suicide when they are asked to make judgements of abstract situations..." (p. 142). This is an even more incisive criticism for the majority of the research on attitudes towards suicide, which simply asks about general opinions and beliefs (e.g., Domino et al., 1980; Limbacher & Domino, 1986; Marks, 1989; Wellman & Wellman, 1986). The present study will heed this warning by including attitudinal scales that ask participants to rate both their "close" and their "distant" attitudes towards suicide.

In sum, the present study will examine underlying meanings across the main suicide attitude instruments presently used in the field. It is tentatively proposed that a tripartite model of attitudes (Ajzen, 1988), combining aspects of cognitive, affective, and conative components of attitudes, may also apply to the study of suicide attitudes and suicidal behaviour. Research has found that measuring these components of attitudes in aggregate increases behavioural prediction (Eagley & Chaiken, 1993), and more accurately represents the multifaceted nature of attitudes. This examination will also help

to determine whether or not varying results obtained by different attitudinal scales can be

explained by their differing emphases on attitudinal dimensions. Moreover, the

examination for an underlying structural model of attitudes is an attempt to strengthen the

role of theory in suicide attitude research, and thus take advantage of the plethora of

social psychology research that has been conducted on attitudes.

Prior Experience with Suicide

A second question that will be examined is to what degree, and in what manner, is

previous experience with suicide related to attitudes towards suicide? In other words, to

what degree are attempted suicide, parasuicidal behaviour (i.e., low lethality attempts),

and suicidal ideation related to attitudes towards suicide? To address this question,

participants will be grouped according to their experience with suicide, and these groups

will then be examined for differences across the attitudinal dimensions found in the

search for underlying factors.

Note that this study also comprises an attempt to provide further data on the

prevalence of suicide experience in university students. There remains a dearth of data on

this issue, and that which has been collected has often asked just a few broad questions,

often answered in a yes or no fashion (e.g., Langhinrichsen-Rohling, Sanders, Crane, &

Monson, 1998; Osman, Barrios, Grittmann, & Osman, 1993; Wellman & Wellman, 1986;

Zhang & Jin, 1996). Some studies have only examined ideation (e.g., Zhang & Jin,

1996); others have grouped ideators and attempters (e.g., Langhinrichsen-Rohling,

Lewinsohn, Rohde, Seeley, Monson, Meyer, & Langford, 1998; Langhinrichsen-Rohling,

Sanders, Crane, & Monson, 1998; Osman, Barrios, Grittmann, & Osman, 1993). Other

studies have clumped all attempters together, whereby someone who took four Tylenol

five minutes before his or her roommate would be home was grouped with someone

whose branch broke while he or she was hanging him- or herself in the back woods (e.g.,

King et al., 1996). No known studies have examined in any degree of depth in university

students: (a) different types of suicidal behaviour, including assessing intent, lethality,

and other circumstances surrounding the event; (b) current suicidal ideation; and (c) high-

risk behaviour.

Although research has examined attitudes towards suicide, few studies have

examined the effects of prior experience with suicide on attitudes towards suicide. It has

been argued that society affects "an individual's likelihood of committing or attempting

suicide through the attitudes it inculcates towards it" (Diekstra & Kerkhof, 1989, p. 91).

Thus, through the study of societal attitudes towards suicide we may come to a better

understanding of the social factors that impact on suicidal thoughts and behaviours.

Moreover, an individual's attitudes towards suicide may be reflective of his or her

own future suicidal behaviour (e.g., Diekstra & Kerkhof, 1989; Kerkhof & Nathawat,

1989). It is thus important to conceptualize and test approaches to better assess suicide

attitudes.

Examining for prior experience with suicide becomes even more important when

considering recent attitude research. For example, ratings of attitudes have been found to

vary greatly depending on the degree of involvement that the person has had with the

attitude object (e.g., Dijksterhuis, Macrae, & Haddock, 1999; Krosnick & Petty, 1995;

Millar & Millar, 1996). Moreover, attitudes that are based on experience are more likely

to guide behaviour (Fazio & Zanna, 1978). Indeed, it has been found that the greater the personal involvement with an attitude object, the greater the impact on one's subjective beliefs (Haddock et al., 1999). Subjective beliefs refer to the concept of attitude strength, whereby attitude certainty, intensity, and importance of the attitude are all impacted by having had personal experience (Krosnick & Petty, 1995). For example, "subjective accessibility," has been found to play a central role in attitude judgements (see Haddock et al., 1999), in that prior experience will facilitate the ease of retrieval of the person's attitudes. This is significant in that such attitudes have in turn been found to be stronger (i.e., have greater intensity, certainty, resiliency) (see Millar & Millar, 1996), and stronger attitudes have greater predictive power with respect to behaviour (Fazio, 1990; Millar & Millar, 1996). In sum, personal experience, whether one's own or being exposed to that of others, is heavily reflected in attitudes. It is thus important to include past experience with an attitude object in any assessment of attitudes; in this study, individuals who have been exposed to the suicidal behaviour of others will likely have attitudes that reflect this exposure to suicide.

It has been argued by many suicidologists that a continuum of severity exists from suicidal ideation to suicidal attempts to suicidal completions (e.g., King, 1996; Silverman & Maris, 1995). The present study will examine whether attitudes moderate this continuum. For example, do those who ideate have different attitudes towards suicide than do those who have made suicide attempts? Specifically, do such groups vary along the attitudinal dimensions, having higher or lower scores on given dimensions?

Plausibly, those who have made more serious suicide attempts may have different

attitudes towards suicide than do those who have made less serious attempts. Yet, the difficulty with the classification of suicide and suicide behaviour is that there is no agreed upon system (see Lewinsohn, Langhinrichsen-Rohling, Langford, Rohde, Seeley, & Chapman, 1995). For example, some lines of research have, perhaps unintentionally, operated from the assumption that suicidal behaviours can be grouped with suicide attempts (e.g., King et al., 1996), or that ideation can be grouped with suicidal attempts (e.g., Langhinrichsen-Rohling, Lewinsohn, Rohde, Seeley, Monson, Meyer, & Langford, 1998; Langhinrichsen-Rohling, Sanders, Crane, & Monson, 1998; Osman et al., 1993).

Yet, research has found that many people are able to distinguish between suicidal acts aimed at death and those that are not (e.g., Wallace & Kral, 1994). A problem with the approach used by these researchers, however, is that it left the judgement of intent totally in the hands of the person. Given the continuing stigma surrounding suicide (see Lester, 1996), it is possible that the reporting of some participants might be inaccurate. For example, for some individuals it may feel less socially acceptable to engage in suicidal behaviour that is not aimed at ending one's life. Thus, such individuals may report higher ratings of intent to die than was actually the case.

The present study is an attempt to improve on this method of classification of suicidal behaviour. Participants were still asked to distinguish a suicide attempted aimed at death from one which was not, but were asked additional questions that might further illuminate the *degree* of intent, rather than solely viewing it as a dichotomous variable. For example, information on the details of the attempt were gathered, including such things as whether the person left a suicide note and the nature (i.e., lethality) of the

method.

In essence, this study will address the following question: What is the nature of the relationship between one's own experience with suicide and attitudes towards suicide? To examine this question, the present study compared groups of persons with differing types of experience with suicide to see if they could be differentiated on the basis of their attitudes. Again, the attitudes were be defined by the attitudinal dimensions found to underlie suicide attitudes, as discussed in the previous section. For example, if "acceptability of suicide" were found to be a factor underlying suicide attitudes, do those who have attempted suicide have more favourable attitudinal ratings towards suicide (e.g., rate suicide as more acceptable) than do those who have ideated? Is having known someone who committed suicide reflected by having more acceptable attitudes towards suicide? Do those who make high lethality suicide attempts have higher acceptability ratings for suicide than do those who make lower lethality attempts?

Such attitudinal differences could help to explain why some go on to make more lethal attempts. Such information could be especially important to mental health professionals, who could inquire more specifically about a client's attitudes on death, dying, and more specifically, suicide. For example, it may be that an individual who views suicide as a viable option may be at greater risk to commit suicide in the future, even if the individual is not currently in distress. Although this study is not of a prospective nature, and thus cannot draw cause-and-effect conclusions, various links between attitudes and behaviour can still be examined.

Another focus of this study is to the extent to which specific links can be drawn

between having known another to have experienced a form of suicidal behaviour and one's attitudes towards suicidal behaviour. What impact, for example, does having had someone close to one attempt suicide have on one's attitudes towards suicide?

Are those who have known a friend to have considered or attempted suicide more likely to do so themselves? In short, does the behaviour of others impact on one's attitudes; and, if so, are these attitudes reflective of one's behaviour?

In sum, this study will also examine to what extent: 1) the exposure to the suicidal behaviour of others impacts on one's attitudes, 2) one's attitudes towards suicide are reflective of one's suicidal behaviour, and 3) being exposed to the suicidal behaviour of others is reflected in one's own suicidal behaviour.

Summary and Hypotheses

In discussing the relationship between culture and meanings of suicide, Boldt (1988) notes that there are two sources: one comes from internalized, cultural values and the other from the sanctions of the cultural community. Research on attitudes may describe both the sanctions of the community (i.e., the attitudes of a group towards suicide) and also the degree to which a given individual has internalized such sanctions (i.e., as evidenced by his or her attitudes towards suicide). Thus, by studying the attitudes of individuals towards suicide coupled with the attitudes of society towards suicidal individuals we can come to better understand the cultural matrix of suicide. In effect, the study of attitudes may help illuminate the link between suicide and culture.

Many, in fact, have stressed the importance of understanding the cultural matrix within which suicide occurs (e.g., Kral & Dyck, 1995; Reynolds, Kalish, & Farberow,

1975; Shneidman, 1985). Boldt (1988) has argued that "given that suicide derives its meaning from socio-cultural values and attitudes, it follows that the meaning of suicide differs from one cultural community to the next" (p. 94). Similarly, Farberow (1989) has recognized the importance of understanding the cultural reaction to suicide, as seen in his argument that the reaction of society in turn influences the form and frequency of suicide. This study is in part an attempt to better understand the reactions of society towards suicide via attitudes, and to examine potential links between these attitudes and various forms of suicidal ideation and behaviour.

As an exploratory study of the factors that underlie suicide attitudes, this study will attempt to provide a structural model of attitudes towards suicide. The tripartite model, as has already been argued above, provides the most theoretically sound hypothesis, and the one-component theory of Fishbein (1967) and the homeostasis approach of Cacioppo et al. (1989) provide the most worthy testable alternatives. If a one-component solution is found for attitudes with cognitive items having the primary loadings, this result would also partially support the definition of "attitude" in the theory of reasoned action.

Alternatively, it is also possible that more than three dimensions may be found. For example, two factor analyses conducted by Rogers and DeShon (1992, 1995) of the SOQ led the researchers to report that five factors underlie that respective scale. The five factors reported (acceptability, factual knowledge, social disintegration, person defect, and emotional perturbation), however, are composed of items that primarily assess beliefs and knowledge about suicide, and thus the cognitive component of attitudes. Rather than

these five factors being viewed as the factors that underlie suicide attitudes, they appear

to be possible factors that underlie *cognitive* attitudes towards suicide. In effect, it would

be implausible that the tripartite model would hold given a factor analysis of the SOQ

alone, given the cognitive slant that this scale takes in its assessment of suicide attitudes.

Diekstra and Kerkhof (1989) found five factors that underlie suicide attitudes as

assessed by the SUIATT, a scale that does include items that ask not only about thoughts,

but also about feelings and intentions. These researchers initially reported that two

factors relate to the cognitive component (i.e., consequences of suicide and rationality of

suicide), two factors relate to the conative component (i.e., physical impairment and

social disruption as circumstances for suicide, present and past suicidal ideation), one

factor that related to both the cognitive and conative component (i.e., right to commit

suicide, willingness to assist with suicide, desirability of suicide hospices). The affective

component did not appear as a single factor; instead, the affective subscales had strong

loadings on the other two dimensions of attitudes (Diekstra & Kerkhof, 1989). I would

argue that these results, however, are somewhat questionable with respect to which

attitudinal component (i.e., affective, cognitive, conative) the sets of items were described

as being related to. For example, the consequences for society, relatives, and him- or

herself were all defined by the authors of the scale as being cognitive items, as were

ratings of the degree of cowardice involved in suicide. Yet, I would suggest that such

items could also be categorized as affective, given that such attitudes could be as much

based on feeling as on knowledge and/or beliefs.

Indeed, a second analysis by Diekstra and Kerkhof (1989) testing the

interrelationships between the various subscales reported a six-factor model that accounts for a greater degree of variance in suicide attitudes than the five-factor model. This principal component analysis found one of the factors to be strongly related to the emotional meaning of suicide, leading the researchers to conclude that the "instrumental, cognitive, and affective components are relatively independent of one another" (p. 102).

In sum, this study is an exploratory examination of factors that underlie suicide attitudes. It has been argued that three attitudinal dimensions will be found to underlie suicide attitudes across the three scales. The three dimensions hypothesized to underlie suicide attitudes are: cognitive, affective, and conative, corresponding to the tripartite model of attitudes.

With respect to the relationship between personal experience with suicide and suicide attitudes, the following is hypothesized.

1) Being exposed to the suicidal behaviour of others is expected to reflect in both the attitudes and behaviour of participants; and

2) This effect is expected to be moderated by the strength of the relationship (i.e., closeness) between the participant and the other person.

"Suicidal behaviour of others" is operationalized as having known a completer, attempter, or an ideator; "suicidal behaviour of self" is defined as the participant having attempted suicide or having ideated (both past and/or present). The underlying attitudes (i.e., meanings) derived from the factor analysis of the attitude scales comprise the dependent variables for the examination of the impact of being exposed to the suicidal behaviour of

others. As well, these same attitudes comprise the dependent variables to see whether or not having experienced past suicidal behaviour oneself is reflected in one's attitudes towards suicide.

The attitudinal impact will be assessed by examining how high or low the attitude ratings are of the various types of suicide experience and comparing them to other experience categories. For example, those people who have had someone close to them attempt suicide are expected to show a higher degree of attitudinal and behavioural impact. Specifically, such individuals are expected to have more favourable/supportive attitudes towards suicide. More favourable attitudes towards suicide will be reflected by higher or lower scores on the attitudinal dimensions, depending on the nature of the dimension itself. Thus, for example, a more favourable attitude towards suicide would be reflected in a higher score on acceptability, but a lower score on intent to help a person not commit suicide.

3) It is predicted that those who have had someone close to them commit suicide in the past will be much more likely to have seriously considered suicide in the ast than do those who have not.

4) Having had someone close to one attempt suicide is expected to be reflected not only in having more favourable attitudes towards suicide, but also in being more likely to have attempted suicide oneself.

In short, those who have known attempters are expected to: (a) be more likely to have ideated than have those with no experience, but equally likely to have ideated as those

who have known completers; and (b) be more likely to have attempted themselves--

having known completers is not expected to be related to suicide attempts.

5) Those who have known an ideator are expected to be have attitudes that are

more supportive of suicide, and further to be more likely to have both ideated and

attempted themselves.

In effect, these three hypotheses predict that limited evidence of the contagion

effect (e.g., Phillips, 1974) will be found, and propose that a similar effect may also hold

true for both suicidal ideation and attempts. Contagion theory (Phillips, 1974) suggests

that a single suicide can lead to others committing suicide. This study offers an extension

to this theory, predicting that those who have been exposed to suicidal behaviour will be

more likely to have engaged in such behaviour themselves. Further support for this

hypothesis comes from a study which found that of 255 participants who admitted to

having had prior self experience with suicide (i.e., had ideated, parasuicided, and/or

attempted), only 20 reported that they did not know another individual to have suicide

experience(s) (Wallace & Kral, 1994). In effect, these authors note that over 92% of

those with prior self experience with suicide had known *at least* one other person whom

had ideated, attempted, and/or completed suicide.

6) Participants who have personal experience with suicide (i.e., have themselves

ideated or attempted in the past) will have more favourable attitudes towards

suicide than will participants without such experience.

It seems plausible, as has been suggested by prior research (e.g., Diekstra & Kerkhof,

1989; Wallace & Kral, 1994), that there is a link between prior experience with suicide and attitudes towards suicide.

7) It is predicted that those who have attempted suicide with high ratings of lethality of method will have more favourable attitudes towards suicide than will those who have attempted with low ratings of lethality.

8) It is expected that those who have attempted suicide with an intent to die will have more favourable attitudes towards suicide than those who attempt suicide without such intent.

9) It is expected that those who have attempted suicide multiple times will have more favourable attitudes than those who have attempted once, with the exception of lesser attitudes on a conative factor (i.e., intent to commit suicide) relating to completed suicide, should this dimension be found.

Such a findings would support that idea that the form and number of the suicide attempts is not coincidental, whereby, for example, the choice of method is more than simply a matter of availability. Attempts that are made with a greater intent to die, using methods higher in lethality, and involving a single act aimed at death, may be the result of a stronger intent to complete suicide.

10) It is expected that those who are currently ideating will have more favourable attitudes towards suicide than will those who have ideated in the past only, who will in turn have more favourable attitudes towards suicide than will those who have never seriously considered suicide.

11) Those who have ideated with high ratings of lethality of method are expected to have more favourable attitudes towards suicide than will those who have ideated with low ratings of lethality of method.

In effect, these hypotheses are testing the assumption that one must have more favourable attitudes towards suicide in order to seriously consider it.

CHAPTER II

METHOD

Participants

Six hundred and two university students participated in this study, with 411

(68.3%) being female. The ages ranged from 18 to 52, with the mean age being 21.9

(standard deviation 4.9). The students were recruited from introductory psychology

classes, and received course credit in exchange for their participation.

Measures

Three questionnaires measuring attitudes towards suicide and one suicide

experience instrument were used.

Suicide Opinion Questionnaire (SOQ; Domino, Moore, Westlake, & Gibson,

1982). The SOQ is the most-widely used instrument in suicide attitude research. The

100 item scale was designed with the intent of better understanding the cultural context

for suicide. Participants rate the extent to which they agree with each statement on a

Likert scale from one (strongly agree) to five (strongly disagree).

On the basis of a principle component factor analysis of 285 participants, Domino

et al. (1982) reported 15 factors that underlie attitudes towards suicide, underscoring for

these researchers the "complexities of attitudes toward suicide" (p. 262). The reported

factors were: acceptability and normality, mental and moral illness, suicide as semi-

serious, religion, risk, lethality, normality, irreversibility, demographic aspects, ageing,

motivation, impulsivity, getting even, individual aspects, and sensation-seeking.

The fact that Domino et al. (1982) have interpreted the SOQ as having 15 factors,

however, has been questioned by some. For example, that 15 factors account for 76.7%

of the variance suggests that a number of them may account for less than five percent of

the variance (Diekstra & Kerkhof, 1989).

Rogers and DeShon (1995) similarly have criticized the "erratic factor structure"

(p. 305) of the SOQ, and further note that no reliability estimates have been reported by

Domino for the total SOQ score or for the individual factors/scales. Their analysis of a

more factorially sound eight-factor model of the SOQ found that only one of the eight

scales had a Cronbach's reliability of higher than .70 (Rogers & DeShon, 1992).

Rogers and DeShon (1992) have instead proposed a more elegant five-factor

model that will be used in the present study. They suggested that the five factors are:

acceptability, perceived factual knowledge, social disintegration, personal defect, and

emotional perturbation. These factors were found to account for 72% of the variance.

Rogers and DeShon (1995) later reported cross-validation for this five-factor model,

noting that the internal consistencies of the factors range from .60 to .89, with only one

(i.e., emotional perturbation) falling below the .70 suggested cut-off (Kaplan &

Saccuzzo, 1982).

Clearly, this five-factor model addresses many of the questions regarding the

factor structure of the SOQ as well as the concerns about the reliability of the subscales.

Moreover, given that the SOQ was included in the factor analysis in the present study, the issue of reliability could be re-examined. For example, Rogers and DeShon (1995) concluded by noting that "a useful strategy grounded in psychometric theory and supported by the present research would be to develop new items that might load on the five factors" (p. 309) and then conduct a new investigation. With the additional items to be included from the SUIATT and the MSAS, to be described below, it is likely that the reliability of the individual factors derived in the present study will be significantly improved over that of the SOQ alone.

Suicide Attitude Questionnaire (SUIATT; Diekstra & Kerkhof, 1989). The SUIATT is composed of 94 items regarding attitudes towards suicide, with the items requiring the participant to rate their attitude on a five point Likert scale.

The SUIATT is the only suicide attitude scale to take into account social learning theory and notes that attitudes "toward suicide may differ depending upon whether the (supposed) actor is the respondent, somebody else, e.g., the person most near and dear to the respondent, or someone unknown" (Diekstra & Kerkhof, 1989, p. 92). To reflect this emphasis, on the SUIATT a participant rates his or her suicide attitudes towards "people in general," the "person most near and dear to them," and him- or herself. This process allows for the possibility that while one may rate suicide as generally acceptable for people in general, one may not view it as acceptable for oneself or for someone close to one.

Moreover, as has already been discussed, the SUIATT also includes aspects of the

affective, cognitive, and instrumental/conative attitudinal model. Reliability for the

SUIATT is quite high; Cronbach's alpha has been reported as .90, with test-retest

reliability being .82 (Diekstra & Kerkhof, 1989).

Multi-Dimensional Suicide Attitude Scales and Vignettes (MSAS; Stillion, 1992).

Through its stronger foundation in attitudinal theory, the MSAS constitutes a vast

improvement over the earlier Suicide Attitude Vignette Experience (SAVE; Stillion et al.,

1984). Whereas the SAVE is composed of a series of vignettes, each of which is

followed by several questions to be rated after reading each vignette, the MSAS also

includes scales covering other aspects of suicide attitudes.

Specifically, on four separate scales participants rate their attitudes on the

following themes: 1) feelings about suicide (e.g., rating the extent to which they feel

angry about a person who has attempted suicide), 2) knowledge about suicide (e.g., rating

true or false "most people who attempt suicide do so without giving warning signs"), 3)

behaviour (e.g., "I have attended a meeting on the subject of suicide," and "I have tried to

kill myself"), and 4) suicide beliefs (e.g., "killing oneself is wrong," and "suicide is a

selfish act"). (see Appendix A)

The MSAS also includes a series of vignettes that present a series of scenarios

about suicidal target figures who differ by age (adolescent and young adult, middle-aged,

and elderly). These sets of vignettes are separated into three categories according to the

age of the suicidal target figure, with each set consisting of 11 vignettes. For each

vignette the participants rate their level of sympathy, agreement, and the likelihood that

they would do the same under those circumstances.

For the present study, the knowledge scale was excluded, due to reported low internal consistency (J. Stillion, personal communication, May 1997). The reliability (internal consistency) of the remaining scales assessing feelings, behaviours, beliefs, as well as the three sets of vignettes is reported as "excellent," with reliability ratings ranging from the high .70s to the low .90s (Stillion & McDowell, 1996).

The scales covering suicide feelings, beliefs, and behaviour reflect the affective, cognitive, and conative factors of the tripartite model, respectively. Preliminary evidence from Stillion and McDowell (1996) on the basis of factor analyses on each of the three vignette scales yielded the same three factors: sympathy, agreement, and probability. Sympathy refers to the amount of compassion felt towards the target; agreement refers to the extent to which the participant agrees with the target's decision to commit suicide; and probability refers to the participant's rating of the probability that he or she would do the same. Once again, these factors reflect the tripartite division of attitudes.

Suicide Experience Questionnaire (SEQ). The SEQ is a revised version of the questionnaire on personal experience with suicide used by Wallace and Kral (1994). It is composed of nine general questions about whether or not certain events have happened in the participant's life, answered in a yes or no fashion. Three of these general questions ask about being exposed to the suicidal behaviour of others; four relate to having partaken in suicidal behaviour oneself; and one asks about engagement in high risk behaviour. Up to 12 follow-up questions were also included for each general question, to be answered

only if the participant responded in the affirmative to the general question. These questions ask about such things as the closeness and nature of relationship between the participant and the suicidal person, when the act occurred, choice of method, circumstances surrounding the suicidal ideation, behaviour, and questions around the degree of planning and intent. A complete copy of the SEQ is in Appendix A.

Procedure

After entering the classroom, the experimenter first explained that the purpose of the study was to learn about people's attitudes towards suicide. Participants were then told that they would be: 1) answering questions about their views and opinions regarding suicide; 2) reading a number of fictitious scenarios about an individual who has decided to commit suicide, and evaluating these situations; and 3) answering a few questions about their own experience with issues relating to suicide.

Participants were further told that their responses were anonymous, but they were asked to record their age and sex on their questionnaire. The consent forms were collected separately from the questionnaire responses to ensure that their individual responses could not be matched with their names. Consent forms were signed, however, in order that the two (2) bonus mark credits could be given to their respective psychology professors for their having taken part in the study. Only classes in which an alternate assignment was available to the students were invited to participate.

It is important to note that the motivation to kill oneself cannot be implanted by asking about suicide (Bongar, 1991; Kral, personal communication, 1992; Leenaars,

personal communication, 1994). In other words, one does not become suicidal by answering questions about suicide. Moreover, the only way to learn about suicide attitudes and experiences are to ask about them. Yet, some precautions were warranted. Namely, there is an ethical concern that some participants may be currently either experiencing suicidal ideation, or know of someone who is, and as a result may be made upset by the questionnaire.

Phone numbers for various intervention agencies were included on a resource sheet, and left with each participant. In addition, the consent form pointed out that the survey deals with matters that are potentially upsetting to some people. A copy of the consent form was also left with each participant. It was also made clear that participation was voluntary; the students were told that they could leave at any time or omit any questions that they did not want to answer. Finally, participants were informed that the author would be present to answer questions and/or address concerns following the data collection.

Participants were told that the questionnaire will take about one and one-half hours to complete. All data were collected by the author and two assistants.

CHAPTER III

RESULTS

This chapter is divided into two main sections. The first section, "Suicide Attitudes & Meanings," will address the question of what the major factors underlying suicide attitudes are. The second section, "Suicide Attitudes & Behaviour," will address the relationship between the underlying attitude dimensions, as found in the first section, and various categories of suicide experience.

Suicide Attitudes & Meanings

Before factor analyzing the three primary suicide attitude scales (SOQ, MSAS, and SUIATT), each scale was examined in order to ensure that issues of scoring, reliability, and appropriateness were met. Although research has supported the internal reliability of these scales, as has already been discussed, it was important to determine if such findings held for this sample as well.

The SOQ

Scoring the SOQ according to the method suggested by Rogers and DeShon (1992) produced five subscales scores. Summing the items across the respective factors they outline, these five subscale scores were argued by these researchers to reflect the underlying suicide attitude constructs assessed by the SOQ, and thus would be five of the variables that would be entered into the main factor analysis of the three scales.

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To ensure that their proposed solution also fit the present sample, internal reliabilities were calculated for the five subscales. Only the first factor had a reliability of greater than .70 (.7939), two were in the high .60s (.6939 and .6828), and two of the five scales were low (.5229 and .5163). To further evaluate the appropriateness of using these subscales, a principle components analysis (PCA) was conducted. However before factor analyzing the subscale matrix, it was necessary to determine whether there were a sufficient number of participants and the factorability of the matrix. The current sample size of 602, considered "very good" to "excellent" by Comrey (1974; cited in Tabachnick & Fidell, 1989), also easily satisfies the criterion of having more than five cases for each variable (Tabachnick & Fidell, 1989). As a measure of matrix factorability, Kaiser's measure of sampling adequacy was calculated to determine if even one factor underlies the correlation coefficients. The Kaiser-Meyer-Olkin (KMO) index of .791 easily exceeds the .600 criterion, suggesting the presence of at least one factor. A PCA was then conducted on the five subscales, using varimax rotation, Kaiser normalization and Kaiser's eigenvalue-above-unity criterion. This procedure produced a four-factor solution that accounted for only 27% of the variance. Coupled with the low internal reliabilities for some of the subscales, the solution that Rogers and DeShon (1992) proposed clearly does not fit this sample well.

Restarting the analysis of the original 100 items of the SOQ, with the aim of providing a better solution, an adequate Cronbach internal consistency measure of .8446 was found. A PCA (varimax, eigenvalue-above-unity) produced a four-factor solution accounting for 22% of the variance. Because of the high correlations between the components, even with the high internal reliability, little variance was explained by the

solution. Thus, items that had item-total correlations of less than .30 were removed,

and another PCA (varimax) was performed on the 23 items that met this criterion. Once

again, the KMO index, being .842, was greater than .60 criterion, suggesting a factorable

matrix. Based on the eigen-above-unity criterion, scree plot, and ease of interpretability,

a four-factor solution was derived accounting for 41.2% of the variance.

All items with loadings above .45 on the first factor were associated with beliefs

about the lack of religion, and this scale was thus identified as "Lack of Religiosity." The

highest loadings on the first factor were item 97 ("People who attempt suicide are, as a

group, less religious," .785), item 81 ("People who commit suicide lack solid religious

convictions," .781), and item 88 ("Most people who commit suicide do not believe in

God," .741). The main items that loaded on the second factor were item 82 ("People with

no roots or family ties are more likely to attempt suicide," .662) and item 41 ("A large

percent of suicide victims come from broken homes," .571), and this factor was labelled

"Weak Family Ties." The third factor, "Suicide as Revenge," had its highest loadings

(.798 and .793) with items 47 ("Suicide attempters are typically trying to get even with

someone") and eight ("Many suicides are the results of the desire of the victim to 'get

even' with someone," respectively. The common thread across the fourth factor's

loadings was the inference of deficiency and manipulation (e.g., "Those who commit

suicide are cowards who cannot face life's challenges"), and it was labelled "Weakness

and Manipulation." The item analysis of the four-factor solution is shown in Table 2.

Note that the internal reliability of the Weakness & Manipulation factor is acceptable, but

certainly not strong.

Table 2

Item Analysis of the Four-Factor Model of the SOQ

Deleted Variable Item No.	Correlation with Total	Alpha if Item Deleted	Deleted Variable Item No.	Correlation with Total	Alpha if Item Deleted
1. Lack of Religiosity			*3. Revenge*		
7	.5568	.7905	8	.3353	.6777
81	.6954	.7177	11	.5389	.5411
88	.5899	.7707	47	.5706	.5245
93	.6488	.7423	80	.3768	.6519
Cronbach's Alpha: .8051			Cronbach's Alpha: .6694		
2. Problematic Family Ties			*4. Weakness & Manipulation*		
41	.4115	.6049	29	.2896	.5641
66	.3163	.6307	38	.3926	.5273
72	.3429	.6229	54	.2624	.5726
74	.2801	.6372	62	.3150	.5552
76	.2690	.6415	63	.3350	.5479
82	.4503	.5925	84	.2152	.5890
90	.3521	.6212	97	.3671	.5351
94	.3429	.6225			
			Cronbach's Alpha: .5944		
Cronbach's Alpha: .6530					

* See Appendix A for individual items

The MSAS

Already being composed of subscales with demonstrated reliability (except the knowledge subscale, which was omitted from this study for that reason), the items on

each of the MSAS subscales can simply be summed to produce the subscale score. Thus, the Sympathy items, Rational Agreement items and Acceptable Agreement items combined into one variable named "Agreement," and the Probability items were added to produce their respective subscale scores (see Appendix A).

For the Beliefs subscale, however, eleven of the 23 items (i.e., 139, 141, 143, 144, 147, 149, 153, 155, 156, 157, and 159) had to be reverse-scored for consistency. Although Stillion and McDowell (1996) make no mention of reverse-scoring, it is important when arriving at subscale totals that all of the content items be scored in the same direction (K. Cramer, personal communication, June, 1999). For example, rating the extent to which participants agreed with the item: "Killing oneself is wrong" was reverse-scored so that it would be consistent with rating the extent to which they agreed with "Suicide is sometimes a praiseworthy act." Given that the purpose of the factor analysis is to search for underlying meanings regarding suicide *attitudes* (and not suicidal behaviour), the Behaviour subscale was omitted from this part of the analysis.

For the Feelings subscale (see Appendix A), it ideally would have been desirable to have done the same. With this subscale, however, a multitude of different items (each listing one feeling) are listed such that rating them all in a unidirectional scale is nearly impossible, nor likely desirable (e.g., angry, indifferent, afraid, understanding, upset, unaccepting). Stillion and McDowell (1996) report that this subscale has high internal reliability; Cronbach's alpha for this sample was .7681. Examining the item-total correlations, only one item was negatively correlated with the total. This item, "indifference," was thus reverse-scored, improving alpha to .7820. It is also interesting to note the content of this item: The only item negatively correlated with the sum of the

Feelings subscale was an item that assesses having a *lack* of feelings. The relatively

good internal reliability, coupled with the fact that the only item negatively correlated

with the total was relating to *not* having feelings about suicide, suggests that this subscale

(and thus the construct of affect) may be unidimensional when it comes to suicide

attitudes.

Finally, while the authors report that the internal reliabilities in their study ranged

from the high .70s to the low .90s, it was important to ensure this held with my sample.

Calculated Cronbach's alphas for the scales were: Sympathy alpha = .9333, Agreement

alpha = .9446, Probability alpha = .8536, Beliefs alpha = .8373, and Feelings alpha =

.7820.

The SUIATT

Although a scoring system is said to be present for the SUIATT (Diekstra &

Kerkhof, 1989), repeated attempts by the author to obtain this system were unsuccessful.

Further, the table listing item factor correlations was omitted from their article detailing

the creation of this scale. Consequently, a new scoring system had to be derived. The

internal reliability for these items was strong (alpha = .9020), the sample size (n = 602)

once again more than adequate for this procedure, and the KMO index for these items

was .851 suggesting a factorable matrix. A PCA (varimax rotation, Kaiser normalization

and Kaiser's eigenvalue-above-unity criterion) was conducted on the 94 items that

compose this scale. This procedure produced a 26-factor solution, accounting for 66.9%

of the variance, and failed to converge after 25 iterations of orthogonal rotation.

Using the .30 item-total correlation, again based on the principle that the scale

should be assessing an underlying factor, namely attitudes towards suicide (see Rogers &

DeShon, 1992), some items were dropped from further analysis. A PCA (varimax, Kaiser, eigenvalue-above-unity) of the remaining 42 items produced an eight-factor solution, accounting for 65.5% of the variance. Further consideration of the scree plot, variance accounted for, and ease of interpretability, suggested that a four-factor solution best fit the data. Easily meeting the KMO measure of sampling adequacy, the four-factor solution, composed of 42 items, accounts for 52.7% of the variance.

Seven items had greater than .60 loadings on the first factor. All seven items that loaded on this factor ask about the likelihood that the person rated as "most near and dear" to them would commit suicide. This factor was thus labelled Likelihood of Suicide (Closest). The three strongest asked about the likelihood of suicide if he or she had an incurable disease (.806), a terminal illness (.804), or was severely disabled (.803). It is noteworthy that these items with the three highest loadings, but notably only some of the items that load on this factor, also tap a "health issues" component.

Similar to all seven items that had higher than .60 loadings on the second factor, the three strongest all inquired about the likelihood of the participant committing suicide in the future, if he or she: did not find a life partner (.780), had his or her partner leave (.742), or became unemployed (.706). This factor was thus labelled Likelihood of Suicide (Self). It is notable that a "relations/connections" theme is also present in some, but not all, of the items that load on this factor.

The three highest items loading on the third factor asked about whether the person has the right to commit suicide (.721), whether he or she would be willing to assist someone to take their own life (.715), and whether people in general have the right to take their own lives (.692). The common theme among these and the other similar items

that loaded on this factor was Acceptability of Suicide. It is once again worthy of note that several items that loaded on this factor tapped "agency"; in other words, an aspect of willingness to assist someone to commit suicide was present.

The fourth factor had seven items loading significantly on it, with the three highest all tapping aspects of how likely it would be for people in general to suicide if they were: suffering from an incurable disease (.777), had a terminal illness (.766), or if they became severely disabled (.625). This factor was thus identified as Likelihood of Suicide (Others). Note that an alternative argument can be made for this factor tapping "illness." Yet, the theme connecting all four items with the primary loadings on this factor was the fact that it was another person. Moreover, this theme is also what distinguishes this factor from the first factor (Likelihood of Suicide (Closest)), which also has a health issues aspect to it. It is counterintuitive to interpret two separate factors that have been rotated orthogonally (i.e., uncorrelated) as tapping the same construct; the underlying construct for separate factors will largely be distinct. Finally, the findings of Diekstra and Kerkhof (1989) that these three aspects (attitudes of self, closest, and other people) have been found to be separate components underlying this scale influenced the labelling of the above factors.

The internal reliabilities for all four of these factors were very good, with the highest being for Likelihood of Suicide (Closest) (.9205) and the lowest for Acceptability of Suicide (.8161). It is notable that the first factor (closest person) had strong loadings on items that also involved illness and old age; the second factor (self) had strong loadings on items that involved partner relational issues; and the fourth factor (other) had strong loadings on items that involved illness. In other words, it appears that people have

some tendency to view the suicide of: (1) the person most near and dear as being more

likely and/or acceptable in the case of illness or old age, (2) self as being more likely

and/or acceptable in the case of partner relational problems, and (3) others and more

likely and/or acceptable when it involves illness.

Table 3

Item Analysis of the Four-Factor model of the SUIATT

Deleted Variable Item No.	Correlation with Total	Alpha if Item Deleted	Deleted Variable Item No.	Correlation with Total	Alpha if Item Deleted
1. Likelihood of Suicide (Closest)			*3. Acceptability of Suicide*		
247	.6642	.9142	228	.6231	.7836
248	.7088	.9122	235	.4532	.8096
249	.5262	.9196	262	.4724	.8025
250	.8068	.9078	263	.5250	.7963
251	.7643	.9096	277	.4711	.8030
254	.5483	.9186	300	.5761	.7928
256	.8053	.9077	301	.4068	.8112
257	.8140	.9072	302	.5187	.7997
258	.5903	.9171	304	.6513	.7787
260	.5701	.9181			
261	.6935	.9130	Cronbach's alpha: .8161		
276	.5329	.9198			

Cronbach's alpha: .9205

4. Likelihood of Suicide (Others)

2. Likelihood of Suicide (Self)

			215	.4342	.8395
			220	.6360	.8143
			221	.6024	.8181
224	.3402	.8894	226	.4836	.8336
252	.5868	.8778	265	.5992	.8187
253	.5596	.8791	271	.7253	.7955
255	.6064	.8768	272	.7067	.7994
259	.6316	.8757			
264	.6398	.8753	Cronbach's alpha: .8401		
266	.5520	.8797			
267	.6524	.8772			
268	.5799	.8796			
269	.5542	.8792			
270	.6023	.8774			
273	.6061	.8770			
274	.6959	.8731			
275	.4586	.8868			

Cronbach's alpha: .8866

* See Appendix A for individual items

Underlying Meanings

To assess for common constructs that underlie these suicide attitude scales, a

factor analysis (FA) using principle axis factoring was conducted on the 13 subscale

scores across all three scales. Four of these scores were from the SOQ (Lack of

Religiosity, Problematic Family Ties, Revenge, and Weakness/Manipulation); five were

from the MSAS (Sympathy, Agreement, Probability, Beliefs, and Feelings); and four

from the SUIATT (Likelihood of Suicide (Closest), Likelihood of Suicide (Self),

Acceptability of Suicide, and Likelihood of Suicide (Others).

By analyzing covariance, rather than variance as PCA does, FA allows for a

theoretical solution that is not contaminated by error variability. As the major motivation

is to look for meaning in the factors that underlie the variables, factor rotation will

contribute by improving interpretability (Tabachnick & Fidell, 1989). Finally, given that

the proposed hypothesized constructs (relating to cognitive, affective, and conative

attitudes) are thought be correlated (see Breckler, 1984), oblique rotation was used.

Again, first checking the factorability of the matrix, KMO was calculated to be

.661, above the .600 criterion. A FA (principle axis, promax, eigenvalue-above-unity)

produced a five-factor solution accounting for 41.5 percent of the variance. Given that

some of the correlations between the factors/components were above .30 following

rotation, the oblique rotation was retained, following the recommendation of Tabachnick

and Fidell (1989). Because an examination of the scree plot points to a three-factor

solution, accounting for 34.0 percent of the variance, both solutions were examined.

An examination of the pattern matrix, which contains the unique contributions of

each factor to the variance in the variable, will be used in place of the structure matrix.

Although the latter "is more readily understood...the correlations between variables and factors are inflated by any overlap between factors" (Tabachnick & Fidell, 1989, p. 617). In the interpretation of both solutions, emphasis was given to items (i.e., subscales) that loaded > .40 on a factor, as well as "pure items," being those that loaded primarily on one factor only.

Three-Factor Solution. Through a visual examination of the factor loadings, a three-factor solution was first interpreted. As can be seen in Table 4, the first factor had three items load significantly on it. Beliefs (.989) had the highest loading, followed by Acceptability (.767) and Lack of Religiosity (.414). It appears that this factor is tapping Cognitive Aspects of suicide attitudes, with an emphasis on beliefs in particular, and was labelled as such.

The highest loadings for the second factor were for Probability that the participant would also engage in the suicidal act (.885), followed by Likelihood of Suicide (Self) (.596) and Agreement with Suicide (.535). This factor appears to be largely related to conative aspects regarding ratings of what the person would do across a number of given situations, and was labelled Suicide Intent. It stands to reason that the lesser contribution of Agreement (a cognitive/conative aspect) would be moderately correlated. If one did not agree that suicide was the right solution in a given situation (cognitive/conative), then it is unlikely that one would intend to do the same if in the identical circumstances (conative).

Finally, two subscales had significant loadings on the third factor. Sympathy has the highest loading (.789), followed by Feelings (.446). This factor appears to be related to Sympathy itself. Although an argument could be made that this factor be identified as

Affect, a comparison of the respective loadings on the factor show the Sympathy to

have a much higher relationship to the construct than Feelings. It also stands to reason

that people who have high ratings of Sympathy would also have somewhat higher ratings

of Feelings as well.

Note that the following factors did not load significantly on any of the three

factors: Likelihood of Suicide (Others) (SUIATT), Likelihood of Suicide (Closest)

(SUIATT), Problematic Family Ties (SOQ), Weakness/Manipulation (SOQ), and

Revenge (SOQ).

Table 4

Factor Loadings for Three-Factor Solution

Item	Factor 1	Factor 2	Factor 3
Beliefs	.989		
Acceptability	.767		
Religion	.414		
Probability		.885	
Likelihood of Self Suicide		.596	
Agreement		.535	
Sympathy			.789
Feeling			.446

Five-Factor Solution. For the five-factor solution, factor one consists of three

items. As in the three-factor solution, the first factor here again appears to reflect a

dimension involving cognitive aspects of attitudes about suicide. The highest loadings

are with Beliefs (.902), followed by Acceptability (.879). The belief that Lack of

Religiosity also loaded on the first factor, although to a much weaker degree (.418). This

factor was also labelled as Cognitive Aspects.

The second factor had three of the subscales load significantly on it, with the highest loading belonging to Probability (.785), referring to the probability that the person would also engage in the suicidal act. The second highest loading was with the Likelihood of Suicide (Self) (.667), followed by Agreement (.574). The common theme among these items appears, once again, to be of a conative nature. Specifically, the intent to commit suicide oneself in the future, and this factor was also identified as Suicide Intent (See Table 5).

As in the three-factor solution, factor three had two items load on it significantly, Sympathy (.825) and Feelings (.467). This factor was also identified as Sympathy.

Both factors four and five had a single subscale load on each significantly, and were thus identified by that subscale. Factor four was identified as Likelihood of Suicide (Others) (.619), and factor five as Likelihood of Suicide (Closest) (.652). These two factors do not fit neatly into the conative category, as they require the participant to make judgements about another's potential intent. A cognitive aspect seems to also be involved, given that the person is essentially giving a belief about another's future behaviour. Note that Problematic Family Ties, Weakness/Manipulation, and Revenge did not load significantly on any of the factors.

Table 5

Factor Loadings for Five-Factor Solution

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Beliefs	.902				
Acceptability	.879				
Religion	.418				
Probability		.785			
Likelihood of Self Suicide		.667			
Agreement		.574			
Sympathy			.825		
Feeling			.467		
Likelihood of Others Suicide				.619	
Likelihood of Closest Suicide					.652

In considering which solution is more appropriate for the present study, it is important to note that both factors four and five are defined by one variable each; despite the moderate loadings, reliability does become a concern. There are other considerations, however. Although an examination of the scree plot suggests that the fourth and fifth factors contribute a decreasing amount of variance, they nevertheless contribute in a statistically significant way to the overall variance accounted for, as assessed by the eigen-above-unity criterion. In addition, neither of these factors is significantly correlated with any of the others, and therefore these two factors appear to be tapping dimensions not accounted for by the first three factors. This finding also suggests that the addition of these two factors maintains the simplicity of the overall solution (see Tabachnick & Fidell, 1989), as supported by the finding of the same three dimensions identified as found in the three-factor solution. Finally, the finding that ratings of

attitudes towards suicide for self, the person closest, and people in general are distinct

dimensions of suicide attitudes is consistent with the finding of Diekstra and Kerkhof

(1989). Thus, the five-factor solution will be retained for the further analyses with

experience.

<div align="center">Suicide Attitudes & Behaviour</div>

What is the relationship between experience with suicide and one's attitudes

towards suicide? The following section will address this question.

Experience Categories

For the analysis of experience, participants were placed into three broad

categories: other-experience, self experience, and high-risk behaviour. Other-experience

was made up of those who had known: (a) a completer (53.7%), (b) an attempter

(56.3%), and (c) an ideator (41.4%). A full 80.6% of participants had been exposed to at

least one of these three types of experience.

Self experience was composed of those who: (a) had attempted suicide without

an intent to die (9.5%), (b) had attempted with a purported intent to die (5.0%), (c) had

seriously considered suicide (ideated) in the past (21.6%), and (d) were currently ideating

(0.8%). In all, 27.1% of participants had one or more types of self experience. Finally,

37.4% of the participants reported having engaged in high-risk behaviour. High-risk

behaviour is that behaviour which involves taking part in activities that while not actively

intended to take their lives, have a chance to do so. (See Table 6)

Table 6

General Suicide Experience Categories

Experience Category	Frequency	Percentage
Other-Experience	485	80.6
Known Completer	323	53.7
Known Attempter	339	56.3
Known Ideator	249	41.4
Self Experience	163	27.1
Attempted without Intent	57	9.5
Attempted with Intent	30	5.0
Ideation, Past	130	21.6
Ideation, Current	5	0.8
High-Risk Behaviour	225	37.4

In order to better examine the effect of various types of suicide experience on both attitudes and behaviour, a number of new experience variables were created. For example, given that the closeness of the relationship with the person engaged in the suicidal behaviour would be important to assess, all three categories of other-experience were further divided into categories according to whether they had known someone rated by them as close. (See Table 7)

Self experience was similarly divided up whereby those who had attempted were categorized according to: (a) intent to take life, (b) single or multiple attempts, and (b) lethality of method. Those who had ideated were categorized according to: (a) rated intent to die, (b) rated degree of planning, and (c) lethality of the choice of method (See Table 9). Cutting and drugs (prescriptions, OTCs) were categorized as being low lethality methods, while jumping, shooting, hanging, drowning, exhaust, driving, and suffocation were classified as high lethality methods. Both intent and planning were

rated by the participant on a one to seven scale, and were considered "low" for ratings from one to three, and "high" for ratings from five to seven. Thus, note that participants who scored such items in the middle were omitted from these respective categories, and thus some of the percentages do not total 100. Finally, those who had engaged in high-risk behaviour were categorized according to whether they rated their intent to die as being "high" (five or greater on a one to seven scale), medium (two to four), or low (one).

One criticism of this approach may be that too many categories are included. This in-depth approach to both self and other-experience with suicide, however, allowed for exploration as to whether differences existed across these experience categories. In fact, significant and important differences were uncovered for some of these behaviours, as will be explored below.

Table 7

Closeness of Other-Experience

Experience Category	Frequency	% of Category	% of Sample
Any Other-Experience	485		80.6
Close	318	65.5	52.8
Not close	152	31.3	25.2
Known Completer	323		53.7
Close	60	18.6	10.0
Not close	230	71.2	38.2
Known Attempter	339		56.3
Close	211	84.8	35.0
Not close	99	39.8	16.4
Known Ideator	249		41.4
Close	214	85.9	35.5
Not close	23	9.2	3.8

Table 8

Correlations between General Experience Categories

	1	2	3	4	5	6	7	8	9
1. Know Completer	1.00								
2. Know Attempter	.225**	1.00							
3. Know Ideator	.122**	.248**	1.00						
4. Attempt w/o Int	.036	.125**	.154**	1.00					
5. Attempt w/ Int	.075	.116**	.149**	.105*	1.00				
6. Ideation, past	.026	.101*	.241**	.226**	.324**	1.00			
7. Ideation, current	-.027	-.034	-.003	.033	.235**	.175**	1.00		
8. High-risk Beh	.055	.134**	.196**	.041	.041	.133**	-.062	1.00	
9. Sex	-.053	-.047	-.123**	-.097*	-.014	-.032	.068	.205**	1.00

* = p < .05, ** = p < .01

Table 9

Type, Intent, Lethality, and Planning of Self Experience & High-Risk Behaviour

Experience Category			Frequency	% of Category	% of Sample
Attempters			80		13.3
	Intent				
	Without		57		9.5
		Single	36	63.2	6.0
		Multiple	21	36.8	3.5
	With		30		5.0
		Single	17	56.7	2.8
		Multiple	13	43.3	2.2
	Lethality				
		Low	42	92.7	7.0
		High	5	6.3	0.8
Ideators, Past			130		21.6
	Lethality				
		No Method	54	41.5	9.0
		Low	19	14.6	3.2
		High	20	15.4	3.3
	Intent to die				
		Low	33	25.4	3.5
		High	55	42.3	9.1
	Planning				
		Low	58	44.6	9.6
		High	23	17.7	3.8
Ideators, Current			5		0.8
High-Risk Behaviour			225		37.4
	Intent to die				
		Low	181	80.4	30.1
		Medium	30	13.3	5.0
		High	7	3.1	1.2

Table 10

Correlations between All Variables and Attitudes

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Likelihood-Closest
1. Know Completer	-.061	-.005	.033	.058	-.027
2. Know Attempter	.016	.060	.129**	.081	.050
3. Know Ideator	.010	.102**	.187**	.080	-.002
4. Attempt w/o Int	.067	.213**	.145**	.222**	-.018
5. Attempt w/ Int	.103*	.214**	.229**	.041	-.080
6. Ideation, past	.223**	.337**	.287**	.093*	-.007
7. Ideation, current	.193**	.196**	.099*	-.049	-.007
8. High-risk Beh	.067	.052	.051	.080	.026
9. Other-Experience	.033	.080	.174**	.099*	.032
10. Close Other-Exp	.043	.072	.179**	.110**	.043
11. Distant Other-Exp	-.030	-.013	-.051	-.035	-.047
12. Know Close Comp	-.007	-.008	-.004	.106*	.036
13. Know Distant Comp	-.048	-.015	-.020	-.006	-.096*
14. Know Close Att	-.014	-.043	.140**	.106*	-.013
15. Know Distant Att	.041	.020	.008	-.063	.080
16. Know Close Id	.020	.079	.183**	.051	.020
17. Know Distant Id	.024	.079	.028	.033	-.026
18. Ideators w/o Att	.175**	.191**	.179**	.023	.049
19. No method Ids	.133**	.147**	.157**	-.022	.006
20. Low Leth Ids	.074	.091*	.101*	.052	-.018
21. High Leth Ids	.054	.130**	.108*	.066	.001
22. Low Intent Ids	.072	.061	.143**	-.023	-.007
23. High Intent Ids	.150**	.234**	.165**	.082	-.029
24. Low Plan Ids	.090*	.158**	.192**	.082	-.041
25. High Plan Ids	.137**	.208**	.169**	.038	.011
26. Self Experience	.216**	.349**	.314**	.160**	-.028
27. Attempters w/o Int	.067	.213**	.145**	.222**	-.018
28. Attempters w/ Int	.103*	.214**	.229**	.041	-.080
29. Mult Atts w/o Int	.059	.128**	.096*	.179**	.083*
30. Mult Atts w/ Int	.088*	.117**	.147**	-.057	-.083*
31. Attempts w/o Id	.027	.092*	.094*	.139**	-.037
32. Attempts w/ Id	.104*	.252**	.209**	.111**	-.063
33. Low Leth Att	.012	.171**	.158**	.139**	-.115*
34. High Leth Att	.085*	.033	.099*	.049	.039
35. Sex	.082*	.037	-.150**	-.062	-.005
36. Cognitive Aspects	1.00				
37. Suicide Intent	.524**	1.00			
38. Sympathy	.369**	.449**	1.00		
39. Likelihood-Others	.109*	.441**	.106*	1.00	
40. Likelihood-Closest	.334**	.262**	.153**	.224	1.00

* = p < .05, ** = p < .01

Other-Experience & Attitudes

It had been hypothesized that being exposed to the suicidal behaviour of others would be reflected in one's attitudes towards suicide. A MANOVA was performed to test this prediction, with the dependent variables being the five attitudinal factors derived above, and the independent variable was other-experience.

An examination of Hotelling-Lawley's Trace suggests that the other-experience did indeed vary across the combined dependent variables, F (5, 542) = 4.485, p < .001 (observed power = .971). While statistically significant, however, this result reflected only a small association between the presence of other experience and attitudes, eta^2 = .040.

Follow-up analyses of variance were then done in order to examine which of the five attitudes those with and without other-experience differed on. Those with other-experience were found to have higher scores on Suicide Intent (F (1, 546) = 3.693, p < .05 (power .483), Sympathy (F (1, 546) = 17.300, p < .001 (power .986), and Likelihood of Suicide (Others) (F (1, 546) = 5.685, p < .017 (power .663).

In effect, having had exposure to the suicidal behaviour of others, in general, was reflected in attitudes towards suicide. Such experience, while leaving individuals more sympathetic to the plight of suicidal individuals, also left them believing that suicide is more likely for people in general, and to more seriously consider suicide as an option for themselves. It is noteworthy, however, that the relationship between other-experience and attitudes, although present, was not particularly strong. The small effect size can be seen more clearly by looking at the small correlations between other-experience and attitudes towards suicide (see Table 10).

Close Other-Experience & Attitudes

It was further predicted that close-other experience with suicide would be related to attitudes towards suicide. In order to test this hypothesis, a MANOVA examined the effect of having close other-experience on the five correlated attitudinal variables (Cognitive Aspects, Suicide Intent, Sympathy, Likelihood (Others), and Likelihood (Closest)). Hotelling-Lawley's Trace suggests that having had close other-experience had an impact on the dependent variables, F (5, 542) = 5.396, p < .001 (observed power = .990). Again, although statistically significant, this result reflected only a weak association between the presence of other experience and attitudes, eta^2 = .047. Follow-up ANOVAs to further examine which of the four attitudinal variables suggested that those with any type of close experience have higher scores on Sympathy, F (1, 546) = 19.455, p < .001 (observed power .993) and Likelihood of Suicide (Other), F = (1, 546) = 7.632, p < .01 (power .788), and was close on Suicide Intent, F (1, 546) = 3.300, p < .07 (power .442).

Covarying out the effect of other-experience on attitudes towards suicide, having close other-experience comes near, but does not continue to significantly affect one's attitudes towards suicide, F (5, 541) = 2.104, p < .06 (power = .689, eta^2 = .019). Follow-up univariate analyses suggest that scores on Sympathy, in particular, are affected by having had close other-experience, F (1, 545) = 6.953, p < .01 (power .749). Covarying out both sex and other-experience, those with close other-experience do not have differing overall attitudes towards suicide, F (5, 511) = 1.818, p < .10 (power .623).

In effect, those who have close other-experience have differing attitudes towards suicide than those who do not. Having had close other-experience, however, does *not* impact on attitudes over and above having other-experience. In other words, it is the experience of simply having other-experience with suicide that is related to having more favourable attitude towards suicide scores (Sympathy and Likelihood of Suicide (Other)), regardless of whether the person was close or not.

Other-Experience and Self Experience

While the previous sections examined the relationship between being exposed to the suicidal behaviour of others (i.e., other-experience) and one's own attitudes towards suicide, the following section focuses on the relationship between such exposure and one's own suicidal behaviour. The overall hypothesis that those who had been exposed to the suicidal behaviour of others would be more likely to have themselves engaged in suicidal ideation and/or behaviour will first be examined. This will be followed by more specific comparisons of the relationship between having known about the suicidal behaviour of others and one's own experience with suicide. Tables 11 and 12 show the correlations between the categories of other-experience and those of self experience.

Having Other-Experience. To compare the overall relationship between other-experience and self experience, a chi-square test of independence was performed. There is evidence of a strong relationship between the two types of experience, chi^2 (1) = - 20.808, p < .001. Those with self experience were very likely to have had some exposure to the suicidal behaviour and/or ideation of others. Only 12 (7.4%) of 163 participants with self experience reported never having other-experience with suicide. (r = .186, t = 4.635, p < .001).

Having Known a Completer. Having known a completer was also expected to have been associated with ideation. Although 74 of 130 (56.9%) ideators had known a completer, there was no statistically significant relationship, chi^2 (1) = 0.641, p < .297. As well, it had been hypothesized that having known a completer would *not* be significantly related with having attempted. Indeed, no significant relationship was found between the two variables, chi^2 (1) = 1.900, p < .104.

Having Known an Attempter. It had been hypothesized that having known an attempter in general, and not necessarily someone rated as close, would be related to having ideated oneself, and also to having made attempts oneself. Indeed, over two-thirds of those who had ideated had known an attempter (87 of 130), and there was a significant relationship between the two categories of experience, chi^2 (1) = 5.214, p < .01.

In addition, it was predicted that having known an attempter would be related to having made attempts oneself. Those who had known an attempter were more likely to have attempted themselves than were those who had not known an attempter, chi^2 (1) =15.289, p < .001. Of those who had attempted, 78.2% (61 of 78) had known an attempter.

Having Known an Ideator. It was expected that having known an ideator would be related both to having ideated and attempted. Indeed, those who had known an ideator were more likely to have: (1) ideated, chi^2 (1) = 34.338, p < .001 (r = .241); (2) attempted suicide, both without intent, chi^2 (1) = 13.771, p < .001 (r = .154) and with intent, chi^2 (1) = 12.614, p < .001 (r = .149); and (3) to have engaged in high-risk behaviour, chi^2 (1) = 21.400, p < .001 (r = .196).

In sum, it appears that the influence of being exposed to the suicidal behaviour of others does not end at one's attitudes, but may also reflected in one's own suicidal behaviour. While having known a completer was unrelated to self experience with suicide, having known either an ideator or attempter was found to be related to having both ideated and attempted oneself.

Table 11

Correlations between Other-Experience and Ideation

	10	11	12	13	14	15	16	17	18
1. Other-Experience	.118**	.095*	.065	.044	.063	.083*	.132**	.032	-.062
2. Close Other-Exp	.046	.064	.075	.064	.038	.092*	.106**	.049	-.153**
3. Distant Other-Exp	.043	.018	-.017	-.044	.028	-.025	.005	-.036	.110**
4. Know Close Comp	-.032	.051	-.028	-.031	.017	-.009	.004	-.008	.026
5. Know Distant Comp	.004	-.020	.054	.045	.081*	.024	.091*	-.032	-.064
6. Know Close Att	.020	.074	.007	.078	-.039	.093*	.067	.017	-.146**
7. Know Distant Att	-.002	.033	.074	-.007	.051	-.001	.022	.005	.107*
8. Know Close Id	.047	.010	.104*	.114*	.080*	.114**	.134**	.087*	-.130**
9. Know Distant Id	.050	.028	.063	.011	-.010	.057	-.006	.005	.098*
10. Ideators w/o Att	1.00								
11. No method Ids	.579**	1.00							
12. Low Leth Ids	.125**	-.057	1.00						
13. High Leth Ids	.228**	-.058	-.033	1.00					
14. Low Intent Ids	.422**	.333**	.123**	.118**	1.00				
15. High Intent Ids	.402**	.183**	.338**	.263**	-.076	1.00			
16. Low Plan Ids	.419**	.272**	.263**	.159**	.441**	.385**	1.00		
17. High Plan Ids	.177**	.089*	.162**	.302**	.104*	.298**	-.065	1.00	
18. Sex	.003	-.020	-.045	.094*	-.020	-.068	-.100*	.071	1.00

* = $p < .05$, ** = $p < .01$

Table 12

Correlations between Other-Experience and Attempts

	10	11	12	13	14	15	16	17	18	19
1. Other-Experience	.186**	.113**	.050	.048	-.014	.081*	.080*	.102*	.045	-.062
2. Close Other-Exp	.156**	.100*	.139**	.089*	.072	.038	.163**	.128**	.013	-.153**
3. Distant Other-Exp	-.010	-.006	-.119**	-.069	-.086*	.028	-.098*	-.054	-.011	.110**
4. Know Close Comp	-.003	.023	-.002	.088*	-.011	.042	.007	-.004	.031	.026
5. Know Distant Comp	.044	.035	.072	-.038	.024	.021	.052	.026	.041	-.064
6. Know Close Att	.132**	.107**	.151**	.088*	.059	.053	.163**	.140**	.048	-.146**
7. Know Distant Att	.032	.037	-.040	-.011	-.035	.031	.005	.037	-.041	.107*
8. Know Close Id	.188**	.127**	.166**	.105*	.105*	.035	.211**	.151**	.047	-.130**
9. Know Distant Id	.054	.053	-.048	.009	-.030	-.010	.039	-.021	-.018	.012
10. Self Experience	1.00									
11. Attempters w/o Int	.532**	1.00								
12. Attempters w/ Int	.376**	.105*	1.00							
13. Mult Atts w/o Int	.312**	.587**	.121**	1.00						
14. Mult Atts w/ Int	.244**	-.049	.648**	-.028	1.00					
15. Attempts w/o Id	.395**	.619**	.144**	.233**	.065	1.00				
16. Attempts w/ Id	.478**	.518**	.615**	.417**	.425**	-.070	1.00			
17. Low Leth Att	.449**	.646**	.355**	.197**	.139**	.507**	.455**	1.00		
18. High Leth Att	.150**	.158**	.231**	.082*	-.014	.219**	.110**	.047	1.00	
19. Sex	-.053	-.097*	-.014	-.076	.018	-.050	-.052	-.094	-.025	1.00

* = p < .05, ** = p < .01

Close Other-Experience & Self Experience

It was also predicted that having any type of close other-experience would be reflected in self experience. A chi-square comparing those with close other-experience and those with self experience found a significant relationship, chi^2 (1) = 14.742, p < .001. Approximately two-thirds of individuals (107 of 164; 65.2%) with self experience have had some type of *close* other-experience (r = .156, p < .01). As can be seen in Table 12, some notable correlations between close other-experience are with having attempted without an intent to die (r = .100, p < .05), having attempted multiple times without intent (r = .089, p < .05), and having attempted with a lower lethality method (r = .128, p < .01). In effect, those who had been exposed to the suicidal experience of someone rated as close were more likely to have engaged in suicidal ideation and/or behaviour themselves. Clearly, having known someone close who has engaged in suicidal behaviour is related to one's own experience with suicide. It is interesting to note, however, that the relationship is with lower intent and lethality suicidal behaviour.

Having Known a Close Completer. It had further been hypothesized that those who have known a close completer would be more likely to have ideated. No statistically significant relationship was found, however, between having known a close completer and having ideated oneself, chi^2 (1) = 0.641, p < .267. In fact, surprisingly, there were no significant correlations between having had a close person commit suicide, and any type of ideation or attempts (see Tables 11 and 12). It is noteworthy, however, that having known a *distant* completer was correlated with low intent ideation (r = .081, p < .05) and low planning ideation (r = .091, p < .05). It appears that having even had a colleague or

someone known from school complete suicide may be related to suicidal ideation, albeit less serious types.

Having Known a Close Attempter. It was also hypothesized that having known someone close who attempted suicide would be related to having attempted oneself. Over half of attempters (55%) knew a close person who had attempted suicide, and a significant relationship was found between the two types of experience, chi^2 (1) = 16.130, $p < .001$ ($r = .164$).

In sum, while having overall close other-experience was related to self experience with suicide, having known a close completer was unrelated to self experience with suicide. It was having known a close attempter that had a more significant impact on self experience, as reflected in such participants' own suicide attempts.

Sex, Other-Experience, & Self Experience

Given the well-established sex difference in both suicide attitudes and behaviour, it was important to attend to this factor in the present study. Although women were no more likely to have other-experience than are males, they were more likely to have had close other-experience (chi^2 (1) = 13.811, $p < .001$; $r = .153$). Specifically, women were more likely to have known a close attempter (chi^2 (1) = 14.742, $p < .001$; $r = .146$) and a close ideator (chi^2 (1) = 9.942, $p < .001$; $r = .132$).

Women were more likely than men to have attempted suicide without an intent to die than were men (chi^2 (1) = 5.395, $p < .01$; $r = -.098$), but no more likely to have attempted with an intent to die (chi^2 (1) = 0.110, $p > .05$). Women were also more likely than men to have attempted suicide with low lethality means (chi^2 (1) = 5.138, $p < .01$; $r = .095$). Finally, women were more likely than men to have attempted multiple times

without a purported intent to die (chi^2 (1) = 3.337, p < .05), but no more likely to have

attempted multiple times with a purported intent to die (chi^2 (1) = 0.172, p > .05).

With respect to suicidal ideation, women were no more likely than men to have

ideated in the past with a low lethality method (chi^2 (1) = 1.188, p > .05) or with low

intent (chi^2 (1) = 0.248, p > .05). Women were more likely than men, however, to have

ideated with a low degree of planning regarding the suicidal act (chi^2 (1) = 5.808, p < .01;

r = .101). Moreover, more men than women had ideated with a high lethality plan (chi^2

(1) = 6.414, p < .01; r = .106), and with a higher degree of planning about the suicidal act

(chi^2 (1) = 3.941, p < .05; r = .083).

Such findings have the potential to provide further hypotheses regarding the sex

difference in both suicide attempts and completions. These data indicate that more

women than men engage in suicidal behaviour that is not intended to end their life.

Further, women are more likely to attempt with low lethality means, but also to "attempt

suicide" without an intent to die. This does not, for example, support the commonly

argued view that more men complete suicide *simply because* men choose more lethal

methods. Moreover, while more men than women were found to have ideated with high

lethality methods, men were also more likely than women to engage in a high degree of

planning in their suicidal ideation. In contrast, women are more likely to engage in less

planning in their suicidal ideation.

With respect to high-risk behaviour, men were more likely than women to report

having engaged in high-risk behaviour with no purported intent to die (chi^2 (1) = 15.177,

p < .001). There were no sex differences, however, between reports of having engaged in

high-risk behaviour with either high intent to die (chi^2 (1) = 2.759, p > .05) or medium

intent to die (chi^2 (1) = 2.703, p > .05). It is possible that these findings were affected

by the small sample size for medium and high intent high-risk behaviour.

<u>Self Experience & Attitudes</u>

It had been predicted that having self experience with suicide would be reflected

in one's overall attitudes towards suicide. Hotelling's t^2 clearly indicates the presence of

a significant relationship between having ideated and/or attempted and having more

supportive overall attitudes towards suicide, F (5, 542) = 22.467, p < .001 (observed

power = 1.0). Once again, although statistically significant, this result reflected a small

association between the presence of self experience and attitudes, eta^2 = .172. Follow-up

ANOVAs to further examine which of the five attitudinal variables indicated that those

with any type of self experience have higher scores on Cognitive Aspects, F (1, 546) =

25.987, p < .001 (power .999); Suicide Intent, F = (1, 546) = 74.515, p < .001 (power

1.0); Sympathy, F (1, 546) = 58.103, p < .001 (power 1.0); and Likelihood of Suicide

(Others), F (1, 546) = 13.589, p < .001 (power .957).

Given that women reported more self experience than men, it became important

to covary out the effect of sex when examining for the effects of self experience on

attitudes towards suicide. It was found that those with self experience had significantly

different attitudes towards suicide even when sex was covaried out from those with no

self experience, F (5, 512) = 21.691, p < .001 (power 1.000, eta^2 = .175),. Follow-up

univariate analyses suggest that scores on Cognitive Aspects, F (1, 516) = 26.768, p <

.001 (power .999); Suicide Intent, F = (1, 516) = 74.186, p < .001 (power 1.0); Sympathy,

F (1, 546) = 54.966, p < .001 (power 1.0); and Likelihood of Suicide (Others), F (1, 516)

= 7.380, p < .001 (power .973) continue to be affected (i.e., more supportive) by having had self experience, regardless of the person's sex.

In short, having self experience with suicide was reflected in having higher scores on all attitudinal dimensions *except* for Likelihood (Closest), even when the relationship between sex of participant and self experience was held constant. The remaining sections below examine the relationship between specific types of self experience and attitudes towards suicide.

Ideation, Attempts, & Attitudes

It was expected that those who have ideated in the past would have differing attitudes (i.e., more supportive) towards suicide than those who had not. It was also expected that those who had attempted would have differing attitudes (i.e., more supportive) than those who had ideated. Theoretically, for those who have seriously considered suicide, those who go on to attempt perhaps view suicide as a more acceptable or favourable option. Similarly, those who have seriously considered suicide were expected to have more favourable attitudes towards suicide than those who have not so ideated.

A two-step procedure was performed to examine the effect of having ideated or attempted on attitudes towards suicide. First, a standard regression (i.e., simultaneous) procedure was done whereby all of the independent variables are entered at the same time. This process illuminates whether one's sex, having ideated, having attempted without intent, or having attempted with intent can explain variance in the responses to the respective dependent variables (i.e., the five attitudinal dimensions). Note the

inclusion of sex in the analysis, given the strong foundation of prior research suggesting its impact on suicide attitudes.

Standard regressions were performed for each of the five attitudinal variables (the dependent variables), with the predictors being sex, ideation, and attempts. This procedure allows the following questions to be addressed: (a) are there sex differences in attitudes towards suicide, (b) do those who have ideated have different attitudes towards suicide, (c) do those who have attempted without intent have different attitudes towards suicide, and (d) do those who have attempted suicide with intent have different attitudes towards suicide.

Second, a hierarchical regression procedure was used to enter the variables into the regression equation in a specified order, allowing for the sex difference in attitudes to be accounted for *before* examining for differences across the suicide experience categories. In this case, sex and past ideation were used as covariates, whereby any differences in the attitudes of attempters without intent would have to be over and above any differences in the dependent variables according to sex and ideation. This is especially important as sex is correlated with having attempted ($r = .07$, $p < .05$). Similarly, any attitudinal differences in those who have attempted with an intent to die would have to be over and above any differences in the dependent variables according to sex, ideation, and attempts without intent.

Hierarchical regressions were calculated for the attitudinal variables (the dependent variables) found to be significant in the standard regression procedure, with the predictors being sex, ideation, attempts without intent, and attempts with intent. This procedure allows the following questions to be answered: (a) holding sex differences in

attitudes constant, do those who have ideated have differing attitudes towards suicide, and (b) holding both sex differences and the effect of having ideated constant, do those who have gone on to attempt suicide have differing attitudes from those who have only ideated, and (c) holding sex, ideation, and attempts without intent constant, do those who go on to attempt suicide with intent have differing attitudes from those who attempt without intent.

With the standard regression analyses, the overall models were significant for Suicide Intent, F (4, 485) = 23.590, $p < .001$ (Adj R^2 = .156); Sympathy, F (4, 485) = 19.338, $p < .001$ (Adj R^2 = .130); Cognitive Aspects, F (4, 485) = 7.836, $p < 001$ (Adj R^2 = .061); Likelihood of Suicide (Others), F (4, 485) = 7.618, $p < .001$ (Adj R^2 = .051); but not Likelihood of Suicide (Closest), F (4, 485) = 1.363, $p > .05$. In effect, the combined independent variables (sex, ideation, attempts without intent, and attempts with intent) were related to scores for all of the attitudinal dimensions except for Likelihood (Closest).

Cognitive Aspects. For Cognitive Aspects, there was a main effect in the standard regression for sex (Beta = .094, t = 2.124, $p < .05$) and ideation (Beta = .207, t = 4.335, $p < .01$). The hierarchical regression on Cognitive Aspects shows that the impact of ideation on Cognitive Aspects remains present after holding sex constant, Beta = .227, t = 5.168, $p < .001$. In effect, those who had ideated had higher scores on Cognitive Aspects than did those who had not. Table 13 displays the standardized regression coefficients and their respective t values for all three independent variables for each of the five attitudinal dimensions.

These results indicate the presence of a sex difference in scores on Cognitive Aspects, with males having higher scores. Moreover, it was having ideated, more so even than having attempted, that was found to be related to elevated scores on this dimension. Ideation accounted for significant variance in Cognitive Aspects even when sex was held constant.

Suicide Intent. For Suicide Intent, there were main effects in the standard regression for ideation (Beta = .285, t = 6.313, p < .001), attempts without intent (Beta = .166, t = 3.892, p < .001), and attempts with intent (Beta = .102, t = 2.308, p < .05. There was no significant relationship between sex and Suicide Intent. Once again, even when sex is held constant, the follow-up hierarchical regression shows ideation to have an impact on Suicide Intent. In addition, those who have attempted have scores that differ significantly from those who have ideated, even when sex is held constant. Finally, those who have attempted with intent have scores that differ significantly, even when sex, ideation, and attempts without intent are held constant.

In short, these results reflect that having ideated, attempted without intent, or attempting with intent is associated with higher scores on Suicide Intent. In fact, those having attempted with intent had higher scores on Suicide Intent than those who had attempted without intent. Further, those having attempted without intent had higher scores on Suicide Intent than did those who had ideated. Those who had ideated in turn had higher scores on Suicide Intent than those who had not ideated. In essence, as one moves from no experience to ideation to attempts without intent to attempts with intent, statistically significant scores on Suicide Intent reflect each incremental step.

<u>Sympathy</u>. For Sympathy, there were main effects in the standard regression for sex (Beta = -.140, t = -3.315, p < .001), ideation (Beta = .218, t = 4.746, p < .001), attempts without intent (Beta = .086, t = 1.987, p < .05), and attempts with intent (Beta = .155, t = 3.455, p < .001). The results of the hierarchical regression indicate that even when the significant sex differences in Sympathy are held constant, there remains a relationship between ideation and one's Sympathy. When both sex differences and the impact of ideation is held constant, there remains a significant relationship between having attempted without intent and attitudes on Sympathy. Finally, when sex, ideation, and attempts without intent are all held constant, having attempted with intent continues to be reflected in significantly higher scores on Sympathy.

In short, women, along with those who have ideated, attempted without intent, or attempted with intent, all had higher scores on Sympathy. Once again, those who had ideated had elevated scores even in comparison to the higher scores of women. Further, those who had attempted with intent had significantly higher scores than those who had attempted without intent, who in turn had higher scores than those who had ideated. Once again, Sympathy scores rise as one moves from no suicide experience to ideation to attempts.

<u>Likelihood of Suicide (Others)</u>. The overall model for Likelihood of Suicide (Others) was once again significant for the standard regression, F (4, 485) = 7.618, p < .001. There was a main effect for attempters without intent only; sex of participant, past ideation, and having attempted without intent were unrelated to their scores on this factor. Attempters without intent had higher scores on Likelihood of Suicide (Others), Beta = .213, t = 4.690, p < .001. Even when sex, ideation, and attempts without intent are held

constant in the hierarchical regression, having attempted with intent is significantly

related to having higher scores on Likelihood of Suicide (Others), Beta = .209, t = 4.609,

p < .001.

For this attitudinal dimension, only those who had attempted suicide without

intent showed scores that significantly varied from the mean. Notably, attempters

without intent had lower scores on Likelihood (Others), viewing other people as *less*

likely to commit suicide than would participants without such experience.

Table 13

Analysis of Covariance (Hierarchical Regression) of the Five Attitudinal Dimensions X Attempts

Dep Variable	Ind Variable	Beta	t	Adj R^2	F
Cognitive	Sex	.094	2.124*		
Aspects	Ideation	.207	4.335***		
	Attempts w/out	.033	0.738		
	Attempts w/	.038	.801		
Model				.053	7.836***
Suicide	Sex	.055	1.322		
Intent	Ideation	.285	6.313***		
	Attempts w/out	.166	3.892***		
	Attempts w/	.102	2.308*		
Model				.163	23.590***
Sympathy	Sex	-.140	-3.315***		
	Ideation	.218	4.746***		
	Attempts w/out	.086	1.987*		
	Attempts w/	.155	3.455***		
Model				.130	19.338***
Likelihood	Sex	-.048	-1.078		
(Others)	Ideation	.068	1.416		
	Attempts w/out	.209	4.609***		
	Attempts w/	-.006	-0.132		
Model				.050	7.503***

* = p<.05, ** = p<.01, *** = p<.001

<u>Attempts & Attitudes – Lethality, Intent, and Number of Attempts</u>

This section comprises a comparison of different types of suicide attempts

according to their respective attitudes towards suicide. Table 14 shows large differences

between scores on Cognitive Aspects, Sympathy, and Likelihood (Closest). Note that

each score represents the z score from the regression-derived factor values for each

attitudinal variables, multiplied by ten to ease interpretability. The mean of each scale is

zero; the standard deviation of each scale is ten.

<u>Lethality of Attempts</u>. It was predicted that those attempters who had used high

lethality methods would have differing attitudes (i.e., more supportive) towards suicide

than those who used low lethality methods. In the MANOVA, Hotelling's t^2 was close to

significance, but did not indicate a statistically significant relationship, F (5, 542) =

1.980, p < .080 (observed power .667). Follow-up ANOVAs to further examine which of

the five attitudinal variables suggested that those who had attempted with more lethal

methods had higher scores on both Cognitive Aspects (F (1, 546) = 3.988, p < .046

(power .513) and Sympathy (F = (1, 546) = 5.533, p < .019 (power .651)). In effect,

although not having significantly different *overall* attitudes towards suicide from those

who attempted with lower lethality methods, those who attempted with higher lethality

methods viewed suicide as more acceptable and suicidal individuals with more sympathy.

It is also interesting to note that while those who have attempted with lower lethality

means have a *trend* towards viewing the suicide of their closest other as being *less* likely

than an average participant, those who have attempted with higher lethality means have

the opposite trend, viewing suicide of the closest other as being relatively *more* likely.

Number of Attempts. Multiple attempters without intent were found to differ in their overall attitudes, $F (5, 542) = 4.584$, $p < .001$ (observed power .974, $eta^2 = .041$). Specifically, follow-up ANOVAs indicated that they had higher scores on: Likelihood of Suicide (Others), $F (1, 546) = 18.512$, $p < .001$ (power .990); Suicide Intent, $F (1, 546) = 9.259$, $p < .01$ (power .859); Sympathy, $F (1, 546) = 5.184$, $p < .05$ (power .623); and Likelihood of Suicide (Closest), $F (1, 546) = 3.878$, $p < .05$ (power .502).

Further, multiple attempters without intent had significantly different attitudes from single attempters without intent, $F (5, 47) = 2.418$, $p < .05$ (power = .715, $eta^2 = .205$). Specifically, those who had attempted multiple times without intent had lower scores on Likelihood of Suicide (Closest), $F (1, 51) = 7.175$, $p < .01$ (power .748, $eta^2 = .123$). In essence, multiple attempters without intent rated the likelihood of suicide for the person closest to them as *more* likely (mean = 4.43) than did single attempters (mean = -.048), and more likely than other participants (mean = 0).

Multiple attempters with intent were also found to differ in their overall attitudes, $F (5, 542) = 5.630$, $p < .001$ (power .992, $eta^2 = .049$). Those who had attempted more than once with a purported intent to die had higher scores on Sympathy, $F (1, 546) = 12.275$, $p < .01$ (power .938); Suicide Intent, $F (1, 546) = 7.728$, $p < .01$ (power .793); Cognitive Aspects, $F (1, 546) = 4.291$, $p < .05$ (power .543); and lower scores on Likelihood of Suicide (Closest), $F (1, 546) = 3.715$, $p < .05$ (power .486).

Multiple attempters with intent, however, were not found to differ in *overall* attitudes from single attempters with intent, $F (5, 23) = 1.128$, $p < .37$ (power .327). Nevertheless it is interesting to note that those who attempted more than once with intent had lower scores on Likelihood of Suicide (Others), $F (1, 27) = 5.515$, $p < .05$ (power

.620, $\underline{eta}^2$ = .170) than did those who attempted with intent once. In contrast to

multiple attempters without intent, multiple attempters with intent rated the likelihood of

the person closest to them suiciding as *less* likely (mean = -5.27) than did single

attempters (mean = -1.75), and less likely than other participants (mean = 0). Another

trend worthy of note is the tendency for multiple attempters with intent to view suicide by

others (mean = -3.57) as *less* likely by approximately one standard deviation from single

attempters with intent (mean = 6.04).

Attempts with and without Intent. Finally, those who attempted suicide with

intent ("Att w/ Int") had significantly different attitudes towards suicide from those who

attempted suicide without intent ("Att w/out Int"), $\underline{F}$ (5, 64) = 2.927, $\underline{p}$ < .019 (power

.821, $\underline{eta}^2$ = .186). Note that for this analysis these categories were kept mutually

exclusive due to some participants having attempted suicide both with and without intent.

In particular, follow-up ANOVAs found higher scores for Sympathy ($\underline{F}$ (1, 68) = 5.288, $\underline{p}$

< .025 (power .621)) and lower scores for Likelihood of Suicide (Others) ($\underline{F}$ (1, 68) =

6.382, $\underline{p}$ < .014 (power .702)) for those who attempted with intent. Those who had

attempted suicide with intent viewed suicide more sympathetically but viewed the

likelihood of others committing suicide as less than did those who had attempted suicide

without an intent to die.

Table 14

Subtypes of Attempts & Attitudes

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood- Others	Likelihood- Closest
Self Experience	3.52*	5.77*	5.22*	2.66*	-0.27
Attempters w/o Int	2.09*	6.52*	4.52*	6.78*	-0.48*
Single	1.50	6.36	4.18	5.23	-3.22**
Multiple	3.14	6.81	5.11	9.55	4.43**
Attempters w/ Int	4.23*	8.88*	9.60*	1.73*	-3.33*
Single	3.07	9.94	9.67	6.04**	-1.75
Multiple	5.66	7.57	9.50	-3.57**	-5.27
Low Leth Att	0.46**	6.16	5.69**	5.02	-4.05
High Leth Att	8.87**	3.49	10.43**	5.22	4.11
Atts w/out Int only	1.53	5.16	3.44**	6.36**	-0.85
Atts w/ Int only	3.66	6.71	8.71**	-0.44**	-4.82

* - Significant difference from non-members of the overall experience category ($p < .05$)
** - Significant difference between the two sub-categories within an experience category ($p < .05$)

Ideation & Attitudes

It was predicted that those who were currently ideating about suicide would have attitudes that were more favourable about suicide than those who have only ideated in the past, who in turn would have more favourable attitudes than those with no self experience with suicide.

Again, a two-step regression analysis was performed. In the first step, standard regressions examined for differences for each of the respective five dependent variables (i.e., attitudes) across the experience categories. In the second, hierarchical regressions examined for whether there are any attitude differences for those who are currently ideating over and above those who have ideated in the past.

With the standard regression analyses, the overall models were significant for

Suicide Intent, F (2, 522) = 38.074, p < .001; Sympathy, F (2, 522) = 23.809, p < .001;

Cognitive Aspects, F (2, 522) = 20.446, p < .001; and Likelihood of Suicide (Others)

comes close, F (2, 522) = 2.615, p < .07. Likelihood of Suicide (Closest), was not found

to be significant, F (5, 222) = .015, p > .05. The combined independent variables

(ideation (past), ideation (current)) were related to scores for Cognitive Aspects, Suicide

Intent, and Sympathy.

The next question becomes: is it having seriously considered suicide in the past

that is continuing to impact on attitudes towards suicide; or, do those who are currently

ideating have attitudes towards suicide that are even more extreme than those who have

ideated in the past only? Needless to say, an answer to this question would be of great

clinical use in the identification of and intervention with suicidal individuals.

Cognitive Aspects. Main effects in the standard regression of Cognitive Aspects

were found for ideation (past) (Beta = .190, t = 4.429, p < .001) and ideation (current)

(Beta = .160, t = 3.723, p < .001). A hierarchical regression on Cognitive Aspects

indicated that the impact of ideation (current) on this attitudinal dimension remains

present after holding ideation (past) constant. There were higher scores on Cognitive

Aspects for current versus past ideators. Table 15 displays the standardized regression

coefficients and their respective F values for both independent variables for the three

attitudinal dimensions.

Suicide Intent. There was a main effect in the standard regression on Suicide

Intent for ideation (past) (Beta = .300, t = 7.210, p<.001) and ideation (current) (Beta =

.146, t = 3.513, p<.001). Once again, even when ideation (past) is held constant, the

follow-up hierarchical regression shows ideation (current) to have an impact on

Suicide Intent, whereby those who were currently ideating had higher scores on this

factor.

Sympathy. For Sympathy, there were main effects in the standard regression for

ideation (past) (Beta = .276, t = 6.477, p < .001), but not ideation (current) (Beta = .049,

t=1.154, p < .25). When ideation (past) is held constant, however, ideation (current) did

not account for a statistically significant additional amount of variance in Sympathy.

In short, those who are currently ideating have different attitudes from those who

have ideated only in the past. Specifically, current ideators have significantly higher

ratings on Cognitive Aspects and Suicide Intent.

Table 15

Analysis of Covariance (Hierarchical Regression) of the Five Attitudinal Dimensions X Ideation

Dep Variable	Ind Variable	Beta	t	Adj R^2	F
Cognitive	Ideation (Past)	.190	4.429***		
Aspects	Ideation (Curr)	.160	3.723***		
Model				.069	20.446***
Suicide	Ideation (Past)	.300	7.210***		
Intent	Ideation (Curr)	.146	3.513***		
Model				.124	38.074***
Sympathy	Ideation (Past)	.276	6.477***		
	Ideation (Curr)	.049	1.154		
Model				.080	23.809***

* = p<.05, ** = p<.01, *** = p<.001

<u>Ideation Subtypes & Attitudes</u>.

Given the significant correlations between the various types of ideation and

Suicide Intent (see Tables 10 and 16), a second series of follow-up analyses was

performed. The purpose of these analyses was to examine whether those who have

ideated with a: (a) high lethality plan, (b) high stated intent, or (c) high degree of

planning, have differed on this attitudinal dimension from those who were low in the

respective experience categories. More generally, these analyses aim to address whether

there is a relationship between their underlying Suicide Intent, and the lethality of the

suicide plan, the degree of intent, and the degree of planning of the suicidal act that has

been done.

Table 16

<u>Ideation and the Attitudinal Dimensions</u>

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Likelihood-Closest
No method Ids	4.34	4.79	5.15	-0.64	0.24
Low Leth Ids	4.08	4.97**	5.55	2.87	-0.93
High Leth Ids	2.79	6.74**	5.61	3.46	0.11
Low Intent Ids	3.20	2.72**	6.36	-0.93	-0.27
High Intent Ids	4.69	7.28**	5.17	2.59	-0.85
Low Plan Ids	2.88	5.05**	6.12	2.66	-1.23
High Plan Ids	6.57	10.02**	8.14	1.87	0.60

** - Significant difference between the two sub-categories within an experience category ($p < .05$)

<u>Lethality of Ideation</u>. While having ideated with a low lethality plan was

predictive of Suicide Intent (Beta = .096, $t = 2.264$, $p < .05$), having ideated with a high

lethality plan was related to Suicide Intent even when low lethality was held constant

(Beta = .120, t = 2.821, p < .01). This effect did not hold up, however when having

ideated was held constant (Beta = .000, t = .004, p < .997). In effect, while having a high

lethality plan may account for variance in Suicide Intent over-and-above a low lethality

plan, ratings of Suicide Intent do not appear to differ according to the lethality of the

plan, when ideation is held constant. In other words, high lethality ideators can be

separated from low lethality ideators on the basis of their Suicide Intent scores, but not

from ideators in general.

A difficulty with assessing the lethality of the plan in this manner is that it does

not distinguish between an individual who thinks for two seconds about a gun versus

someone who has spent months considering the same method. Thus, additional analyses

examining the perception of their intent to die, as well as the degree of planning, were

conducted.

Intent to Die. Having ideated with low intent was unrelated to Suicide Intent

(Beta = .062, t = 1.453, p < .147), whereas having ideated with high intent was related to

Suicide Intent (Beta = .236, t = 5.673, p < .001). Having ideated with high intent was

related to Suicide Intent even when having ideated with low intent was held constant

(Beta = .242, t = 5.813, p < .001), but once again not when having ideated was held

constant (Beta = .157, t = 1.196, p < .232). Once again, high intent ideators have

significantly higher scores on Suicide Intent than do low intent ideators, but do not differ

significantly from ideators in general.

Degree of Planning. Finally, having ideated with a low degree of planning was

predictive of Suicide Intent (Beta = .160, t = 3.793, p < .001). Further, having ideated

with a high degree of planning was related to Suicide Intent over and above low planning

(Beta = .208, t = 5.030, p < .001), and also over and above having ideated (Beta = .087, t = 1.955, p < .05). In effect, those who have engaged in a high degree of planning in their suicidal ideation have significantly higher scores than those who have engaged in a low amount of planning. Moreover, Suicide Intent scores are significantly higher for high planning ideators than for ideators in general.

Such findings indicate that Suicide Intent scores differ significantly across low versus high lethality, intent, and planning ideators. Further, these results also indicate that those who go on to formulate a more detailed suicide plan have higher scores on Suicide Intent than do those who do not.

High-Risk Behaviour & Attitudes

Although having engaged in past high-risk behaviour was unrelated to attitudes towards suicide, $F_{(5, 493)}$ = 1.023, p > .05 (power .367), having engaged in high-risk behaviour with a high intent to die was related to overall attitudes towards suicide, $F_{(5, 542)}$ = 3.701, p < .01 (power .932, eta^2 = .033). Specifically, those who had engaged in high-risk high intent behaviour had higher scores on: Likelihood of Suicide (Others), $F_{(1, 546)}$ = 11.278, p < .001 (power .918); Sympathy, $F_{(1, 546)}$ = 7.285, p < .001 (power .769); Suicide Intent, $F_{(1, 546)}$ = 4.707, p < .05 (power .582); and Cognitive Aspects, $F_{(1, 546)}$ = 3.841, p < .05 (power .499).

Table 17

High-Risk Behaviour and the Attitudinal Dimensions

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Likelihood-Closest
High-risk Behaviour	.093	0.46	0.82	0.89	0.39
Intent to die					
None	0.59	-0.27	0.56	0.18	-0.42
Low	1.12**	3.75**	1.15**	3.11**	4.18
High	7.94**	8.78**	10.90**	13.51**	6.78

** - Significant difference between the two sub-categories within an experience category ($p < .05$)

Of those who engaged in high-risk behaviour, those who rated their intent to die as low had significantly higher attitude scores than did those who rated their intent to die as none. As can be seen in Table 17, however, the actual magnitude of the difference in attitudes was minor. In contrast, those who had engaged in high-risk behaviour with a high intent to die had attitudes that were much more supportive of suicide than those with low or no intent.

CHAPTER IV

DISCUSSION

Two of the main approaches to understanding suicide are the sociological and the psychological. The former explains suicide as a consequence of social factors; the latter explains suicide as a consequence of individual factors. Both areas of research have examined methods by which to distinguish suicidal from non-suicidal individuals, the former highlighting external variables and the latter highlighting internal variables (Zhang & Jin, 1996).

The present study is an attempt to bridge these two approaches. The social factors explored in this study were composed of participants' exposure to the suicidal ideas and behaviour of others. Participants' own attitudes and experience with suicide comprised the individuals factors. By examining the dimensions underlying the suicide attitude scales, several goals were attempted. First, this study sought to provide an examination of the psychometric utility as well as the emphasis of each of the common suicide attitude scales. Second, it sought to explore underling attitudinal meanings, to allow for a structural model of attitudes towards suicide to be proposed. Third, the underlying meanings would then be used to examine the relationship between attitudes towards suicide and suicidal experience. For example, does exposure to the suicidal behaviour of others impact on one's attitudes towards suicide? If so, for what types of behaviours, and what type of impact do they have? Finally, the examination of experience with suicide

comprises an attempt to provide further data on the prevalence of various types of

suicide experience among university students.

Several main findings are notable. First, further research is required on all three

of the major suicide attitude scales to further examine issues of reliability and/or validity.

Second, five factors were found to underlie suicide attitudes: Cognitive Aspects, Suicide

Intent, Sympathy, Likelihood of Suicide (Others), and Likelihood of Suicide (Closest).

These factors provide support for a multidimensional model of attitudes towards suicide,

and more specifically provide support for a tripartite model of attitudes comprised of

cognitive, affective, and conative components. Third, having other-experience with

suicide was found to be predictive of one's attitudes towards suicide. Fourth, having self-

experience with suicide was found to be predictive of suicide attitudes, even more

strongly than having had other-experience. Fifth, new data on the prevalence of specific

types of suicidality are provided, reinforcing the conclusion that suicidal ideation and

behaviour are very common among university students. Sixth, the data support the

proposition of a new classificatory system for suicidal behaviour. Each of these findings

will be further explored below.

Suicide Attitude Scales & the Search for Meanings

The SOQ

With respect to the attitudinal scales, several findings are noteworthy. First, the

results from Rogers and DeShon's (1992) analysis of the SOQ were not replicated. They

had described the SOQ as being composed of five factors: acceptability, factual

knowledge, social disintegration, person defect, and emotional perturbation.

The nature of the four-factor solution here is in part similar to their findings in that Revenge and Weakness & Manipulation have some similarity to their Personal Defect and Emotional Perturbation factors. Why the other differences in factors found? The present study had a very similar sample (university students), and applied a similar analysis. Overall, the scale did not appear to hold together that well in the present study, however. Many items had to be dropped from further analysis due to low internal consistency. Notably, Rogers and DeShon (1992) had the same difficulty when attempting to explore the factor structure underlying this scale. It is quite possible that the results of the present study did not replicate those of these researchers because of the even greater difficulty faced with internal reliability, such that a larger number of items were dropped on this basis than were dropped by Rogers and DeShon. Consequently, that fewer items were entered into the principle components analysis may have resulted in different components (i.e., factors) being found. In short, the full SOQ is heterogeneous, with many unrelated items assessing different aspects of suicide attitudes.

This finding lends support to the argument of Domino et al. (1982) that attitudes towards suicide, as assessed by this scale, are complex. Indeed, Domino and Shen (1997) have noted that "one advantage of the SOQ is that it is not theory driven, but its items mirror the vast array of attitudes that people express towards suicide" (p. 20). It is possible that the lack of theory in initial item selection has resulted in such a diversity of items that it is difficult to find common themes that underlie these heterogeneous items.

Further, two of the small subscales that were identified and retained had somewhat questionable reliability (.6694 and .6530), and even Weakness & Manipulation hovered around the .6000 mark. Only Lack of Religiosity had reasonably good internal

reliability (.8051). Scales with lower reliability become problematic in that it

becomes more difficult to detect statistically significant differences between two groups

even when they do differ in their true attitudes (Petty & Cacioppo, 1981). Given that

some of the reliabilities of the subscales entered into the final factor analysis were fair

rather than good, this may have affected the results. Specifically, only the one scale with

good reliability, Lack of Religiosity (= .8051), was significantly correlated with the

underlying factors and thus played a part in the overall three- and five-factor solutions.

In sum, these results suggest that this scale does not have strong reliability nor

was an eight-factor solution found (Domino, 1988), echoing the findings of Rogers and

DeShon (1992). The results of the present study also provided only partial support for

the model of the SOQ advocated by Rogers and DeShon (1992), however. Clearly, the

data do not support usage of the scale as is, and further research on this scale is required

to reexamine issues of reliability and factor structure; the contention that this scale has

adequate internal reliability (Domino et al., 1989) appears premature.

The MSAS

The results of the present study provide further support for the reliability for many

of the MSAS subscales. Specifically, the internal reliabilities of the subscales used in the

present study were found to be: .9333 for Sympathy, .9446 for Agreement, .8536 for

Probability, .8373 for Beliefs, and .7829 for Feelings. Note that these values were

calculated with 11 of the 23 items on the Belief subscale and one on the Feelings subscale

reverse-coded.

It is interesting that despite the diversity of feelings assessed in the latter subscale,

all items but one were positively correlated with the subscale total. Although Stillion and

McDowell (1996) found three factors underlying the Feelings scale, this study found

that ratings of the individual items, regardless of content (e.g., annoyed, sympathetic,

concerned, anxious) were all significantly correlated with the subscale total. These

results provide evidence that the construct of feelings with respect to suicide attitudes

may be unidimensional. Further support of this argument is that the single item that

correlated negatively with the subscale total was "indifference," an item suggesting a *lack*

of feelings. In turn, this finding also provides support for the argument that the construct

of "affect" may compose a unitary component that underlies attitudes (see Cacioppo et

al., 1999; Zajonc, 1980).

The SUIATT

That a PCA of the full SUIATT produced a 26-factor solution that failed to

converge in a PCA suggests a heterogeneous attitudinal scale. In contrast to the SOQ,

however, removal of the items that did not appear to be related to an underlying

dimension of suicide attitudes resulted in a smaller version of the scale that did hold

together nicely under a PCA. The four components (i.e., factors) produced from this

PCA, Likelihood of Suicide (Closest), Likelihood of Suicide (Self), Acceptability of

Suicide, and Likelihood of Suicide (Others), all had high internal reliabilities, being

.9205, .8866, .8161, and .8401, respectively.

By comparison, Diekstra and Kerkhof (1989) reported finding six factors: (I)

Probability of suicide by respondent/person closest, (II) Right to commit suicide, (III)

Rationality of suicide, (IV) Affective meaning of suicide, (V) Probability of suicide of

people in general, and (VI) Consequences of suicide. The four-factor solution found in

the present study provides some replication of factors I, II, IV, and V in particular. In

short, further support for their conclusion that "the attitudes towards the probability of

suicide committed by of [sic] oneself or one's most beloved is [sic] relatively

independent from the attitude towards the probability of suicide committed by people in

general" (p. 21). In fact, the present results would expand this even further: the attitudes

of a person towards the probability of suicide differ depending on whether one is rating

oneself, others, or the person closest. All three were found to be relatively independent

dimensions on this scale, suggesting that it is important for future suicide attitude

research to separate these three targets. This idea will be expanded on in a future section.

Towards a Structural Model of Attitudes towards Suicide

In the search for underlying meanings several findings are significant. It is first

important to note that the present study is of an exploratory nature, however, rather than a

test of competing attitudinal models. As such, no effort was made to engage in a

prospective study that would allow for a more thorough examination of such models as

the theory of reasoned action (TRA; Ajzen & Fishbein, 1980) or the theory of planned

behaviour (TPB; Ajzen, 1985, 1991), for example.

Nevertheless, some suppositions can be proposed about a structural model of

suicide attitudes. Namely, comparisons can be made on the basis of these results and

existing models of attitude structure. To address the specific aspects of the structural

model it would appear that the three strongest dimensions underlying these scales, being

the primary attitude scales presently available in the field, relate to: Cognitive Aspects,

Suicide Intent, and Sympathy. For the three-factor solution, Cognitive Aspects, Suicide

Intent, and Sympathy fit the cognitive, conative, and affective dimensions nicely.

In addition, I have argued in favour of making use of two additional factors, Likelihood of Suicide (Others) and Likelihood of Suicide (Self). These two additional dimensions, however, do not match the tripartite model quite as cleanly. Yet, given that participants are rating their beliefs regarding the future intent/behaviour of others, both a conative and cognitive component seem to be involved with both of these factors. Thus, on the whole, the five-factor solution still provides support for the tripartite model. The five-factor model that I advocate is made up of a cognitive, conative, affective, and two additional dimensions that have both cognitive and conative aspects to them. In essence, regardless of whether one applies the three-factor or five-factor solutions, the underlying constructs can be tied to cognitive, conative, and affective dimensions.

What meanings can be derived from the factors found? The primary factor underlying suicide attitudes was found to be Cognitive Aspects (i.e., cognitive component), accounting for 20.3% of the variance in responses. Specifically, this construct is related to the beliefs that individuals have about suicide, as well as their acceptability of suicide. The second factor is Suicide Intent (i.e., conative component), accounting for 8.4% of the variance. This construct strongly relates to the rated likelihood that the person him- or herself intends to commit suicide in the future. The third factor, Sympathy (affective component; 6.0% of variance), reflects the degree to which the person sympathizes with the suicidal persons and their decision to take their own lives. The fourth factor, Likelihood of Suicide (Others) (3.7%), indicates the likelihood that the person senses that other people would commit suicide across a variety of life circumstances. Finally, the fifth factor, Likelihood of Suicide (Closest) (3.3%),

reflects the likelihood that the person senses that the person closest to them will

commit suicide.

It has been argued that two main perspectives in approaches to attitude research

exist (Jackson et al., 1996). These researchers have contrasted the tripartite perspective,

involving a multidimensional approach to attitudes (e.g., Rosenberg & Hovland, 1960), to

the perspective involving a unidimensional approach in its assumption that attitudes are

largely derived from beliefs (i.e., cognitions) (e.g., Ajzen & Fishbein, 1980; Fishbein,

1967). In the latter perspective, as seen in the TRA and TPB, such models are argued to

be unidimensional in that attitudes are derived from beliefs about the characteristics of

the attitude object. Moreover, even subjective norms and perceived behavioural control

are based on beliefs, and thus are cognitive in nature. Regardless, it is important to note

that in these two models subjective norms and perceived behavioural control are *not*

included as being attitudinal components, and are instead considered separate (external)

constructs used to help explain the attitude-behaviour link.

The results of the present study support a multidimensional approach to suicide

attitudes. Moreover, these results suggest that the three dimensions of the tripartite

model are consistent with the meanings found to underlie suicide attitudes. Although

beliefs were found to be an important underlying dimension, this was not the only

dimension. This finding is consistent with the conclusion of Jackson et al. (1996) that

"attitudes, particularly group attitudes, cannot be understood by cognitions alone" (p.

313). Specifically, further support for the tripartite model is provided by these results,

and thus is consistent with other recent attitude research in this support (Jackson et al.,

1996; Simons & Carey, 1998).

Although at first glance there appears to be some similarity between the Likelihood (Closest) and the subjective norm component to the TRA, these are two very different concepts. Likelihood (Closest) is a measure of how likely the participant feels that the person closest to him or her would be to commit suicide across a number of circumstances. In contrast, subjective norms would be a person's beliefs about the degree to which he or she believes that individuals close to him or her would want him or her to perform a given behaviour. For example, this contrast is the difference between John rating how likely he feels that Jenn (the person closest to him) would suicide if she suddenly became disabled (i.e., Likelihood (Closest)), and John rating how likely he believes that Jenn would want John to commit suicide should he suddenly become disabled (i.e., subjective norm).

Moreover, in addition to the cognitive and conative components found in both solutions, there is clearly a strong affective component, supportive of the argument that affect plays an important role in attitude measurement (e.g., Ajzen, 1989; Zajonc, 1980) and not of the TRA or the TPB. It appears that Sympathy, in particular, is an important construct that should not be ignored in suicide attitude research. In fact, as will be explored below, this attitudinal dimension was the most strongly related attitude to many experience categories, particularly many types of self experience. There is evidence that the degree of sympathy felt towards another suicidal individual may even be an effective means to discriminate various levels of suicidality among people.

Other findings in the structural model of attitudes proposed by this study go beyond the tripartite model. For example, support was also found for the importance of including likelihood and not simply intent when assessing attitudes (Sheppard et al.,

1988). The inclusion of likelihood, as reflected most clearly in the Suicide Intent,

Likelihood (Others) and Likelihood (Closest), has been argued by these researchers to

greatly improve the attitude-behaviour link. Please note in this document that whereas

"Suicide Intent" refers to the attitudinal dimension tapping participants' estimated

likelihood to commit suicide in the future, "intent" refers to the degree to which the

participant wanted to end their life.

In addition, further support was found for the argument that people readily

distinguish between suicide attitudes towards themselves, people close to them, and

people in general (Diekstra & Kerkhof, 1989). In effect, these three targets were

reflected in Suicide Intent, Likelihood (Closest), and Likelihood (Others). It may thus be

important for future suicide attitude research to separate these three aspects; because one

believes that suicide is not a bad thing for society does not necessarily mean that one

believes it is a good option for oneself. This finding supports the common sense notion

that different beliefs and rules may apply according to whom they are aimed at. One

might thus believe that capital punishment is a positive thing, but not believe that it

should be applied to oneself or one's loved ones. Similarly, someone may believe that

smoking should be disallowed in public places, but that it is okay for him or her to

smoke, but not for his or her teenager to smoke.

In sum, although the role of the cognitive component of attitudes accounts for the

highest share of the variance in participants' attitudes towards suicide, these findings

suggest that peoples' attitudes towards suicide are not solely based on cognitions. Thus,

these results are not in line with what would be expected by the TRA or TPB, which

define attitudes as being based on beliefs (i.e., cognitions). Instead, the underlying

attitudinal dimensions involve: (1) cognition, as defined by beliefs and acceptability; (2) affect, as defined by sympathy and to a lesser extent feelings in general; and (3) conation, as defined by likelihood and intent to act (i.e., commit suicide) in given circumstances.

This finding suggests that a structural model that includes cognitive, affective, and conative dimensions, such as the tripartite model, furthers our understanding of suicide attitudes. On a general level, both the three- and five-factor solutions lend support to a structural model of suicide attitudes that includes cognitive, affective, and conative dimensions when assessing attitudes. This finding advocates that future attitude research in suicide attitudes should ensure that whatever approach is applied to scale construction, some items included should tap each of these attitudinal aspects.

Why is a structural model of attitudes towards suicide helpful? The five-factor model proposed in this study can be useful in many ways. First, it may help to provide a way to understand the meanings that underlie suicide attitudes. In effect, it can help us address the question of what we are talking about when we refer to attitudes towards suicide. While studies have focussed on attitudes towards suicide, very few have clearly defined what attitudes are, let alone incorporated attitude theory.

Second, a structural model may help to explain the potential links between different types of other-experience and self experience. Such a model allows for the examination of whether there is a mediating effect of attitudes between being exposed to the suicidal behaviour of others and one's own suicidal behaviour.

Third, a model has both theoretical and practical use in being able to help distinguish between various types of experience with suicide. Theoretically, it would be

helpful to better understand why only some people seriously consider suicide, and why fewer still go on to make attempts on their own lives. Further, what is it that is different about those who are more suicidal? While many studies have examined demographic risk factors, very few have questioned why certain risk factors are risk factors. This idea will be further explored below.

Practically, this information would be useful for those in the mental health field on two different levels. First, having a conceptual model of suicide attitudes might help clinicians to be better able to distinguish between different states of suicidality, so as to make more informed assessments and decisions regarding the treatment of suicidal individuals. Second, greater knowledge of the various impacts of different types of other-experience with suicide may have tremendous implications for both prevention and postvention efforts. For example, as will be explored in a future section, this study suggests that rather than focussing the lion's share of effort into postvention efforts following a suicide completion, more attention should be directed towards suicidal attempts. It is being exposed to the ideation and attempts of others, far more than completions, that seems to have a tremendous impact on both one's own attitudes and behaviour. Further implications of the five-factor model are expanded on below.

Attitudes and Suicide Experience

Other-Experience & Attitudes

Overall, as was hypothesized, having exposure to the suicidal behaviour of others is reflected in attitudes towards suicide. Such experience leaves people with more sympathy for the plight of suicidal individuals. In addition, being exposed to the suicidal behaviour of others is associated with people believing that suicide is a more likely action

for people in general. Even if the person is not rated as close, this effect held up.

This overall finding that other-experience impacts on suicide attitudes is consistent with prior research (e.g., Diekstra & Kerkhof, 1993; Gutierrez et al., 1996; King et al., 1996; Limbacher & Domino, 1986; Wallace & Kral, 1994; cf. Overholser et al., 1989). It is noteworthy that ratings of Sympathy and Likelihood (Others) remain impacted equally regardless of the degree of closeness on the part of the other-experience. In sum, being exposed to the general suicidal experience of others impacts on one's experience, irrespective of the closeness of the relationship.

Having Known a Completer. Unexpectedly, having known a completer was not associated with attitudes towards suicide, even for those who had a close relationship with the person who committed suicide. Although some research has suggested that the impact on suicide attitudes from having known a completer is minimal (Overholser et al., 1989; see also Agnew, 1998; Limbacher & Domino, 1996), other research indicated that having known a close completer is related to higher acceptability ratings (Wallace & Kral, 1994). The results of the current study are consistent with those of Overholser et al. (1989), and suggest that being exposed to a suicide completion has only a small impact on attitudes towards suicide.

The notable exception is that having known a close completer is associated with seeing other people as being more likely to commit suicide across a number of situations. It is not surprising that having known a completer leaves one with the sense that people are slightly more likely to commit suicide.

Interestingly, having known a completer rated as distant was associated with lower scores on Likelihood of Suicide (Closest). In effect, one of the views that people

may take after having known someone who is not close commit suicide is a defensive one: "that would *never* happen to someone that *I* care about." It will be very important to further research this finding, as after people find out about a suicide there may be a tendency for some to see suicide as less likely for someone close to them, and thus perhaps not take suicidal warnings or discussion as seriously.

Why is the relationship between having known a completer and attitudes not stronger? It is possible that some of those who have known a completer may have attitudes that are very supportive of suicide while others are not very supportive towards suicide. Such disparate attitudes may have balanced each other out, and thus concealed a relationship that is present for *some* of those who have known a completer.

The examination of the measures of variability, however, do not support this argument, with one possible exception. For Likelihood of Suicide (Other) there was a high number of extreme cases on *both* ends of the continuum for those who had known a completer. This finding suggests that having known a completer may make one more likely to view suicide as being either much more, or much less, likely than the norm. This finding did not hold for having known a close completer, however.

Alternatively, it is possible that given the effect that having known even a distant completer can have, those who were more affected by the suicide of a close person self-selected not to take part in this study. Indeed, when a prior study had students fill out the survey in their own class, and thus did not use a sign-up process, a relationship was found between having known a completer and acceptability (Wallace & Kral, 1994).

Having Known an Attempter. Having known an attempter was found to be related to attitudes towards suicide. Specifically, those who had known an attempter had

higher ratings of Sympathy, and for those who had a close relationship with the attempter, higher ratings of Likelihood (Other) as well. Individuals who had been exposed to the suicide attempts of others had more sympathetic attitudes towards suicidal individuals, and viewed suicide as more likely for other people across a number of life circumstances. Given the strong relationship between this affective dimension and self-experience with suicide, such experience may place individuals at greater risk to engage in their own suicidal behaviour. This idea will be further explored in a later section.

Having Known an Ideator. As was hypothesized, those who had known an ideator had different attitudes towards suicide than those who had not. In fact, the data indicate a greater attitudinal impact for having known an ideator than an attempter. Those who had known an ideator were more sympathetic towards suicide people. In addition, individuals who had known an ideator, regardless of closeness, were more likely to have higher ratings of Suicide Intent.

This is an important finding: Those who have had an ideator speak with them about suicide are more likely to report an intent to take their own lives. It is also very important to note that the relationship between these two variables was identical whether the ideator was rated as close or as distant. Thus, it may be helpful for the clinician in an evaluation of suicidality to ask not just about having known a completer, but also about acquaintance with an attempter or ideator. The latter experience, in particular, may be associated with having a greater intent to take one's own life.

Prior research had indicated that having known an attempter was related to having not only higher affective and conative ratings, as found in the current study, but also cognitive ratings (Wallace & Kral, 1994). In particular, this study reported that people

who have known ideators view suicide as more acceptable (a cognitive attitude) than

do those who have not. The fact that Cognitive Aspects was not found to be elevated in

the present study for those who have known ideators may reflect a much more thorough

assessment of this construct. Rather than use a single item to assess acceptability, the use

of a multiple questionnaire and multiple item assessment in the current study allowed for

a stronger, though broader, evaluation of the cognitive component of attitudes to be

performed. While it remains possible that acceptability itself is affected by being

exposed to suicidal ideation, these results indicate that one's overall beliefs are not

impacted.

In sum, an overall relationship was found between having had other-experience

with suicide on attitudes towards suicide. The impact was in some respects less than

expected, however. For example, having had other-experience was not related to the

Cognitive Aspects dimension, suggesting that people's beliefs and acceptability of

suicide were not affected by the suicidal ideation or behaviour of those around them. In

contrast, feelings, as assessed by Sympathy, are related to having known an ideator or

attempter, but once again not a completer. It is not uncommon in a clinical assessment of

suicide risk that a client be asked about his or her exposure to suicide completions in the

past. These results suggest that asking about their exposure to both attempts and ideation

may prove useful, as both are related to having higher scores on the affective dimension

of suicide attitudes. Those who have known an ideator, in particular, are more prone to

view suicide as a likely option for them in the future.

<u>Self Experience & Attitudes</u>

The following section will first address the hypotheses and some of the general findings, followed by more focussed discussions of some of the specific findings.

<u>Severity of Suicidal Behaviour - General Findings</u>. It was hypothesized that having self experience with suicide would be reflected in attitudes more supportive of suicide. Indeed, having self experience with suicide was related to having higher scores on Cognitive Aspects, Suicide Intent, Sympathy, and Likelihood (Others). In effect, those with self experience had beliefs that were more favourable towards (and accepting of) suicide, professed to having greater intent to commit suicide in the future, were more sympathetic towards suicide and suicidal individuals, and viewed suicide as a more likely outcome for people across a number of life circumstances, respectively.

Two variables in particular, Suicide Intent and Sympathy, have a strong relationship with any type of suicidal behaviour. Individuals who have been through any type of self experience with suicide, whether ideation or attempts, tend to report having greater intent to end their own lives as well as more sympathy towards someone who completes suicide than those without self experience. These two constructs appear to be the benchmark attitudes for any type of self experience.

Two other attitudinal dimensions appear to be useful in separating the more serious suicidal individuals from the less serious. First, higher scores on Cognitive Aspects were found among those who had engaged in more serious suicidal behaviour. Such individuals viewed suicide as a more acceptable solution, and had beliefs that were more supportive of suicide. For example, higher scores were found in those who: (a) had attempted with intent but not those who attempted without intent, (b) had attempted with

ideation, but not those who attempted having never ideated, and (c) had attempted with high lethality means, but not those who attempted with low lethality means. It may thus be especially important for clinicians to assess the various beliefs and degree of acceptability that clients have towards suicide, as this appears to be a dimension that is able to distinguish more from less serious suicidal behaviour.

Second, Likelihood of Suicide (Others) scores were found to be higher for those who engaged in less serious suicidal behaviour. In other words, the attitude that suicide is a more likely outcome for other people was found to be related to having engaged in less serious suicidal behaviour. For example, a relationship was found whereby higher scores were related to those who: (a) had attempted without intent, but not with intent, (b) had multiply attempted without intent but not with intent, and (c) had used low lethality means but not high lethality means.

In sum, individuals with different types of personal experience with suicide have different attitudes towards suicide from those with no such experience. Specifically, having greater suicide intent and more sympathy towards suicide and suicidal individuals may be useful in picking out those individuals with any type of personal suicidal behaviour. Further, having higher acceptability and beliefs more supportive of suicide (i.e., Cognitive Aspects) is predictive of higher severity suicidal behaviour. In contrast, viewing suicide as more likely for people in general is predictive of lower severity suicidal behaviour.

Ideation & Attempts. Two of the difficult clinical decisions to make are how likely it is that a client is denying suicidal ideation in an interview, and how likely it is that a suicidal client sitting in one's office will make a suicide attempt shortly thereafter.

It was predicted that those who have ideated would have different attitudes towards suicide from those who had not. Indeed, those who had ideated had higher scores on Cognitive Aspects, Suicide Intent, and Sympathy than did non-ideators. In other words, such ideators had greater acceptability of suicide, reported being more likely to commit suicide in the future, and had more sympathetic feelings towards suicide. Individuals who have ideated show attitudinal differences relating to all three of the tripartite components: cognitive, conative, and affective.

It had been expected that those who had attempted would have more supportive attitudes towards suicide than those who had only ideated. Indeed, those who had gone on to attempt suicide, without intent to take their lives, had much higher ratings on Suicide Intent, Sympathy, and Likelihood (Other). In particular, the scores on Likelihood (Other) for attempters without intent (mean = 6.78) were much higher than those of ideators (mean = 0.65). In other words, attempters, even more than ideators, report having beliefs that are more supportive towards suicide. Suicide is viewed by attempters as being a more likely occurrence for themselves, with more sympathy, and as a more likely outcome for other people as well.

Further, it was found that the attitudes of those who had attempted with intent differed from those who had attempted without intent, as was hypothesized. Those who had attempted with intent had significantly higher scores on Suicide Intent and Sympathy, and thus reported having an even higher intent to commit suicide, as well as more sympathy towards suicide and suicidal individuals.

Several conclusions are notable from these results. First, ideators, attempters without intent, and attempters with intent can all be separated by their attitudes towards

suicide. This finding, coupled with the fact that their actual *intent* differed (as assessed both by the Suicide Intent scale as well as their own stated intent), suggests that these three groups should not be viewed as a single group and thus combined for research.

Second, evidence was found of a pattern of increasingly supportive attitudes towards suicide as one progressed along the continuum from non-ideator to ideator to attempter without intent to attempter with intent. In particular, scores on Suicide Intent, and to a lesser degree Sympathy, increase as one moves along this continuum of seriousness. Participants' ratings of their intent to take their own lives were significantly higher for those who had ideated than those who had not. Those who had gone on to make attempts without intent, further, had even higher ratings on Suicide Intent. Finally, those who had gone on to make attempts with intent have higher ratings still. Notably, Sympathy scores in those who had attempted without intent were slightly lower than for those who had ideated. While elevations on Sympathy suggest the presence of some type of ideation, high elevations on this dimension may point to a more serious form of suicidal behaviour.

This finding provides evidence that attitudes themselves may be helpful in distinguishing those who are ideating from those who are not, as well as those who have gone on to attempt suicide, including the seriousness of the attempt. The possibility is also present that it is attitudes that predispose individuals to such behaviour, and perhaps higher scores on Suicide Intent and Sympathy in someone who has never attempted may reflect this person being at greater risk to make a more serious suicide attempt. Of course, however, this is only speculation, as no statements of causation can be made on

the basis of these data, as it is also possible that having engaged in the behaviour

changed the attitude.

Third, general descriptors can be given for all three experience categories, so as to

provide clinicians, and future research, with potential clues in distinguishing these

individuals. Table 18 lists a summary of the attitudes across the three experience groups.

Categories were broken down as follows: low (-5.1 and below), below (-2.6 to –5.0),

average (-2.5 to 2.5), above (2.6 to 5.0), high (5.1 to 7.5), very high (7.6 to 10), and

extremely high (10.1 and above)..

Table 18

Ideation, Attempts, & Attitudes

Likelihood-	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood- Others	Closest
Ideators (No atts)	above	above**	above**	average	average
Attempters w/o Int	average	high**	above**	high	average
Attempters w/ Int	above	very high**	very high**	average	below

** - Significant difference between these sub-categories (p < .05)

Types, Severity, & Number of Attempts. The pager beeping in the middle of the

night for an on-call clinician from a nurse with a suicidal person evokes anxiety in many

mental health professionals. The clinician's pulse typically further quickens if a history

of having made a suicide attempt is uncovered. The determination of the likelihood that

the individual will make a suicide attempt, and the seriousness of the attempt, is at the

heart of the decision making process on how the situation should be handled. Thus,

information on attitudinal differences between single attempters (i.e., those who had

attempted only once) and multiple attempters (i.e., those who had made an attempt on more than one occasion) may be of clinical use.

In the present study's comparison of single versus multiple attempters, several significant findings were revealed. First, different patterns in attitudes were noted according to whether one was comparing single to multiple attempters for attempts without intent, or to whether one was comparing them for attempts with intent.

Single attempters without intent had significantly lower scores on Likelihood (Closest), whereas multiple attempters without intent had significantly higher scores on Likelihood (Closest). In effect, single attempters without intent view the person closest to them as being *less* likely to commit suicide than average ratings for the sample. In contrast, multiple attempters view the person closest to them as being *more* likely to commit suicide.

This is an interesting contrast, in that both groups view both themselves and people in general as being more likely to commit suicide, but only multiple attempters have the same opinion for those close to them. There is no clear explanation for this finding. One can speculate, however, that those who have made a single attempt may look back on their attempt with negative feelings (e.g., bothered that they upset someone close to them through their own suicidality), and psychologically defend themselves by viewing the suicide of the person closest to them as less likely (e.g., "he or she would *never* do that to me..."). One might further speculate, in contrast, that multiple attempters may project their own sense of being more likely to commit suicide onto their loved one.

In contrast to the attitudinal differences of attempters without intent, those of attempters with intent reflect a different trend. Multiple attempters with intent had significantly lower scores on Likelihood (Others), whereas single attempters with intent had significantly higher scores on this dimension. Although both had very high ratings on their own future suicide intent as well as sympathy, multiple attempters with intent seem to view suicide as less likely for people in general, and have a trend towards viewing suicide as less likely for those close to them as well.

Although the intent was reported to be high by attempters with intent, it is noteworthy that the lethality of the method was low for the vast majority of this experience category. For example, one participant reported having made several attempts with intent, and reported that for each she absolutely wanted to die; but, she did not leave a note, engaged in minimal if any planning, had people in the vicinity, and used a low lethality method. It is possible that this apparent contradiction is the result of an underlying belief that even when people really want to kill themselves, they are in fact unlikely to do so. Thus, the fact that multiple attempters with intent have attempted a number of times and are still alive may explain why they view suicide as being less likely for others. Those who have made a single attempt with intent, in contrast, may have the opposite sense that they, and thus others, could feasibly commit suicide given certain circumstances.

Another possible explanation is that multiple attempters, particularly those with intent, feel more isolated and depressed, carrying with them a sense that they are both more defective and ineffectual than other people. In a song about hopelessness, the Police's "Message in a Bottle, Sting (1979) eloquently depicts the depressed person

feeling so isolated that he's "just a castaway... island lost at sea." Note the double

meanings of the words "castaway" and "island." But along with the sense of isolation so

strong that it is as if one were alone on an island is the belief that "... loneliness, any man

could bear. Rescue me before I fall into despair" (see also Jamison, 1999). Multiple

attempters may feel weak, believing that other people could handle the emotional pain

that they are struggling so desperately to manage. Thus, others would be less likely to

engage in the suicidal attempts that they themselves have. Perhaps each suicide attempt

becomes their sending "an SOS to the world" until someone gets their "message in a

bottle." The hope is to be rescued—not from the physical damage inflicted from the

attempt, but from their tremendous psychological pain. Not a clear, assertive request; an

act of desperation, as fragile as something made of glass, with the fear that their cry is as

likely to be heard as someone finding their bottle floating in a vast ocean.

Unexpectedly, the hypothesis that attitudinal differences would be found between

those who had attempted with high versus low lethality means found only weak support.

There were no statistically significant *overall* attitudinal differences found across the

lethality of the suicide attempt. It is surprising that having attempted suicide with a

higher lethality means was not more strongly reflected in attitudes towards suicide,

although the sample size of high lethality attempters was small ($n = 5$), and included both

attempters with and without intent.

Nevertheless, a significant difference was found in the scores on Likelihood

(Closest). Those who had attempted with high lethality had significantly higher scores

than those who attempted with low lethality. Whereas those who attempted with high

lethality perceived suicide as much *more* likely for the closest person to them, those who attempted with low lethality perceived it as much *less* likely.

Interestingly, while this is the same trend found for single versus multiple attempters without intent, it is the opposite of single versus multiple attempters with intent. In order to better predict a future attempt, it appears to be important to determine the intent of the past attempt(s), and not just the lethality of the method. Thus, for clinicians attempting to decide whether a given client may go on to make an attempt, queries regarding their attitudes towards the suicide of others, as well as people close to them, appear to be more diagnostic than the person's own rated intent.

Specifically, the attitude that suicide is a more likely outcome for the person closest to them (i.e., high score on Likelihood (Closest)) was predictive of those who had attempted: (a) without intent multiple times, and (b) with high lethality means. Low scores were predictive of those who had attempted: (a) with intent multiple times, and (b) with low lethality means. For the clinician, a low score on this dimension should not alleviate concern over the client's suicidality. This is especially true for clients who have attempted with intent before, as low scores are associated with making multiple attempts, albeit they were more likely to be low lethality ones.

There was also a noticeable trend in attitudinal difference between those who attempted with higher versus lower lethality means on their beliefs and acceptability of suicide (i.e., Cognitive Aspects). Those who had made higher lethality attempts were found to have higher scores on this scale. Thus, for example, such individuals would be more likely to believe that people have the right to commit suicide, and to view suicide as an acceptable solution to the problems of life.

The finding that there were no significant attitudinal differences in Suicide Intent across the lethality of attempt was surprising. A statistical comparison of the means alone, however, paints an inadequate picture. The standard error for low lethality attempters was less than half that of high lethality attempters. In other words, there was far more variability in the responses of high lethality attempters than low lethality attempters. Whereas the 95% confidence interval of Suicide Intent scores for low lethality attempters was 2.27 to 10.37, for high lethality attempters it was -7.82 to 18.97. In effect, there were some high lethality attempters who had very low scores on Suicide Intent and others who had extremely high scores. This is further evidence that intent and lethality are not synonymous, and appear to be separate dimensions of suicidality.

Research has been divided on the issue of the relationship between intent and the lethality of the method used. Some researchers have reported that suicide intent is highly correlated with the choice of method (e.g., Lester & Beck, 1980; Peck, 1984; see also Peck & Warner, 1995). One thorough clinical examination, however, found no relationship between intent and the lethality of the method (Plutchik, van Praag, Picard, Conte, & Korn, 1989). The results of the present study support the latter argument, indicating that intent and lethality may tap different dimensions of suicidality.

Table 19

<u>Attempts & Attitudes</u>

Likelihood-	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Closest
Attempters w/o Int					
Single	average	high	above	high	below**
Multiple	above	high	high	very high	above**
Attempters w/ Int					
Single	above	very high	very high	high**	average
Multiple	high	very high	very high	below**	low
Low Leth Att	average**	high	high	high	below
High Leth Att	very high**	above	extremely high	high	above

** - Significant difference between these two experience categories ($p < .05$)

<u>Types & Severity of Ideation</u>. Only partial support was found for the hypothesis that the lethality of the ideator's method would be significantly related to Suicide Intent, similar to the finding with attempters. Those who had ideated with a high lethality plan had significantly higher intent to commit suicide than did those who ideated with a low lethality plan. Interestingly, however, high lethality ideators did *not* have significantly higher intent to commit suicide than did those who ideated *without* a method.

Yet, a difficulty with assessing the lethality of the plan in this fashion is that it does not distinguish between someone who ideates on using hanging as a method for a minute and someone who has a gun in the bedroom drawer and had thought about it constantly for a period of months. Thus, ideators were also examined according to other factors reflecting the severity of ideation: the extent to which they really wanted to die ("intent"), and the degree of planning that they engaged in regarding the suicidal act.

Both the ideator's rated intent to die and the degree of planning were

significantly related to Suicide Intent. Those who had higher ratings of their intent to die

during their episode of suicidal ideation had significantly higher ratings on Suicide Intent,

as did those who reported having engaged in greater planning of the suicidal act. In

effect, having greater intent to commit suicide (i.e., Suicide Intent) was reflected in

having a greater desire to die and of having engaged in more detailed planning of their

suicide.

Moreover, those who had engaged in a high degree of planning, as well as those

who reported having a greater intent to die, both had higher ratings of acceptability of

suicide. Speculatively, the degree to which the individual believes suicide to be an

acceptable solution may distinguish those ideators who go on to have greater intent to

die, and those who go on to engage in more detailed planning of their suicide, from those

who do not.

Sympathy appears to be high across all categories of ideation, regardless of

whether past or present, or the degree of lethality, intent, or planning. Having seriously

considered suicide, regardless of the intensity of that ideation, is predictive of high

sympathy scores. Thus while having greater sympathy for suicide and individuals in a

suicidal dilemma is related to having ideated, there were no differences according to the

severity of the ideation.

In addition, those who have considered a plan view suicide as a more likely

outcome for people (i.e., higher ratings of Likelihood (Others)) than do those who have

not, regardless of the lethality of the selected method. Those ideators who have gone on

to consider a method in their ideation view other people are being more likely to commit

suicide across a variety of life circumstances. Interestingly, those who have ideated but never considered a method view suicide as no more likely for other people than non-ideators.

In the almost universally asked question of ideators as to whether or not they have considered a plan, a typical fear of the clinician is that clients will deny a plan. This attitudinal dimension appears to be able to help determine whether or not an ideator has gone on to consider a plan: Those who have planned their suicide, despite not viewing suicide as any more acceptable than do those who have not, tend to view suicide as more likely for other people. A caveat is that although this variable may be able to help distinguish those who have considered a plan, it appears unrelated to the lethality of the plan.

Several other conclusions are also notable. First, Suicide Intent appears to be the single best attitudinal variable with which to predict the severity of suicidal ideation. Those currently ideating have higher scores than those who have only ideated in the past. In addition, high planning, high intent, and high lethality ideators have higher ratings than do low planning, low intent, and low lethality ideators. Where clinically appropriate, a question such as "how likely is it that you will end up taking your life?" may provide some insight not only on their actual intent, but also on their lethality (for clients who deny having considered a plan) and the degree of planning they have engaged in.

Second, ratings of Cognitive Aspects increase as one goes from low intent to high intent and low planning to high planning ideation. Thus, a thorough clinical examination of the client's cognitive attitudes towards suicide could also be valuable. For example, questions regarding their sense of the acceptability of suicide in general, and how

supportive their beliefs are of suicide (e.g., agreeing with the belief that people should

have the freedom to be allowed to choose suicide as an option) may provide a more

indirect measure of the severity of the client's ideation.

Once again, to provide clinicians additional information, and inform future

research, the present research suggests some clues in distinguishing these individuals.

Table 20 lists a summary of the attitudes across the three experience groups. Again,

categories were broken down as follows: low (-5.1 and below), below (-2.6 to –5.0),

average (-2.5 to 2.5), above (2.6 to 5.0), high (5.1 to 7.5), very high (7.6 to 10), and

extremely high (10.1 and above).

Table 20

Ideation & Attitudes

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Likelihood-Closest
No method Ids	above	above	high	average**	average
Low Leth Ids	above	above**	high	above**	average
High Leth Ids	above	high**	high	above**	average
Low Intent Ids	average**	above**	high	average	average
High Intent Ids	above**	very high**	high	above ·	average
Low Plan Ids	above**	above**	high	above	average
High Plan Ids	high**	extremely high**	very high	average	average

** - Significant difference between these two sub-categories within an experience category (p < .05)

Other-Experience and Self Experience

Contagion theory (Philips, 1974) suggests that a suicide can lead to others

committing suicide. Although this theory has been primarily applied in the study of the

influence of suicides reported in the media (e.g., Martin, 1996; Martin & Koo, 1997), this

study aimed at examining the effect of having personally known the person, and

expanded the theory to include suicidal behaviour and not just completed suicide.

Overall, there was a strong relationship between having been exposed to the suicidal

ideation or behaviour of others and one's own suicidal ideation and behaviour, as was

hypothesized. Approximately 93% of the 163 participants with self experience reported

having had other-experience with suicide.

It was also hypothesized that the relationship between other-experience and self

experience would be even stronger when the other-experience was with someone close to

the individual. This hypothesis was also confirmed: almost two-third of those with self

experience had close other-experience. Those with close other-experience were

significantly more likely to have attempted suicide without intent, to have attempted

multiple times without intent, and to have attempted with lower lethality methods. It is

interesting that the relationship between close other-experience appears to be with low

intent and lethality suicidal behaviour.

The question arises as to whether there is a stronger contagion effect with less

severe types of suicidal behaviour than for more severe types. Alternatively, those who

have engaged in less severe suicidal behaviour may have come in contact with other less

severe suicidal behaviour, such as in support groups.

It was predicted that having known an attempter, regardless of closeness, would

be related to having ideated and attempted oneself. Such a finding would have many

implications. For example, suicide postvention efforts have focussed on suicide

completions (e.g., Hazell & Lewin, 1993; Leenaars & Wenckstern, 1996), and little

attention has been given to the potential impact of suicidal ideation and/or behaviour on

others who know the person. In effect, should such a relationship be found, postvention efforts may be required to deal with the aftermath of parasuicidal behaviour and attempts.

Indeed, a strong relationship was found between having known an attempter, regardless of closeness, and having attempted oneself. Almost 80% of those who had attempted had known an attempter. Similarly, having known an ideator was related to various types of suicidal ideation.

In addition, the effect of having known a close attempter or ideator compounds these effects. Those who had known a close ideator or attempter were more likely to have ideated themselves, and with high intent. Moreover, those who had known a close ideator were themselves more likely to have attempted suicide, both with and without intent.

Clearly, there is a close relationship between having known an ideator or attempter and one's own ideation and attempts. It is tempting to speculate about the impact that having known an ideator or attempter may have on one's own behaviour. Given the impact of being exposed to other's suicidal ideation and behaviour on one's attitudes towards suicide, it is possible that such individuals are predisposed to themselves experiencing ideation or engaging in suicidal behaviour. Specifically, those who had known an ideator or attempter had elevated scores on Sympathy. Remember that it is this attitude in particular that is associated with every subcategory of self experience. Thus, it is possible that this affective dimension might be a predisposing factor for ideating or attempting. In addition, those who had known an ideator,

regardless of the closeness of this relationship, rated themselves as having greater intent to take their own lives.

A caveat, applying to all similar analyses, is that no time-frame on the attempts or ideation was examined. For example, it is possible that someone attempted who had never been exposed to the suicidal ideation or behaviour of others, went to a support group, and met other attempters there. Further research is required to examine the time-frame of the behaviour, for both other- and self experience, so as to allow for a more thorough analysis of the impact of other-experience on self experience with suicide.

It had been predicted that having known a completer would be associated with ideation but not attempts. Although more than half of those who had ideated had also known a completer, no significant relationship was found. As predicted, no relationship was found between having known a completer and having attempted suicide oneself. Much as having known a completer had no appreciable impact on attitudes, it not surprisingly then that little relationship with behaviour was found either. In fact, contrary to what was hypothesized, even when the person who committed suicide was rated as close, there were no significant relationships with any type of suicidal ideation. One exception was found with behaviour, whereby those who had attempted suicide multiple times without intent were found to be more likely to have known a close completer.

An interesting exception to the general finding that knowing a completer has little effect on suicide attitudes or behaviour was found. Having known a distant completer was found to be associated both with attempts without intent as well as low lethality attempts. Once again it is possible that, given the effect of having known even a distant

completer can have, those who were more affected by the suicide of a close person self-selected not to take part in this study.

Prior research has reported not finding any relationship between having known a completer and one's attitudes towards suicide (Agnew, 1998; Limbacher & Domino, 1986; Overholser et al., 1989; Wallace & Kral, 1994) or one's own suicidal ideation or behaviour (Wallace & Kral, 1994). The latter study did report, however, that those who had known a close completer rated suicide as more acceptable, and themselves were more likely to have had suicidal ideation, and to have attempted without an intent to die. Examining these two sets of findings together, there may be a *small* relationship between having attempted without intent, particularly if more than once, and having known a close completer.

On the whole, however, these findings suggest that the concept of contagion theory (Phillips, 1974) as applied to suicide completion does not appear to apply well, particularly in this population. In other words, knowing a completer may have less impact than has generally been feared, and postvention efforts might consider switching at least some of the emphasis from intervening after a completion to intervening after an attempt as well. Further, suicide prevention programs in schools and universities should also note the impact of having known an ideator. It will be important as well for such efforts to consider Higgins and Range's (1999) warning that "college students think others are more vulnerable to suicidal contagion than they themselves....[whereby such students view] themselves as immune to suicidal contagion" (p. 445).

In sum, it may be that being exposed to suicidal ideation and attempts in others, rather than completions, has by far the greatest impact on suicidal attitudes, ideation, and

behaviour. In effect, it appears that the influence of being exposed to the suicidal behaviour of others does not end at one's attitudes, but is also reflected in one's own suicidal behaviour. Further analysis to establish the time-frame of the behaviour is necessary to confirm this conclusion. Nevertheless, I believe that there is at least enough suggestion in these data that until such a time that it can be disproved, we operate under the possibility that, at least for some individuals, being exposed to the suicidal ideation or behaviour of others has a strongly negative impact. And such an impact does not always not end in one's attitudes, but can also be reflected in suicidal ideation and behaviour as well.

Prevalence of Suicidal Behaviour in a University Setting

Having experience with suicide, whether one's own experience or being exposed to the suicidal behaviour of others, was relatively common among the undergraduates in this sample. The following section will first outline the new approach of this study, followed by information on the prevalence of general suicidal experience, and finally the prevalence of more specific types of suicide experience will be explored.

Although several studies have examined the prevalence of suicidal behaviour among university students, they are few in number, have tended to ask only a few questions, are answered in a yes or no fashion, and either overlooked suicide attempts (e.g., Zhang & Jin, 1996) or grouped attempters with ideators (e.g., Langhinrichsen-Rohling, Lewinsohn, Rohde, Seeley, Monson, Meyer, & Langford, 1998; Langhinrichsen-Rohling, Sanders, Crane, & Monson, 1998; Osman et al., 1993). Consequently, only very general information about suicidal behaviour was uncovered.

This study comprises an effort to examine more than gross categories of suicide experience, and thus provide much more in-depth information about the prevalence of different types of experience with suicide. While it has been suggested that data on both suicidal behaviour and completions can be grouped together, showing suicide to be a much larger (i.e., more common) problem for women then men (Kushner, 1985), this study provides an evaluation of part of this hypothesis. Should the different experience groups have similar or identical attitudes and aims, then support would exist for the grouping of a single broad category of suicidal behaviour. By allowing for a comparison between different suicide experience types, the potential for different subtypes of experience to exist was acknowledged. Further, this approach to the examination of suicidal ideation and behaviour offers the possibility for learning about the specific relationship between various hypothesized aspects of the suicide experience, such as intent and lethality, for example.

Suicide is an issue that has touched most undergraduates in one manner or another. Over 80% of the university students in this sample had been exposed to at least one incident of suicidal ideation or behaviour in others. Over half had known a completer, and of these 18.6% (comprising 10% of the overall sample) rated the person as being close to them. Fifty-six percent had known an attempter, and of these students 84.8% regarded the person as close. In effect, 35% of the sample had known at least one person close to them whom has attempted suicide. Finally, 41.4% had known someone who had spoken with them about suicidal ideation; once again, just over 35% of the entire sample had had someone rated as close who ideated about suicide.

It is disappointing, though not surprising, to affirm how prevalent suicidal behaviour is among undergraduates. Almost 10% had attempted suicide without an intent to die, and an additional 5% had attempted with an intent to die. Over one-fifth of this sample acknowledged that they have "seriously" considered suicide at least once in their lives, and almost 1% were seriously considering suicide at the time of filling out the questionnaire. In all, 27.1% of participants acknowledged having one or more types of self experience with suicide.

Such numbers are similar to those found in other studies of university students (e.g., King et al., 1996; Mishara, 1982; Wallace & Kral, 1994). A notable exception is that the number of participants who reported having ideated in the past was lower in this study than had been predicted on the basis of prior research. The method of the recruitment, as will be discussed in a later section, may have accounted for this difference.

As stated above, a central aim of the present study was the attempt to gather more data about the specific types of self experience with suicide. Rather than simply categorizing suicide experience into those who had ideated and those who have attempted, additional aspects were evaluated. For example, the nature of the intent, the degree that intent was aimed at death, the degree of planning, the number of attempts, and the lethality of the plan were all assessed.

Eighty individuals (13.3% of sample) reported having made at least one past suicide attempt, the vast majority (92.7%) being low lethality attempts. Fifty-seven (9.5% of sample) people had made attempts without an intent to take their lives, and almost 37 percent of these attempters without intent had made multiple attempts.

Similarly, of the 30 attempters with intent (5.0% of sample), over 43% had made

multiple attempts with intent.

An examination of the 130 ideators (21.6% of sample) found that most had not

selected a method when in their period of suicidal ideation. Of those who did (30% of

ideators), half had ideated on a low lethality method, and half on a high lethality method.

With respect to the degree of intent to die felt during the ideation, 42.2% had a high

degree of intent. Only 17.7% of all ideators, however, had engaged in a high degree of

planning around the suicidal act.

Of the 225 individuals (37.4% of sample) who reported having engaged in high-

risk behaviour at least once in their lives, over 80% rated their intent to die as having

been minimal. Only 13.3% (5.0% of sample) of those who engaged in high-risk

behaviour had a moderate degree of intent to die, and 3.1% (1.2% of sample) had a high

degree of intent. Thus, most of the high-risk behaviour that undergraduates had engaged

in involved what can be better termed as risky behaviour, with little or no intent to die

involved. The flip-side is that over six percent of the sample acknowledged having

engaged in behaviour with a medium to high level of intent to die.

Given that many participants who have engaged in high-risk behaviour

acknowledge a certain degree of intent to die, further support for the link between this

behaviour and suicide is supported. Perhaps not surprisingly, far more men than women

have engaged in high-risk behaviour ($r = .205$, $p < .01$). Although high intent high-risk

behaviour is more equivocal than an active effort to take one's life via the far more

researched suicide attempt, many participants clearly acknowledged that their intent to

live during the event was low, and their corresponding intent to *die* was high. In short,

the present study underscores the prevalence of high-risk behaviour that is aimed at death. In fact, there were significantly more individuals who engaged in high-risk behaviour with medium to high intent to die combined with a high lethality method than there were high intent and high lethality suicide attempts.

Several significant themes can be drawn from these findings. First, attempting suicide is not a rare phenomenon among university students. As already noted, such data are consistent with other studies of suicidal behaviour in a university population (Johns & Holden, 1997; King et al., 1996; Mishara, 1982). For example, Mishara (1982) found a similar incidence of suicide attempts (13.6%), and concluded his examination of suicide experience among university students by noting that "college students have extensive contact with suicidality and are often faced with a situation where they have the opportunity to respond to verbalizations of suicidal feelings by peers" (p. 148). Such results comprise a call for proactive approaches taken by many universities to approach this problem head-on, from prevention, intervention, and postvention angles.

Second, the vast majority of attempts made by university students are, fortunately, low lethality attempts. Even among those who attempted suicide with intent, the preponderance were still with low lethality means. In addition, almost half of those who have attempted suicide, whether with or without intent, have made multiple attempts. This underscores the importance of paying more attention to the problem of suicide attempts and parasuicidal behaviour. Especially given findings that multiple attempters tend to have more psychological problems, presenting as more depressed, hopeless, and anxious (e.g., Rudd, Joiner, & Rajab, 1996), the estimated five percent of undergraduates

who have made multiple attempts may require greater efforts on the part of the residences and university to intervene.

Third, neither attempters nor ideators represent homogeneous categories of suicide experience. With respect to attempts, some report that their intent was fully to commit suicide, while even more report that they had no such intent. Some of the attempts were carefully planned out, done in isolation, accompanied by a suicide note, and involved a lethal means; others were completely unplanned, involved low lethality means, and were performed with others in the vicinity. And different combinations of the above variables were also found.

Ideators also differed in their attitudes according to the severity of their ideation. Significant differences were found across the subcategories of lethality of method ideated upon, degree of intent towards death, and the amount of planning conducted on the suicidal act. The results of this study, in fact, suggest that there are significant differences across some of the various suicide experience groups. Thus, grouping somewhat disparate suicide experience categories with respect to their attitudes, intent, and behaviour is inaccurate, and may result in erroneous or skewed research findings.

Thus, the findings of some other studies may be called into question, because of such over-inclusive grouping of suicide experience categories. For example, some have grouped suicidal behaviours with suicide attempts (e.g., King et al., 1996), and some have even grouped ideation with suicidal attempts (e.g., Langhinrichsen-Rohling, Lewinsohn, Rohde, Seeley, Monson, Meyer, & Langford, 1998; Langhinrichsen-Rohling, Sanders, Crane, & Monson, 1998; Osman et al., 1993). Clearly, there is no agreed upon

system (see Lewinsohn et al., 1995), and a system is needed that can incorporate the minimal correlation between intent and the lethality of method.

A New Classificatory Model of Suicidal Behaviour

Suicide attempts have been classified in a number of ways, with no universally agreed upon system. At one time, suicides were classified solely on the basis of the result. Those instances in which the person took his or her own life were termed completed suicides, whereas those in which the person survived were termed attempts. A more current view, popularized in Europe, distinguishes suicide attempts on the basis of the lethality of the method. Suicide attempts are those in which there was potential for ending one's life, while parasuicidal acts do not include this potential (see Shneidman, 1985).

Typically, explanations for parasuicidal and suicidal behaviour have made use of this distinction according to the lethality of the method. As an example, it has been argued that more men than women complete suicide, despite the much higher ratio of female to male attempts, because of the sex difference in choice of means coupled with the public's ignorance about what comprises a lethal attempt (e.g., Canetto, 1992).

Several findings in the present study suggest that this over-simplified conclusion is inaccurate. First, sex differences in attitudes towards suicide were found. In particular, men were found to have higher scores on Cognitive Aspects, whereby men have beliefs more strongly supportive of suicide, appearing to view it as more acceptable. Second, men were found to be more likely not only to select higher lethality means, but also to engage in greater planning surrounding the suicidal act. Third, and most importantly, fewer men engage in suicidal behaviour that is not intended to end their own life. Rather

than it being a matter of availability, or concern over what their physical appearance

might be following a completion that scares women more than men away from suicide

(e.g., Canetto, 1992), this study provides evidence that more women than men engage at

self-harming behaviour that is in no way intended to end their own life. In short,

variables other than the lethality of the method appear to be involved in the sex difference

in suicide attempt and completion rates.

Notably, such findings provide further evidence that a new classification system

for suicidal behaviour is needed. The high percentage of suicide attempts that are with

lower lethality means ("parasuicides") do not comprise a homogeneous group--in fact,

anything but. The majority of what has been termed parasuicidal behaviour on the basis

of the lethality of method needs to be re-examined, in that the intent is *not* to die for most

"parasuicidal" individuals, a fact freely acknowledged by many in this study. In fact, a

large number of participants who acknowledged having made "suicide attempts without

an intent to die" reported that they have never in fact even seriously *considered* taking

their own life.

Although intent and lethality certainly are overlapping dimensions, as stated just

above there are large differences in intent across those who have engaged in suicidal

behaviour. Indeed, the present study did *not* find a significant correlation between the

lethality of the plan and the degree of intent.

The Model

In short, I propose that the commonly used terms of parasuicidal behaviour and

suicide attempt only describe the lethality aspect of the act, and ignore the importance of

intent. I further propose that both factors are important in the examination of suicidal

behaviour, and thus should be reflected in the terminology and classification system used. Although the importance of intent has been suggested as being significant in how we classify and understand suicidal behaviour (e.g., Canetto, 1992), there have been no attempts to incorporate both into a classification system.

For the model, the prefix "sub" will be used in order to indicate low intent. Thus, for example, a sub-parasuicidal behaviour would indicate low intent and low lethality, while a parasuicidal behaviour would indicate high intent and low lethality. For example, there were some participants who used low lethality means, but in their own minds intended to take their own lives. This suicide experience group differed significantly in attitudes and experience from those who engaged in low lethality behaviour with low intent. Further, a sub-suicide attempt would indicate a low intent but high lethality act, which describes a small set of participants in the present study; while a suicidal attempt would be reserved for those who engage in a high lethality act with high intent.

Table 21

Proposed Classification System for Suicidal Behaviour

		LETHALITY (of method)	
		Low	High
INTENT (to die)	Low		"Sub"
	High		
		"Parasuicidal Behaviour"	Suicide Attempt

This system seems to better account for the heterogeneous groups of individuals who engage in suicidal behaviour. For example, there were some in the present study who reported that they left no suicide note, had people in the vicinity of the attempt, and did not plan the act at all, but who felt very oriented to ending their life, and had "attempted" in this manner several times. In fact, clinical experience tells me that some such individuals can cause serious harm to themselves at such times. Indeed, attempters with intent to die differed in their attitudes from those who attempted without intent. Given that such individuals are not uncommonly seen in clinical settings, research which may be able to separate these types of acts from other suicidal acts may be useful.

An Example – High-Risk Behaviour

This system would help to explain those who engaged in high-risk behaviour as well. Shneidman, Farberow, and Litman (1965) refer to the category of "submeditated death" in order to describe the individual who engages in potentially high lethality behaviour, such as driving as fast as possible through the city streets for a period of time. The findings in the present study suggest that, in general, having engaged in high-risk behaviour (HRB) was not reflected in attitudes towards suicide. Specifically, those with no intent would not be categorized in this classification system. However, for the subgroups that reported having low or high intent to die, such individuals may fit in the sub-suicide attempt and suicide attempt categories, on the basis of their high lethality and mid to high intent.

The idea that such behaviour is "submeditated" or "subintentional" (see Shneidman, 1980) is not supported by these data. Namely, these individuals *acknowledged* that they had varying degrees of intent to die in their actions. Further, the

ratings on Suicide Intent (i.e., a measure of the degree to which one expects to commit suicide in one's life) reflect this increasing amount of intent going from no reported intent to low to high. Clearly, *intent* plays an important role in the motivation of high-risk HRB. (See Table 22)

Moreover, the attitudes of those who engaged in HRB with low intent and high lethality are very similar to those who have attempted suicide without intent. Likewise, the attitudes towards suicide of those who have engaged in high intent HRB are very similar to those who have attempted suicide with intent and those who have attempted with high lethality, and in fact look to be a combination of these two categories. Such data thus provide some support for high intent HRB being instead categorized as suicide attempts.

Table 22

High-Risk Behaviour and Attitudinal Dimensions

	Cognitive Aspects	Suicide Intent	Sympathy	Likelihood-Others	Likelihood-Closest
High-Risk Behaviour					
Intent to die					
None	average	average	average	average	average
Low	average	above	average	above	above
High	very high	very high	extremely high	extremely high	high
Low Leth Att	average	high	high	high	below
High Leth Att	very high	above	extremely high	high	above
Attempters w/o Int	average	high	above	high	average
Attempters w/ Int	above	very high	very high	average	below

Perturbation, Intent, & Lethality

Shneidman (1985) has argued that "suicide is caused by psychache" (i.e., unbearable psychological pain) (p. 145). Whereas perturbation refers more generally to the degree of upset and turmoil that the person experiences, psychache refers to this pain when it is no longer bearable. But, Shneidman also added that "it is elevated lethality which is dangerous to life" (Shneidman, 1985, p. 205).

I have previously argued that "perturbation is more closely associated with intent than it is with lethality," whereby "high perturbation may or may not lead to high intent, as suicide may or may not be an option for a particular individual (Wallace, 1994, pp. 79-80). Similarly, Kral and Sakinofsky (1994) have noted "perturbation and related risk factors merely render people more vulnerable to accepting the idea of suicide into their current concept of self—more vulnerable to lethality" (p. 319; see also Kral, 1994). In effect, I further posited that cognitive aspects of suicide attitudes, such as acceptability and beliefs about suicide, were what determined whether a given individual viewed suicide as being a viable option. Thus, this aspect would also determine whether someone would go on to have intent, given elevated perturbation. Yet, the data in the current study suggest that this supposition is only partially accurate.

The examination of meanings that underlie suicide attitudes suggests that intent is its own dimension, as distinct from cognitive aspects such as acceptability and from affective qualities such as sympathy. Where I had proposed that the cognitive aspect of suicide attitudes was related to perturbation, I now propose that the cognitive dimension, along with Suicide Intent, instead taps lethality.

First, perturbation, involving the degree of psychological pain, would logically seem to more closely fit the affective dimension of attitudes. In particular, one would then expect that this factor would be elevated for any type of suicidal behaviour. One might also expect that as the level of perturbation rose, so might the severity of the suicidal behaviour. The more pain someone is in, the more desperate he or she may be to do something about it.

Indeed, this was exactly what was found in the present study—regardless of the type of self experience, elevations on Sympathy were present. Moreover, as also would be expected, the ratings on this affective dimension rose as one moved up the suicidality scale from without intent to with intent. It is important to point out that I am not proposing that Sympathy *is* perturbation. I am instead proposing that this attitudinal dimensions appears to tap this quality, given the particulars of its relationship to various types of suicide experience.

It appears that suicide attitudes may tap some of the important dimensions in suicidality: perturbation, intent, and lethality. Sympathy may be related to perturbation; Cognitive Aspects to lethality, and Suicide Intent to intent. Applying a broader definition of lethality as including both ideational (selection of suicide as an option) and conative aspects (intent to act) (see Shneidman, 1985, 1993), Cognitive Aspects and Suicide Intent appear to tap these two aspects of this prerequisite for suicide, respectively. Henceforth, *lethality* will be defined in this manner, as distinguished from *lethality of method* (i.e., lethality of attempts).

As can be seen in Table 19, scores on Cognitive Aspects are higher for those who made high lethality attempts than they are for those who made low lethality attempts.

This finding would be consistent with the idea that only those who accept suicide as

an option would use higher lethality means; for those who accept suicidal behaviour as an

option no such requirement for a high lethality method would be present, and not

surprisingly individuals would choose a low lethality approach.

Moreover, note that Cognitive Aspects is correlated: (a) with having attempted

with intent, but not without intent; and (b) with having attempted and ideated, but not

having attempted without ever having ideated. Thus, this variable appears to have utility

in separating those who have accepted suicide as an option. It is interesting to note that

those who had made high lethality attempts, although having elevated scores on

Cognitive Aspects, did *not* have elevated Suicide Intent scores. Perhaps this is why these

individuals survived.

Further, if it is a prerequisite to view suicide as an option (i.e., ideational quality)

prior to intending to act on it (i.e., intent), then those who have ideated with high intent

and with high planning should not only have elevated scores on Suicide Intent, but also

on Cognitive Aspects. This, in fact, was exactly what was found.

Finally, I would expand Shneidman's (1993) statement that "suicide is caused by

psychache" (p. 51) to suicidal behaviour is caused by psychache. The psychache that

drives people to do something about that pain may result in different types of suicidal

behaviour. It appears to be differences in two other variables, Cognitive Aspects (tapping

ideational quality of the lethality, as well as lethality of method) and Suicide Intent

(tapping intent quality of lethality), that may reflect the lethality dimension.

In sum, there appear to be clear differences in intent and lethality, and clear

attitudinal differences across the different combinations of intent and lethality of method.

This model may help to merge the differing arguments that suicidal behaviour should be examined (and thus classified) on the basis of intent (e.g., Canetto, 1992) versus lethality of method (e.g., Shneidman, 1985), in the hope of more accurately categorizing suicidal behaviour. As an example, an attempt was made to classify HRB into the model. Similarities in suicide attitudes were drawn between HRB and suicide attempts, suggesting that those who engage in HRB share many of the same features of those who attempt, and this is also reflected in similar underlying attitudes towards suicide.

The results of the present study would suggest that it is important to examine both the Cognitive Aspects of one's attitudes, along with Suicide Intent, in order to assess one's lethality. Suicide Intent appears to capture the actual intent to do something to escape the unbearable pain (i.e., psychache), which notably may include suicidal behaviour in place of suicide. Elevated scores on Cognitive Aspects may reflect someone who views suicide as an option and who is ideating on suicide with a higher lethality means.

In effect, it appears that elevated scores on Sympathy only point towards someone in pain, and who may have or be considering suicide as an option, but not seriously. Thus, for example, ideators with low intent had elevated scores on Sympathy only. In contrast, those with elevated scores on Sympathy and Suicide Intent point towards someone in pain who intends to do something about it, and thus may be at risk for parasuicidal and sub-parasuicidal behaviour. For example, both low lethality ideators and attempters fit this pattern, as did attempters without intent (i.e., those who have engaged in parasuicidal behaviour or attempts but denied that their actual intent was to

die) and attempters without ideation (i.e., those who have engaged in parasuicidal behaviour, but denied ever having seriously considered taking their life).

Elevated scores on Sympathy and Cognitive Aspects point towards someone in pain who is actively considering suicide as an option, but has not decided to act on this ideation. Finally, elevated scores on Sympathy, Cognitive Aspects, and Suicide Intent may point towards people in a great deal of pain (even higher scores on Sympathy), who are actively considering suicide as an option, possibly with higher lethality means, and are intending to act and thus are a more serious suicide risk. Both high intent and high planning ideators fit into this category, as did ideators who had never made attempts. Possibly, such attempts would be much more likely to be fatal.

Yet, much more research into the various aspects of suicidal behaviour is needed. This model is suggested only for heuristic purposes; clearly, intent and lethality are dimensional rather than dichotomous variables (Douglas, 1967). Moreover, without question other variables might be equally important in suicide assessment (e.g., planning, etc.). Finally, these categories point towards *trends*, and should not be considered anything close to a definitive diagnostic algorithm. Perhaps due to the inter-correlations between the attitudinal dimensions, not all of the categories fit neatly into this model. For instance, high lethality ideators had significant elevations in Sympathy and Suicide Intent only, and only a trend towards an elevation on Cognitive Aspects. In sum, this model, and the attitudinal components used to separate types of self experience, may point to directions to follow in a clinical interview, help us better predict the nature and severity of suicidal ideation and behaviour, and inform our understanding of the various aspects of parasuicidal and suicidal behaviour. Yet, further research is required.

An Attitudinal Model of Suicide Risk

The emphasis in the suicidology literature to date has been on discovering the risk

factors that are predictive of suicide, almost as if these risk factors themselves cause

suicide. But an important question remains unanswered: Why are these risk factors risk

factors? In short, I am proposing an *attitudinal model of suicide risk* (see also Wallace &

Kral, 1994). This theory proposes that people have differing attitudes towards suicidal

individuals according to that suicidal individual's risk factors. More specifically, it is

possible that people have more negative attitudes (i.e., less sympathy, less empathy, view

suicide as more acceptable) towards higher risk individuals (e.g., a young Native

alcoholic male, as opposed to an elderly white non-alcoholic female). Perhaps these

features are risk factors in part because people have more negative attitudes in general

towards those individuals who meet these criteria, and as a result are less likely to help

them.

Further, this theory also suggests that not only the attitudes of society towards

high-risk groups places them at greater risk for suicide, but also the attitudes *of* high-risk

groups that increases their risk. For example, this theory proposes that males may in part

be at greater risk for suicide than females because they may view suicide as a more

acceptable option (e.g., Deluty, 1989). In sum, the attitudinal model of suicide risk

proposes that both the attitudes *of* high-risk groups as well as the attitudes *towards* high-

risk groups in part accounts for their being at greater risk to take their own lives.

In addition, I propose that an aspect of this attitudinal model of suicide risk can be

applied not only to specific groups in a population that have higher rates of suicide, but

also to nations as well. In particular, it is postulated that the attitudes *of* members of a high-risk nation towards suicide may place them at greater risk to suicide than the attitudes towards suicide of a low-risk nation. Indeed, there is some evidence that nations that have higher suicide rates have higher levels of cultural acceptability towards suicide (e.g., Stack, 1996b). In effect, Stack has found that persons in nations that have higher suicide rates have more favourable attitudes towards suicide as an option than do persons in nations with lower suicide rates.

A plethora of social factors have been proposed to influence suicide. The Random House College Dictionary (1988) defines social as pertaining to "human society" as well as "the life, welfare, and relations of human beings in a community" (p. 1247). To this definition I would add that social forces are those factors that exist across, and therefore are in part external to, individuals.

With respect to suicide, for example, Durkheim (1897) argued that suicide rates are inversely related to social integration, whereby low rates of social integration are related to high rates of suicide. The link between suicide rates and unemployment rates (e.g., Goldney, Winefield, Tiggemann, & Winefield, 1995), economic factors (e.g., Stack, 1996b; Yang, 1995), divorce rates, homicide (e.g., Leenaars & Lester, 1996; Lester, 1995), crime (e.g., McKenna, Kelleher, & Corcoran, 1997), war (e.g., Biro & Selakovic-Bursic, 1996) and many other variables have been examined, many reporting relationships. The media has also been shown to have an influence on suicide (e.g., Martin, 1996).

Further evidence for the social nature of suicide comes from suicide clusters and contagion theory, which involves a suicide influencing others to suicide (see Phillips,

1974); mass suicides (see Coleman, 1987; Maris, 1997); and military suicides, such

as the kamikaze pilots of World War II (see Maris, 1997).

Yet, although these social factors seem to be related to suicide, not all nations that

are suffering from high unemployment have higher suicide rates (see Goldney et al.,

1995; Yang, 1995), just as most individuals who are depressed do not commit suicide.

Correlations between various social variables and suicide rates are just that: correlations.

Similarly, demographic risk factors for suicide are just that: risk factors. The fact that

these factors do not cause suicide suggests that other variables are involved. Not all

individuals who meet the top five, or even ten, demographic risk factors commit suicide.

Two theories will be discussed below: *direct* theory and *mediation* theory. Either theory

would in part help to explain the possible relationship between suicide attitudes and

suicide experience that were examined in this study.

The first approach, which I will term *direct theory,* proposes that it is only

through the impact of social factors on attitudes that suicide rates are affected by social

factors known to be related to suicide (e.g., unemployment). In short, this supposition

states that the various social factors that are purported to lead to individual suicides do so

only to the extent that they influence an individual's attitudes towards suicide.

For example, Maris (1997) describes the Yuit Eskimos:

The Yuit are a hunting and gathering society. If the husband asks his

family three times to allow him to suicide, his wife and children are

obligated either to shoot or hang him (i.e., an assisted suicide). Such

altruistic suicide often occurs when the husband is ill or injured and has

become a liability to the welfare or even survival of the tribe or family.

...suicide is not stigmatized under such circumstances (p. 48).

In this scenario, it is clear that the cultural values are impacting on the decision process of the individual. This theory suggests that only to the extent that this man has internalized the cultural values and mores around him is he at greater risk for suicide. With the Yuit, the cultural value may be that in the case of A, B, and C, the value of a man's life is little, being outweighed by the needs of the tribe or family. Yet, for the particular man who has experienced A, B, and C and who has to some extent internalized this cultural value, his attitude towards suicide will reflect this degree of internalization. All else held equal, the more that he buys into this cultural value, the more favourable his attitude towards suicide is likely to be.

This model can be diagramed as follows:

SOCIAL ------------> ATTITUDES ------------> SUICIDE
FACTORS

Note that this model does not suggest that social factors are the only variables that influence attitudes towards suicide; indeed, there are likely to be many other influences. Rather, this model proposes that the influence of social factors on suicide is directly through their impact on attitudes. Note also in this case that attitudes refer to more than attitudes towards suicide, as attitudes towards a number of variables may be significant. For example, if unemployment is the social variable, then one's attitude towards joblessness, the short-term outlook of the economy, the long-term outlook of the

economy, etc., are all important. And yet, these other attitudes are important in the

case of suicide to the extent that they impact on the attitude towards suicide.

In short, this theory proposes that a favourable attitude towards suicide (in

comparison to other options) must be present for the person to take their own life. Thus,

a young, gay, drug using, male Native will be at greater risk to suicide than an elderly,

white female only to the extent that the former views suicide as a more favourable option

than does the latter.

The second approach, which I will term *mediation theory*, suggests that attitudes

may be an important factor that mediates the impact of various social factors on suicide.

In other words, this second model suggests that social factors *are themselves* related to

individual suicides; yet, this relationship is argued to be influenced by attitudinal

variables. Thus, the degree to which individual social factors (e.g., contagion) are related

to suicide depends in part on attitudinal variables. This proposed relationship could be

diagramed as follows:

```
SOCIAL   ------------> SUICIDE
FACTORS    /\
            |
            |
            |

         ATTITUDES
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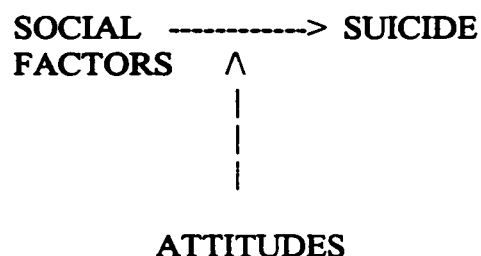
This approach is in part an extension of direct theory. The primary difference is

that mediation theory acknowledges the potential of social factors impacting on suicide

themselves, over and above the influence of attitudes. In other words, attitudes mediate

this relationship, but the potential is acknowledged for social factors to impact on suicide

in ways that are not solely through their impact on attitudes. Thus, not every aspect

of the effect of social factors on suicide would be reflected in attitudes.

This mediation between various social factors and suicide, moreover, may take

place on both the level of society *and* the level of the individual. For societies, some

groups may be at greater risk for suicide (e.g., gays in North America). A given society

may be at greater risk for suicide due to its having more favourable attitudes towards

suicide, for example, such that when various social precipitants of suicide hit (e.g.,

unemployment), the suicide rates may respond accordingly. It has been argued, to

continue our example, that unemployment rates are not always tied to having higher

suicide rates on macro level (e.g., Goldney et al., 1995; Leenaars, Yang, & Lester, 1993;

Yang, 1995). Perhaps in some nations the social factors that impact on suicide do so in

more force given a greater underpinning of societal acceptance towards suicide.

Similarly, the attitudinal model of suicide risk proposes that for individuals as

well attitudes may moderate the degree to which social factors influence suicide. For

example, *social contagion theory* proposes that a single suicide can influence others to

commit suicide (i.e., the "Werther effect") (e.g., see Coleman, 1987; Phillips, 1974). Yet,

most individuals exposed to a suicide do not go on to even seriously consider, let alone

commit, suicide. Perhaps one of the variables that can predict the extent that such social

factors influence suicides is attitudes. For instance, it is possible that those who are

exposed to a suicide tend to have more acceptable attitudes towards suicide. Moreover,

the present study expanded this theory to also include suicidal ideation and behaviour.

Indeed, the results here suggest that those who have had someone close to them attempt

suicide have higher acceptability ratings towards suicide than do those who have not known an attempter.

Moreover, acceptability is but one example of one of the proposed components (i.e., cognitive) of attitudes. Through the application of a more formalized model of attitudes towards suicide, such as that found in the present study, future research can continue to examine this topic empirically. Thus, an examination of the meanings that underlie suicide attitudes allows for the possibility that various social factors may demonstrate their influence on many levels, and not necessarily at the cognitive level alone. It is possible, for example, that certain social factors (e.g., high unemployment) may have a greater emotional impact than a cognitive impact.

In sum, I propose that attitudinal research has the potential to help better explain the nature of risk factors of suicide, both for individuals *and* for groups. This line of research is one example of how a social psychological approach can help to bridge the gap between social and psychological approaches to understanding suicide

Summary

There is no doubt that attitudes are complex. Given this complexity, the process of searching for structure and meaning underlying attitudes, and then attempting to measure them, is a difficult task. I need only look at my own attitudes towards washing the dishes. There are times when doing the dishes is a little enjoyable, say after a cold hour spent outside shovelling snow. There are other times when it more bothersome, such as when doing them is making me late for an appointment. And there are times when doing the dishes is annoying; when I'm missing the "big game," for example. Clearly, my attitude towards this task varies according to the context, and likely other

factors as well, such as my mood. This common sense finding that there is more than one dimension underlying suicide attitudes is thus not surprising. It also highlights the importance of examining one's attitudes towards something, rather than one's attitude towards something.

Gerard Saucier (2000) began a recent article by noting that "social attitude measurement has been limited by inadequate structural models" (p. 366). One of the goals of this study was to propose a structural model of attitudes towards suicide, and in doing so provide an examination of the meanings that underlie the major suicide attitude scales in the field of suicidology.

Support for a tripartite model of attitudes towards suicide, comprised of cognitive, affective, and conative aspects, was found. The structural model was comprised of five factors, Cognitive Aspects, Suicide Intent, Sympathy, Likelihood (Others), and Likelihood (Closest). Supporting a multidimensional model of attitudes, these dimensions indicate that suicide attitudes have cognitive, affective, and conative aspects. In short, thoughts and beliefs, feelings, and intent are all components of suicide attitudes.

It is not surprising that both cognitive (i.e., Cognitive Aspects) and affective (i.e., Sympathy) dimensions to suicide attitudes were found. Support for the argument that affective reactions are a strong part of attitudes, and are distinct from cognitive processes (e.g., Zajonc, 1980), is provided in this study. It is common sense that reactions that some have while watching graphic depictions of surgery on television, for example, or my students' reaction when I tell them of my father's preference for peanut butter and mayonnaise sandwiches, are at least partly emotional. Nevertheless, although this result

is consistent with Ajzen's (1988) description of a tripartite model of attitudes, it would

not have been predicted by the earlier theories of reasoned action and planned behaviour.

But if the structural model proposed had little utility in being related to actual

suicide experience, then it would only be of theoretical use. By identifying correlates of

five factors of suicide attitudes, strategies for prevention could be used both by clinicians

working with individuals and public health officials working with populations (Agnew,

1998). The five-factor model was found to have a significant overall relationship with

experience with suicide. As predicted, those who have been exposed to general suicidal

behaviour of others (i.e., other-experience) had, *regardless of the closeness* to the suicidal

person, more supportive attitudes towards suicide. Specifically, those with other-

experience rated both themselves and others as being more likely to commit suicide in the

future, and were more sympathetic towards suicidal individuals.

An even stronger relationship was found for those who had self-experience with

suicide. Those with self-experience were more accepting of suicide, had higher intent to

commit suicide, felt more sympathy for suicidal persons, and viewed suicide as a more

likely option for people.

One of the most significant findings of this study is that attitudes towards suicide

reflect the severity of the self experience. As one moves from no experience to low

severity ideation (low planning, low intent, no method) to medium severity ideation (low

planning; high intent; method, but low lethality) to high severity ideation (high planning

and/or intent to die, high lethality method), increasingly supportive attitudes towards

suicide were found. Further, as one moves further from ideation to attempts without an

intent to die to attempts with intent, the attitude scores continue to reflect this

progression. Such information may help to further our understanding of suicide experience, how the progression may take place to more severe forms of ideation/attempts. It is hoped that such information may help to better identify ahead of time which individuals may be at more risk to attempt suicide, and which with a highly lethal method.

Finally, the impact of having known an ideator or attempter was reflected not only in attitudes towards suicide, but also in suicidal ideation and behaviour itself. This study sought to expand Phillips's contagion theory (1974), which proposed that a suicide can influence others to commit suicide, to also apply to suicidal ideation and attempts. Indeed, some form of contagion may exist: Those who have known ideators or attempters are more likely to have ideated and attempted themselves, for example. In fact, having known an attempter, regardless of closeness, was related to having ideated and attempted oneself.

At the heart of suicide postvention efforts is immediate intervention following a suicide completion (Leenaars & Wenckstern, 1996). Yet, these data suggest that the impact of knowing someone who completed suicide, even when the person is close, may be far less in terms of attitudes and behaviour than from being exposed to suicidal attempts or ideation of others. Such findings have important implications for suicide postvention programs, which should include suicide ideation and attempts into their content, and not solely completions.

In sum, in one form or another suicide has touched most undergraduates. If "suicide derives its meaning from socio-cultural values and attitudes," as Boldt (1988, p. 94) has argued, then attitudes may provide one entry point into better understanding what

place suicide has in the cultural matrix in which students exist. It has been argued that the two sources of information for understanding the relationship between culture and suicide come from the sanctions of the cultural community and the internalized cultural values (Boldt, 1988). This study has provided a structural model of attitudes that may be used to examine not only the sanctions of the communities (i.e., attitudes of a given group towards suicide), but also the degree to which those cultural values have been internalized (i.e., attitudes of a given person towards suicide). In this manner, future attitude research, through examining both the attitudes of society towards suicide as well as the attitudes of individuals towards suicide, has the potential to help better understand the connection between suicide and culture.

It has also been argued that the subcultural values and norms regarding suicide are a significant influence on an individuals decision to choose suicide (Boldt, 1983). Specifically, Kral and Dyck (1995) have argued that the lethality for a given individual is molded by the attitudes of a given culture regarding dealing with extreme emotional pain ("psychache"). If lethality, again defined as one's orientation and intent towards suicide (Shneidman, 1993), can be pared down to one's acceptance of the choice of suicide as an option (Kral, 1994), then attitudes may help to understand this phenomenon. Specifically, perhaps other attitudes towards suicide such as intent, and not simply the acceptability of suicide, can help provide a better understanding of "lethality," and how it is influenced by the attitudes and behaviour of those around the individual. In this manner, attitudes may help provide a better understanding of how it occurs that a person chooses to end his or her life.

Limitations

A number of shortcomings apply to the present study. Such limitations should be held in mind when considering the results, but hopefully can also point the direction towards future research that can improve on the methods used here.

A weakness of this study, although perhaps necessary, is that attitudes were measured purely on the basis of self-report measures, and with an attitude object that was not physically present. In effect, participants were rating how they *thought* they might have reacted to given situations. For example, Breckler (1984) has demonstrated that the intercorrelations of affective, cognitive, and behaviour were much higher (.80s) when participants were told to imagine a snake than when the snake was actually present (.38 to .70). Participants may still say that they would not be afraid to pick up a snake (or assist a suicidal person), but when actually confronted with the snake (or suicidal person) may react quite differently (see Eiser & van der Pligt, 1988).

A second weakness of the current study is that a sign-up process was used. Although people have been found to be more willing to disclose suicidal ideation on a self-report instrument than through an interview (Kaplan et al., 1994), by having students sign-up for alternate times in order to fill out the questionnaires, a self-selection process may have occurred. Namely, it is plausible that some of those with experience with suicide, whether self or other-, may have been less likely to have taken part due to discomfort with the issue. This may in part explain the slightly lower base-rates for suicidal ideation as compared to Wallace and Kral (1994), in which students remained in their classes to complete the questionnaires.

Third, social desirability could have also affected results. Given the stigma around suicide (e.g., Higgins & Range, 1999), it is possible that participants underreported the degree to which they were favourable towards suicide, and over-reported the amount to which they would help a suicidal person. Lester (1996) reported evidence that people have very negative attitudes towards individuals who have attempted suicide. He reported that suicidal individuals arouse more anger than pity, with people tending to see suicidal individuals as responsible for their condition. Given such attitudes, participants may also have altered a number of their other responses. Some suicidal behaviour may have gone unreported. Indeed, a similar finding of underreporting has been noted in the assessment of hopelessness and suicidal behaviour (Linehan & Nielson, 1981, 1983). It is recommended that future suicide attitude research include a measure of social desirability.

Fourth, the suicide experience questionnaire used in this study is a self-report measure that relies on participant openness and honesty. In general, self-report measures have been found to uncover greater instances of suicide ideation and to correspond well with a clinical interview with the assessment of suicidal behaviour (Kaplan et al., 1994). However, such questionnaires rely on the participant's memory of their experience during the time (e.g., rating the degree to which he or she wanted to die), and are also dependent on their truthfulness. Some of these limitations have been collectively called "the willing and able" assumptions of attitude research (see Lloyd, 1994; Street, 1994). In essence, it is assumed that people are both: (a) willing to be honest in their responses, and (b) producing ratings that are in fact representations of their true underlying attitudes.

Further research in the form of a cross-sequential format would be useful in this regard. Namely, following non-ideators, ideators, low lethality attempters, and high lethality attempters across time would allow more definitive conclusions to be drawn on the relationship between attitudes and behaviour—both past behaviour and future behaviour.

It is also possible that in the efforts of this study to examine attitudes towards suicide we have uncovered attitudes that would be described as "weak" with respect to their attitude strength. For example, subjective beliefs have been proposed as being a dimension that would capture the elusive construct of attitude strength, whereby the latter is defined as the degree of strength that a given attitude is held by a given person. Assessing aspects such as certainty, intensity, extremity, and importance of the attitude (e.g., Krosnick & Petty, 1995), these "subjective beliefs" would allow for more accurate assessment of suicide attitudes, for example, by asking questions about *how certain* one is in his or her answer to a given question, or asking *how important* that particular belief is to him or her personally. Two people who both strongly agree with an item can still differ greatly as to how important that view is to them. A suicide survivor may feel much more strongly about her answer that suicide is an unacceptable solution to life's problems than someone who has never really considered the issue much, and who decides on the spot that it is not a good thing for society.

A related caveat when considering the results of this study, and that of attitude research in general, also comes from contemporary attitude research. Social psychologists have traditionally viewed attitudes as being relatively enduring predispositions to respond towards the attitude object (see Eagley & Chaiken, 1993).

Some recent research has begun to question this assumption. Instead, some researchers have proposed that attitudes may be temporary constructions (e.g., Lavine et al., 1998; Strack & Martin, 1987). Specifically, it has been suggested that at least some attitudes may be episodic constructions, "based on whatever attitude-relevant information is most accessible at the moment an evaluative response is required" (Lavine et al., 1998, p. 369). In other words, attitudes should not be viewed as constructs that lie solely within the individual, but as responses that may change across situation and time, according to the contextual cues.

Most relevant to the present study is that Lavine et al. (1998) have found that such attitude strength-moderated context effects are actually less likely to happen when using several items to assess attitudes strength, and more likely to emerge when using multi-item multidimensional measures. When ambivalence is high, as might be seen in individuals with more experience with suicide (see Shneidman, 1985), it is believed that attitudes on one side may be contextually triggered first, and "selectively prime a subset of feelings and beliefs on one side of the issue" (Lavine et al., 1998, p. 360). This effect would result in large context effects, whereby the person is likely to respond in a given direction across attitude measures; thus, their "true" attitudes would be not accurately represented in their results.

In effect, ambivalence, or the degree to which a person endorses information/beliefs on both sides of an issue (Breckler, 1984), may have been inadequately assessed in this study, because of evidence suggesting that context effects can influence a person's rated attitudes, as once beliefs on one side of an issue are "activated, feelings and beliefs supporting the other side of the issue may be temporarily

refuted or repressed" (Lavine et al., 1998, p. 360). In sum, future research would thus do well to include several items to assess attitude strength, as significant context effects are unlikely to happen when attitudes are strong (e.g., Krosnick & Petty, 1995; Lavine et al., 1998).

<u>Further research</u>

In addition to recommended improvements on suicide attitude research mentioned above, a number of directions for further research exist. One such approach would be to include a measure of psychopathology, and in particular a measure of depression (e.g., Beck Depression Inventory; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). This would allow an examination to see if the attitudinal dimensions still are related to experience with suicide, over and above controlling for psychological disorders such as depression. In addition, it would be interesting to examine whether people exist who have high favourability ratings towards suicide, and in particular the Suicide Intent scale tapping into the likelihood that they will commit suicide in the future, but who are low on measures of psychopathology and current ideation. Such a study would not only provide a test of the importance of the "idea of suicide," but would also provide important clinical information.

Further examination of the data collected about whether or not the participants have told anyone about their suicidal self-experience would also be useful. Is there a difference between those who have shared the information and those who have not? Culp, Clyman, and Culp (1995) noted in their non-clinical sample of adolescents that, despite the fact that 57% had features of depressive symptomatology, only 48% had asked for help. Further research on the reasons for not sharing the suicidal experience

would also be highly valuable, and might have implications for improving suicide prevention and intervention strategies amongst undergraduates.

Moreover, it is possible that other variables besides ratings of the degree of closeness felt, such as the degree to which a person identifies with him or her, might better illuminate the impact of having had other-experience. The inclusion of an assessment of identification with the suicidal person would allow for an examination for whether a suicide of an admired person (e.g., rock star, sports hero, etc.) might impact on suicide attitudes and behaviour.

Another idea for further research comes from very recent evidence of a new structural model of attitudes (Wilson et al., 2000). These researchers have proposed a dual model of attitudes, in which people can simultaneously have both "implicit" and "explicit" attitudes about the same attitude object. Instead of assuming that when an attitude changes from A_1 to A_2 the new attitude has replaced the old one, Wilson et al. (2000) argue that the new attitude will override, but not replace, the old one. The result is dual attitudes, composed of an implicit and an explicit attitude. Implicit attitudes are old, strongly held, underlying attitudes that the person may be unaware of even having, are activated automatically, and thus are more resistant to change. Explicit attitudes, in contrast, refer to the attitudes that have been heretofore discussed. They are much more susceptible to change and require more capacity and motivation to retrieve from memory, but are said to override the implicit attitudes when they are retrieved. For example, an avid baseball fan who has just watched his team lose the World Series may have a sour attitude towards baseball for a time following the loss (i.e., A_2), but this is unlikely to have replaced his underlying love of the game (i.e., A_1). Another example of a dual

attitude is "motivated overriding," whereby the person is aware of their implicit attitude, but views it "as illegitimate or unwanted…and [is] motivated to override it with a different attitude. For example, people might be fully aware that they have quick, negative evaluations of members of another race. Because they deplore this reaction, they tend to override it by retrieving from memory an explicit positive attitude" (p. 106).

A second type of dual attitude, termed "independence," refers to when people are unaware of their implicit attitude even though it continues to influence their behaviour. For example, a therapy client who sits down for the first time with her arms crossed on her chest and who, although pleasant throughout the session, communicates discomfort with, and dislike for, the therapist through her body language. She might report to the therapist during, and rate in a survey following, the session that she felt comfortable and that she liked the therapist, which would be an assessment of her explicit attitude.

Why is this important to attitude research? This landmark finding that people can have simultaneous attitudes in which one may be "below the surface" serves as a warning that when attitudes are assessed, they may only be telling part of the picture. Dual attitudes, as distinct from ambivalence (i.e., where the person is aware of their differing attitudes, viewing them both as "legitimate" views), or different categorizations of attitude objects (i.e., cognitive vs. affective attitudes), provide yet another explanation for findings that attitudes did not appear to predict behaviour. Instead, the attitude-behaviour relationship will depend on the type of attitude involved (implicit or explicit). Consequently, such a process could also theoretically result in behavioural inconsistency, both across time, and within a given situation. For example, someone might reach down to pick up the change dropped by a tourist, but then reach past her outstretched hand to

instead place it on the counter. Wilson et al. (2000) provide examples of using both projective tests (e.g., Rorschach, Thematic Apperception Test) and time pressure procedures to assess implicit attitudes.

This theory may in part explain why those who had someone close to them commit suicide show little impact on their suicide attitudes. Because the measures used in this study assess explicit attitudes, these measures may have overlooked implicit effects. Presumably, "people might begin with an explicit attitude that is based on a theory about an attitude object but little personal experience. When people acquire direct experience with the attitude object, their implicit attitude might change slowly, *before* any change at the explicit level" (Wilson et al., 2000, p. 120; emphasis added). This would result in a situation where a person would genuinely and emphatically claim on an explicit measure a given attitude (i.e., suicide is unacceptable), but may show evidence of the opposite on an implicit attitude measure.

Further, "previous models may have exaggerated the ease with which people change their attitudes, by including only explicit measures of attitudes. Although people may report new explicit attitudes, they may still have their older, habitual, implicit attitudes" (p. 121). This finding suggests that future attitude research incorporate methods to assess for both the presence of implicit and explicit attitudes, and implicit and explicit behaviour where appropriate—a daunting task indeed.

In effect, the potential implications of this study to contribute to our understanding of suicide are substantial. What might look like attitudinal ambivalence about the decision to commit suicide (see Shneidman, 1985), for example, may instead reflect dual attitudes. Perhaps some people who go on to complete suicide have implicit

attitudes viewing suicide as a viable and even likely option, but have the explicit attitude that it is not an option (i.e., "independent" dual attitudes), and thus are being honest when denying it during clinical interview. It is possible, for example, that those who had known close completers, particularly those whom were family members, might have independent dual attitudes.

Or, someone may have implicit attitudes viewing suicide favourably, but may see such attitudes as "wrong" ("motivated overriding") and thus present only the explicit attitudes overtly. Being able to look for signs of a person's implicit attitudes would thus involve more than simple questions about his or her ideation.

Thus, a shortcoming of the present study is that what people reported as their attitudes may to a varying degree be only their conscious acknowledgement of what there attitudes are. As has been discussed, the possible presence of dual attitudes (whether motivated overriding, independence, etc.) may have resulted in an incomplete picture of people's attitudes towards suicide. One method of improving on the methodology used in the present study would be to include projective assessment instruments, such as the Rorschach or Thematic Apperception Test, in order to assess implicit attitudes towards suicide. These two instruments, in particular, are mentioned by Wilson et al. (2000) as having utility in assessing implicit attitudes.

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APPENDICES

APPENDIX A

QUESTIONNAIRES

SUICIDE OPINION QUESTIONNAIRE (SOQ)

This is not a test but a survey of your opinions; there are no right or wrong answers, only your honest opinion counts.

For each item indicate (on the answer sheet) whether you:

A. strongly agree
B. agree
C. are undecided
D. disagree
E. strongly disagree

1. Most persons who attempt suicide are lonely and depressed.

2. Almost everyone has at one time or another thought about suicide.

3. The suicide rate is higher for blacks than for whites.

4. The suicide rate in the U.S. is much greater than reflected by official statistics.

5. Suicide prevention centers actually infringe on a person's right to his life.

6. Many suicides are triggered by arguments with a spouse.

7. The higher incidence of suicide is due to the lesser influence of religion.

8. Many suicide notes reveal substantial anger towards the world.

9. I would feel ashamed if a member of my family committed suicide.

10. Many suicide attempts are impulsive in nature.

11. Many suicides are the result of the desire of the victim to "get even" with someone.

12. In the U.S. suicide by shooting oneself is the most common method.

13. People with incurable diseases should be allowed to commit suicide in a dignified manner.

14. Those who threaten to commit suicide rarely do so.

15. Suicide is more prevalent among the very rich and the very poor.

16. Individuals who kill themselves out of patriotism do so, not because they are courageous, but because they enjoy taking major risks.

17. Suicide is a leading cause of death in the U.S.

18. Suicide is an acceptable means to end an incurable illness.

19. People who commit suicide are usually mentally ill.

20. Some people commit suicide as an act of self-punishment.

21. The feeling of despair reflected in the act of suicide is contrary to the teaching of most major religions.

22. Suicide rates vary greatly from country to country.

23. I feel sorry for the people who commit suicide.

24. John Doe, age 45, has just committed suicide. An investigation will probably reveal that he has considered suicide for quite a few years.

25. Suicide is acceptable for aged and infirm persons.

26. The suicide rate among physicians is substantially greater than for other occupation groups.

27. The Japanese kamikaze pilots who destroyed themselves by flying their airplanes into a ship should not he considered suicide victims.

28. Different cultural child rearing practices are probably unrelated to suicide rate.

29. Suicide is clear evidence that man has a basically aggressive and destructive nature.

30. Over the past ten years the suicide rate in this country has increased greatly.

31. Most people who try to kill themselves don't really want to die.

32. Suicide happens without warning.

33. A business executive arrested for fraud or other illegal practices should face punishment like a man rather than seek suicide as an escape.

34. Most suicide victims are older persons with little to live for.

35. A person who tried to commit suicide is not really responsible for those actions.

36. About 75% of those who successfully commit suicide have attempted suicide at least once before.

37. It's rare for someone who is thinking about suicide to be dissuaded by a "friendly ear."

38. People who commit suicide must have a weak personality structure.

39. The method used in a given suicide probably reflects whether the action was impulsive or fully and rationally planed.

40. Social variables such as overcrowding and increased noise can lead a person to be more suicide prone.

41. A large percentage of suicide victims come from broken homes.

42. A rather frequent message in suicide notes is one of unreturned love.

43. People who set themselves on fire to call attention to some political or religious issue are mentally unbalanced.

44. The possibility of committing suicide is greater for older people (those 60 and over) than for younger people (20 to 30).

45. Most people who commit suicide do not believe in an afterlife.

46. In times of war, for a captured soldier to commit suicide is an act of heroism.

47. Suicide attempters are typically trying to get even with someone.

48. Once a person is suicidal, he is suicidal forever.

49. There may be situations where the only reasonable resolution is suicide.

50. People should be prevented from committing suicide since most are not acting rationally at the time.

51. The suicide rate is higher for minority groups such as Chicano, American Indians, and Puerto Ricans than for Whites.

52. Improvement following a suicidal crisis indicates that the risk is over.

53. People who engage in dangerous sports like automobile racing probably have an unconscious wish to die.

54. Prisoners in jail who attempt suicide are simply trying to get better living conditions.

55. Suicides among young people (e.g., college students) are particularly puzzling since they have everything to live for.

56. Once a person survives a suicide attempt, the probability of his trying again is minimal.

57. In general, suicide is an evil act not to be condoned.

58. People who attempt suicide and live should be required to undertake therapy to understand their inner motivation.

59. Suicide is a normal behavior.

60. Many victims of fatal automobile accidents are actually unconsciously motivated to commit suicide.

61. If a culture were to allow the open expression of feelings like anger and shame, the suicide rate would decrease substantially.

62. From an evolutionary point of view, suicide is a natural means by which the less mentally fit are eliminated.

63. Suicide attempters who use public places (such as a bridge or tall building) are more interested in getting attention.

64. A person whose parent has committed suicide is a greater risk for suicide.

65. External factors, like lack of money, are a major reason for suicide.

66. Suicide rates are a good indicator of the stability of a nation; that is, the more suicides the more problems a nation is facing.

67. Sometimes suicide is the only escape from life's problems.

68. Suicide is a very serious moral transgression.

69. Some individuals have committed suicide to preserve their honor; these were victims of cultural values rather than disturbed personal attitudes.

70. If someone wants to commit suicide, it is their business and we should not interfere.

71. A suicide attempt is essentially a "cry for help."

72. Obese individuals are more likely to commit suicide than persons of normal weight.

73. Heroic suicides (e.g. the soldier in war throwing himself on a live grenade) should be viewed differently from other suicides (e.g. jumping off a bridge).

74. The most frequent message in suicide notes is of loneliness.

75. Usually, relatives of a suicide victim had no idea of what was about to happen.

76. Long term self-destructive behaviors, such as alcoholism, may represent unconscious suicide attempts.

77. Suicide attempts are typically preceded by feelings that life is no longer worth living.

78. Suicide goes against the laws of God and/or of nature.

79. We should have "suicide clinics" where people who want to die could do so in a painless and private manner.

80. Those people who attempt suicide are usually trying to get sympathy from others.

81. People who commit suicide lack solid religious convictions.

82. People with no roots or family ties are more likely to attempt suicide.

83. People who bungle suicide attempts really did not intend to die in the first place.

84. Passive suicide, such as an overdose of sleeping pills, is more acceptable than violent suicide such as by gunshot.

85. Potentially, every one of us can be a suicide victim.

86. Suicide occurs only in civilized societies.

87. People who die by suicide should not be buried in the same cemetery as those who die naturally.

88. Most people who commit suicide do not believe in God.

89. Children from larger families (i.e., three or more children) are less likely to commit suicide as adults than single or only children.

90. Suicide attempters are, as individuals, more rigid and less flexible than non-attempters.

91. The large majority of suicide attempts result in death.

92. Some people are better off dead.

93. People who attempt suicide are, as a group, less religious.

94. As a group, people who commit suicide experienced disturbed family relationships when they were young.

95. People do not have the right to take their own lives.

96. Most people who attempt suicide fail in their attempts.

97. Those who commit suicide are cowards who cannot face life's challenges.

98. Individuals who are depressed are more likely to commit suicide.

99. Suicide is much more frequent in our world today than it was in early cultures such as Egypt, Greece, and the Roman Empire.

100. People who are high suicide risks can be easily identified.

Multi-Dimensional Suicide Attitude Scales & Vignettes (MSAS)

MSAS-Feelings About Suicide

Directions: We want to know how you feel when you think about or talk about suicide. Listed below are a number of different feelings that you may have. Please fill in the letter (A=1, B=2, C=3, D=4, E=5) that indicates the extent to which you feel this emotion when thinking about a person who has attempted suicide.

	not at all		somewhat		very
101. Indifferent	1	2	3	4	5
102. Understanding	1	2	3	4	5
103. Depressed	1	2	3	4	5
104. Annoyed	1	2	3	4	5
105. Angry	1	2	3	4	5
106. Sympathetic	1	2	3	4	5
107. Upset	1	2	3	4	5
108. Compassionate	1	2	3	4	5
109. Sad	1	2	3	4	5
110. Disgusted	1	2	3	4	5
111. Powerless	1	2	3	4	5
112. Hopeless	1	2	3	4	5
113. Concerned	1	2	3	4	5

114. Anxious	1	2	3	4	5
115. Frustrated	1	2	3	4	5
116. Accepting	1	2	3	4	5
117. Interested	1	2	3	4	5
118. Afraid	1	2	3	4	5

MSAS-Behavior Scale

The following statements describe behaviors that you may or may not have experienced with regard to suicide. Please indicate your experience with these behaviours by marking "A" on your answer sheet if you have ever personally experienced the behaviour in the past by marking "B" if you have experienced the given behaviour within the last year. Please mark "C" on your answer sheet if you have never experienced the behaviour.

	(A) Ever in the past	(B) Within the last year	(C) Never

119. I have participated in a course or attended a seminar on suicide.

120. I have worked actively in a crisis intervention group or on a hotline with suicidal people.

121. I have read a book about someone's suicide.

122. I have attended a meeting on the subject of suicide.

123. I have been or currently am a member of a society that promotes suicide (e.g., the Hemlock Society).

124. I have spoken in a public meeting or class on the subject of suicide.

125. I have actively tried to inform myself about suicide and/or suicide prevention.

126. I have personally known at least one person who killed him/herself.

127. I have expressed my views on suicide with my friends.

128. I have made suicide threats.

129. I have read at least one newspaper or magazine article about suicide.

130. I have joined a support group that deals with some aspect of suicide.

131. I have talked with a friend or family member who was actively suicidal.

132. Among the people with whom I associate, there is at least one who has been or is suicidal.

133. I have tried to kill myself.

134. I have seen at least one movie or TV program about suicide.

135. I have privately considered killing myself.

136. I have received counseling because of suicidal thoughts or feelings.

137. I have made specific plans to kill myself.

138. I have done a research paper or report on suicide.

MSAS-Beliefs about Suicide

Directions: There are no right or wrong responses on this scale. We are interested in beliefs you may have about the act of suicide* and suicidal people. Using a five point system, please fill in the letter (A=1, B=2, C=3, D=4, E=5) that indicates the extent to which you agree with each of the following statements.

	Level of Agreement				
	Low				High
139. Killing oneself is wrong.	1	2	3	4	5
140. Elderly people who are no longer productive should consider killing themselves.	1	2	3	4	5
141. Suicide is a waste of potential.	1	2	3	4	5
142. Suicide is sometimes a praiseworthy act.	1	2	3	4	5
143. Family members of people who kill themselves should feel ashamed and/or guilty.	1	2	3	4	5
144. Suicide is a crime against society.	1	2	3	4	5
145. People who try to kill themselves are courageous.	1	2	3	4	5
146. It is honorable to kill yourself to protect your family from disgrace.	1	2	3	4	5
147. People who kill themselves are insane.	1	2	3	4	5
148. People who are physically handicapped have the right to take their own lives.	1	2	3	4	5
149. People who attempt suicide are weak.	1	2	3	4	5
150. Physicians should help people who want to die take their own lives.	1	2	3	4	5

151. Elderly people have the right to take their own lives.	1	2	3	4	5
152. Criminals who have been given a life sentence should have the right to choose suicide as an alternative.	1	2	3	4	5
153. People who try to kill themselves need counseling.	1	2	3	4	5
154. Anyone who wants to die should have the right to take his/her own life.	1	2	3	4	5
155. Suicide is a selfish act.	1	2	3	4	5
156. Books about how to kill oneself should be banned.	1	2	3	4	5
157. God punishes individuals who kill themselves.	1	2	3	4	5
158. Terminally ill people have the right to take their own lives.	1	2	3	4	5
159. People who try to kill themselves may be trying to manipulate others.	1	2	3	4	5
160. Suicide is a sign of strength.	1	2	3	4	5
161. Suicide can sometimes be justified.	1	2	3	4	5

* *Suicide means fatal suicide unless otherwise indicated.*

Adolescent and Young Adult [Vignette] Scale

Directions: We are interested in your response to the figures in the stories or vignettes below. Each item describes a situation in which individuals decided to take their own lives. Please indicate after each situation, the amount of sympathy and agreement with the actions (finding the behavior rational and acceptable) you have for each person.

1. Carol P. has had leukemia since she was 13. She is now 17. She has known for over a year that the disease is most likely going to kill her. Lately the pain has increased to the point where drugs no longer control it. Carol kills herself.

	Low				High
A. (162). Level of Sympathy (i.e., compassionate, understanding)	1	2	3	4	5

B. Level of Agreement that the Behavior is:

163. Rational (i.e., logical, sane)	1	2	3	4	5
164. Acceptable (i.e., a reasonable choice)	1	2	3	4	5

C. (165). What is the probability that you would do
the same in this situation?   1   2   3   4   5

2. Betty L. is a senior in high school. She has wanted to be a lawyer for four years. Her grades have been consistently falling each term. Last week she got back her college board scores and found that they were so low that she probably will not be admitted to any college. Betty kills herself.

A. (166). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    167. Rational (i.e., logical, sane)   1   2   3   4   5

    168. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (169). What is the probability that you would do
the same in this situation?   1   2   3   4   5

3. Jane S. has always been a child whose parents were very proud of her. She was obedient and respectful and never gave them any trouble. However, lately, she and her parents have not been getting along well. Jane doesn't seem able to do anything right. Her parents seem more demanding and critical everyday, and Jane kills herself.

A. (170). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    171. Rational (i.e., logical, sane)   1   2   3   4   5
    172. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (173). What is the probability that you would do
the same in this situation?   1   2   3   4   5

4. Sandra L.'s father has sexually abused her since she was five years old. Now that she is fourteen, she has considered talking to adults about it but doesn't think she will be believed. She feels guilty, worthless, and ashamed. One weekend, while her parents are away, she kills herself.

A. (174). Level of Sympathy •
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    175. Rational (i.e., logical, sane)   1   2   3   4   5

    176. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (177). What is the probability that you would do
the same in this situation?   1   2   3   4   5

5. Ann F. used to think of herself as an intelligent person. Two years ago she began
using pot and drinking. At first she confined it to weekends. Gradually she began to use
harder drugs. Now, she finds she cannot start the day without drugs. She also is
experiencing difficulty in learning and has lost weight because of a lack of appetite. At
her parents' suggestion, she begins to examine her behavior, decides that she has ruined
her life, and kills herself.

A. (1). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    2. Rational (i.e., logical, sane)   1   2   3   4   5

    3. Acceptable (i.e., a reasonable choice) 1   2   3   4   5

C. (4). What is the probability that you would do
the same in this situation?   1   2   3   4   5

6. Bruce G. was driving his family's car to a high school basketball game. The night was
rainy. He didn't see a truck stalled across the road until he was almost on it. In the
resulting accident, one of his passengers was killed and one was crippled. Bruce has not
been able to get over his feelings of guilt and sorrow about the accident. Two months
after the accident, he kills himself.

A. (5). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    6. Rational (i.e., logical, sane)   1   2   3   4   5

    7. Acceptable (i.e., a reasonable choice) 1   2   3   4   5

C. (8). What is the probability that you would do
the same in this situation?   1   2   3   4   5

7. Bill F. is the third of six children. He has always felt that his parents valued the older
and younger children more than they valued him. He thinks he has had to carry more
than his share of family chores and that he does not receive the rewards and recognition
given to his brothers and sisters. He knows that his parents are viewed as having the
"perfect family" in their community and that spoiling that image would hurt them very
much. He decides to punish them for their treatment of him and kills himself on the
football field before a Friday night game.

A. (9). Level of Sympathy
(i.e., compassionate, understanding) 1 2 3 4 5

B. Level of Agreement that the Behavior is:

    10. Rational (i.e., logical, sane) 1 2 3 4 5

    11. Acceptable (i.e., a reasonable choice) 1 2 3 4 5

C. (12). What is the probability that you would do the same in this situation? 1 2 3 4 5

8. Joe P. has been going with Gloria for three years. They are now in their senior year of high school and have planned to be married after graduation. For the past two months they have been arguing more frequently than before. The day before the Senior Prom, Gloria breaks off the relationship. Joe kills himself.

A. (13). Level of Sympathy
(i.e., compassionate, understanding) 1 2 3 4 5

B. Level of Agreement that the Behavior is:

    14. Rational (i.e., logical, sane) 1 2 3 4 5

    15. Acceptable (i.e., a reasonable choice) 1 2 3 4 5

C. (16). What is the probability that you would do the same in this situation? 1 2 3 4 5

9. John M is a fat 15-year-old. For years he has been teased by his classmates because of his size. Recently, his face has broken out with severe acne, causing fellow students to tease him about his skin as well as his weight. His classmates have started referring to him as a "bloated strawberry." John kills himself.

A. (17). Level of Sympathy
(i.e., compassionate, understanding) 1 2 3 4 5

B. Level of Agreement that the Behavior is:

    18. Rational (i.e., logical, sane) 1 2 3 4 5

    19. Acceptable (i.e., a reasonable choice) 1 2 3 4 5

C. (20). What is the probability that you would do the same in this situation? 1 2 3 4 5

10. Rhonda N.'s mother died last year. She has felt depressed and lost since the death. When she thinks of her mother, she is overwhelmed by sadness and hopelessness. She is convinced that she will never be happy again. One night when the family is out, she kills herself.

A. (21). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    22. Rational (i.e., logical, sane)   1   2   3   4   5

    23. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (24). What is the probability that you would do the same in this situation?   1   2   3   4   5

11. Don. R. Has always been close to his family, and felt that it was a happy family. Over the past year, however, his mother and father have been fighting more often than not. One night he comes in while they are arguing. They tell him they have decided to get a divorce and demand to know which parent he wants to live with. Don flees from home. Later that night he kills himself.

A. (25). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    26. Rational (i.e., logical, sane)   1   2   3   4   5

    27. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (28). What is the probability that you would do the same in this situation?   1   2   3   4   5

12. Tom D. is an 18-year-old who was in an automobile accident last year. He had been a member of the football team and was very active in school activities. Now he is paralyzed from the waist down. He kills himself.

A. (29). Level of Sympathy
(i.e., compassionate, understanding)   1   2   3   4   5

B. Level of Agreement that the Behavior is:

    30. Rational (i.e., logical, sane)   1   2   3   4   5

    31. Acceptable (i.e., a reasonable choice)   1   2   3   4   5

C. (32). What is the probability that you would do the same in this situation?   1   2   3   4   5

Suicide Attitude Questionnaire (SUIATT)

Attitudes Toward Self-Destructive Behavior

This questionnaire asks about your attitudes and opinions about self-destructive behavior, including your thoughts about circumstances under which someone might attempt or commit suicide. There are no right or wrong answers; what matters is **your opinion**.

Some questions ask you to identify circumstances under which you think people in general might decide on suicide. Similar questions will ask when you think it probable that someone "near and dear" to you might decide on suicide. Finally, you will be asked if there are circumstances under which you might decide on suicide.

In the questions that ask about the one who is **most near and dear** to you, we need to know who that person is for you. Please indicate on the last page of Part B of the Questionnaire on the line who that person is by writing just his or her last name and your relationship to that person. For example: "Jim is my husband," "Maria, my sister," or "Andy, my sweetheart/lover."

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.

33. How do you feel about the fact that people commit suicide?

        A. It is one of the worst things that can happen.
        B. It is a bad thing.
        C. I don't know
        D. It is a good thing.
        E. It is one of the best things that can happen.

34. In your opinion, is suicide inherited?
        A. Always
        B. In most cases
        C. Sometimes
        D. Seldom
        E. Never

For questions #35-49, please fill in the letter that best represents you opinion.

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

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

35. They were old and crippled?

36. They suffered from severe and chronic pain?

37. Their partner left them?

38. If they became severely disabled?

39. If they became unemployed?

40. If they had a severely handicapped child?

41. If they were admitted to a mental hospital?

42. If it were impossible for them to have children?

43. If they suffer from an incurable disease?

44. If they suffer from a terminal illness?

45. If the person(s) most near and dear to them dies?

46. If they have Alzheimer's disease?

47. If they do not succeed in finding a life partner?

48. If they have killed someone else?

49. If they have AIDS?

50. In your opinion, do people commit suicide because they are mentally ill?
    A. Always
    B. Most of the time
    C. Sometimes
    D. Seldom
    E. Never

51. Do you believe that one has the right to commit suicide?
    A. Always
    B. Most of the time
    C. Sometimes
    D. Seldom
    E. Never

52. If people commit suicide, the consequences for society as a whole are:
    A. Always negative
    B. Often negative
    C. Sometimes negative/Sometimes positive
    D. Often positive
    E. 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 four questions ask: Do you think that someone who makes a suicide attempt:

53. Intends to force or manipulate things in his/her way?

54. Intends to point out to others how big his/her problems are?

55. Intends to die?

56. Is mentally ill?

57. How likely do you think it is that you will end your life by suicide?
   A. Very unlikely
   B. Fairly unlikely
   C. Don't know
   D. Fairly likely
   E. Very likely

58. If you were to commit suicide, would you find this--
   A. Very cowardly
   B. Fairly cowardly
   C. Somewhat cowardly
   D. Only a little cowardly
   E. Not cowardly at all

59. If you were to commit suicide, would you find this--
   A. Very brave
   B. Fairly brave
   C. Somewhat brave
   D. Only a little brave
   E. Not brave at all

60. If the person most near and dear to you would commit suicide, how would you feel about that?
   A. That would be the worst thing that could happen to me
   B. That would be one of the worst things that could happen to me.
   C. That would be a bad thing for me
   D. I don't know how I would feel about that
   E. That would not be a bad thing for me

61. Do you believe that if someone commit suicide, it--
   A. Is a very deliberate act
   B. Probably is a deliberate act
   C. Don't know
   D. Probably is an impulsive act
   E. Is a very impulsive act

62. Would you be willing to help suicidal persons by talking with/contacting them?
   A. Certainly
   B. Probably
   C. Don't know
   D. Probably not
   E. Certainly not

63. When someone commits suicide, the consequences of this act for those closest to him/her are--
    A. Always negative
    B. Often negative
    C. Perhaps negative/perhaps positive
    D. Often positive
    E. Always positive

64. Do you think that in order to commit suicide, you have to be mentally ill?
    A = Definitely Yes
    B = Probably Yes
    C = Maybe/Maybe not
    D = Probably No
    E = Definitely No

Reminder of choices: A = Definitely Yes
                        B = Probably Yes
                        C = Maybe/Maybe not (Don't know/No opinion)
                        D = Probably No
                        E = Definitely No

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

65. Intends to force or manipulate things his/her one way.

66. Intends to point out how big his/her problems are.

67. Intends to die.

68. Is mentally ill.

69. If the person most near and dear to you were to commit suicide, would you object to newspapers reporting it?
    A = Definitely Yes
    B = Probably Yes
    C = Don't know
    D = Probably No
    E = Definitely No

Reminder of choices: A = Definitely Yes
                        B = Probably Yes
                        C = Maybe/Maybe not (Don't know/No opinion)
                        D = Probably No
                        E = Definitely No

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

70. If he/she were old and crippled?

71. If he/she suffered from severe and chronic pain?

72. If his/her partner left?

73. If he/she were severely disabled?

74. If he/she has AIDS?

75. If he/she were unemployed?

76. If he/she were to have (had) a severely handicapped child?

77. If he/she were taken to a mental hospital?

78. If it were impossible for him/her to have children?

79. If he/she were to suffer from an incurable disease?

80. If he/she were to suffer from a terminal illness?

81. If he/she were to become bereaved of the person most near and dear.

82. If he/she did not succeed in finding a partner in life?

83. If he/she had killed someone else?

84. If he/she had Alzheimer's disease?

Reminder of choices: A = Definitely Yes
B = Probably Yes
C = Maybe/Maybe not (Don't know/No opinion)
D = Probably No
E = Definitely No

Under what circumstances might you commit suicide?

85. If you were old and crippled?

86. If you suffered from severe and chronic pain?

87. If your partner left you?

88. If you had AIDS?

89. If you became severely disturbed?

90. If you became unemployed?

91. If you had a severely handicapped child?

92. If you were admitted to a mental hospital?

93. If it were impossible for you to have children?

94. If you suffered from an incurable illness?

95. If you suffered from a terminal illness?

96. If the person(s) most near and dear to you dies?

97. If you do not succeed in finding a life partner?

98. If you had killed someone else?

99. If you had Alzheimer's disease?

100. How do you feel about putting an end to your own life?
   A. That would be the worst thing I could do
   B. That would be one of the worst things I could do
   C. That would be a bad thing for me to do
   D. That would not be a bad thing for me to do
   E. Don't know/No opinion

101. Do you think that in order to commit suicide you have to be mentally ill?
   A = Definitely Yes
   B = Probably Yes
   C = Maybe/Maybe not
   D = Probably No
   E = Definitely No

For the following four questions, please indicate which way of dying you would prefer for yourself. Mark one letter for each cause.
   A = Least preferred
   B = Next least preferred
   C = Next most preferred
   D = Most preferred

102. Murder

103. Natural causes (illness, old age)

104. Accident

105. Suicide

106. Do you believe that in an ideal society, suicide would
   A. Certainly not occur
   B. Probably not occur
   C. Don't know/No opinion
   D. Probably occur
   E. Certainly occur

107. Do you believe that in your current society, suicide would
   A. Certainly not occur
   B. Probably not occur
   C. Don't know/No opinion
   D. Probably occur
   E. Certainly occur

108. What do you think about suicide prevention efforts in Canada?
   A. Very negative
   B. Fairly negative
   C. Don't know/No opinion
   D. Fairly positive
   E. Very positive

109. If you were to commit suicide, would you object to newspapers reporting it?
  A. Definitely Yes
  B. Probably Yes
  C. Don't know
  D. Probably No
  E. Definitely No

The death of **the person most near and dear** to you would undoubtedly be distressing for you. Nevertheless, the way he or she might die could influence how you would feel about it. Please rank order the following possible causes of death of **the person most near and dear** to you by marking a letter for each of the following questions.

  A = Most disrupting or upsetting cause of death
  B = The next most disrupting cause of death
  C = The next least disrupting cause of death
  D = The least disrupting cause of death

110. Murder

111. Natural (illness/old age)

112. Suicide

113. Accident

114. If the person most near and dear to you were to tell you that he/she wants to commit suicide, would you take this communication:
  A. Very seriously
  B. Rather seriously
  C. Probably not very seriously
  D. Not seriously
  E. No opinion/don't know

115. If you were to commit suicide, it would:
  A. Be a very deliberate act
  B. Probably be a deliberate act
  C. Probably be an impulsive act
  D. Be a very impulsive act
  E. No opinion/don't know

116. Have you ever attempted suicide?
  A. Very often   (7 or more times)
  B. Often   (4-6 times)
  C. More than once   (2-3 times)
  D. Once
  E. Never

117. If you were to commit suicide, the consequences of this act for those closest to you would be:
  A. Always negative
  B. Often negative
  C. Sometimes negative/sometimes positive
  D. Often positive
  E. Don't know

118. When someone commits suicide, do you object to newspapers reporting it?
   A. Definitely Yes
   B. Probably Yes
   C. No opinion/Don't know
   D. Probably No
   E. Definitely No

119. If the **person most near and dear** to you were to commit suicide, it would:
   A. Be a very deliberate act
   B. Probably be a deliberate act
   C. No opinion/don't know
   D. Probably be an impulsive act
   E. Be a very impulsive act

120. If the **person most near and dear** to you were to commit suicide, would you find this:
   A. Very cowardly
   B. Fairly cowardly
   C. No opinion
   D. Only a little cowardly
   E. Not cowardly at all

121. If the **person most near and dear** to you were to commit suicide, would you find this:
   A. Very brave
   B. Fairly brave
   C. No opinion
   D. Only a little brave
   E. Not brave at all

122. When someone attempts suicide, the consequences of this act for him or herself are:
   A. Always negative
   B. Often negative
   C. Perhaps negative/sometimes positive
   D. Often positive
   E. Always positive

Reminder of choices: A = Definitely Yes
   B = Probably Yes
   C = Don't know/No opinion
   D = Probably No
   E = Definitely No

123. If someone asked you to assist with his/her suicide, would you be willing to do so?

124. If someone were planning to commit suicide, would you be willing to prevent the act?

125. If the person most near and dear to you were to ask you to assist with his or her suicide, would you be willing to do so?

126. If the person most near and dear to you were to plan to commit suicide, would you be willing to prevent the suicide?

127. Do you believe that you have the right to commit suicide?

Suicide Experience Questionnaire

Some questions on this survey ask about very sensitive and private information. However, the only way to find out more about these issues is to ask about them; your participation is very much appreciated.

---

1. Have you ever known somebody who has committed suicide? Yes ___ No ___

a. If so, what is the closest (emotionally) you have been to the individual who has committed suicide? (If more than one, please rate each one individually)

       Not Close   1   2   3   4   5   6   7   Very
       at all   close

b. What was your relationship to the individual(s)?

_____

c. What was the date of the suicide(s)? (Please be as precise as possible)

_____

---

2. Have you ever known somebody who has attempted suicide? Yes ___ No ___

a. If so, what is the closest (emotionally) you have been to the individual who has attempted suicide? (If more than one, please rate each one individually)

       Not Close   1   2   3   4   5   6   7   Very

       at all   close

b. What was your relationship to the individual(s)?

_____

c. What was the date of the suicide attempt(s)? (Please be as precise as possible)

_____

---

3. Has anybody ever spoken to you about killing him- or herself? Yes ___ No ___

a. If so, what is the closest (emotionally) you have been to an individual who has spoken to you about killing him- or herself?

Not Close   1   2   3   4   5   6   7   Very
at all   close

b. What was your relationship to the individual(s)?

_____

c. What was the date of this event? (Please be as precise as possible)

_____

---

4. Have you ever attempted suicide WITHOUT an intent to die? Yes ___ No ___

a. If so, how many times? _____

b. With what method(s)?

Please be as accurate and detailed as possible:

Method	Medication/Drug Type	Dosage

c. On what date did you make the attempt(s) (month & year)? (Please be as precise as possible)

_____

_____

d. Had you consumed alcohol and/or drugs (not used for the suicide attempt) at the time of the attempt? [If applicable, please note each attempt separately by placing a check in the appropriate box for each attempt]   Yes ___ No ___

e. What amount of alcohol had you consumed? (i.e., number of drinks/ounces) (If applicable, please list amount at each attempt separately)

_____

f. What amount of other drugs had you consumed? (Please be as precise as possible) (If applicable, please list amount at each attempt separately)

_____

g. Were there other people in the near vicinity or accommodation (e.g., house, apartment) at the time of the attempt?   Yes ___ No ___

h. Did you leave a suicide note?   Yes ___ No ___

i.   Rate the degree of planning that went into your suicide attempt:

No preparation	1	2	3	4	5	˙6	7	Extensive preparation

j.   Rate the degree to which you really wanted to *end your life* at that time:

Absolutely wanted to stay alive	1	2	3	4	5	6	7	Absolutely wanted to end life

---

5.   Have you ever attempted suicide WITH an intent to die?   Yes ___ No ___

a.   If so, how many times? _____

b.   And if so, with what method(s)? _____

Please be as accurate and detailed as possible:

<u>Method</u>	<u>Medication/Drug Type</u>	<u>Dosage</u>

c.   On what date did you make the attempt(s)? (month & year) (Please be as precise as possible)

d.   Had you consumed alcohol and/or drugs (not used for the suicide attempt) at the time of the attempt(s)? [If applicable, please note each attempt separately by placing a check in the appropriate box for each attempt]

        Yes ___ No ___

e.   What amount of alcohol had you consumed? (i.e., number of drinks/ounces) (If applicable, please list amount at each attempt separately)

f.   What amount of other drugs had you consumed? (Please be as precise as possible) (If applicable, please list amount at each attempt separately)

g.   Were there other people in the near vicinity or accommodation (e.g., house, apartment) at the time of the attempt?

        Yes ___ No ___

h.   Did you leave a suicide note?   Yes ___ No ___

i.   Rate the degree of planning that went into your suicide attempt:

No   1   2   3   4   5   6   7   Extensive
preparation   preparation

j.   Rate the degree to which you really wanted to *end your life* at that time:

Absolutely   1   2   3   4   5   6   7   Absolutely
wanted to   wanted to
stay alive   end life

---

6.   Have you ever SERIOUSLY CONSIDERED committing suicide? Yes ___ No

a.   Did you select a method?   Yes ___ No ___

b.   What was the method? (Please be as specific as possible)

      _____

c.   On what date(s) did you seriously consider suicide? [Please note — if this was a period in your life, please list the month(s) and year(s) that it lasted for] (Please be as precise as possible) _____

      _____

d.   Had you written a suicide note?   Yes ___ No ___

e.   Did you have a plan thought out?   Yes ___ No ___

f.   How detailed was this plan?

Detailed   1   2   3   4   5   6   7   Not detailed

g.   Rate the degree to which you really wanted to *end your life* at that time:

Absolutely   1   2   3   4   5   6   7   Absolutely
wanted to   wanted to
stay alive   end life

h.   Did you at any time tell anyone about this? Yes ___ No ___

i.   Who did you tell? [Please provide the relationship to you (e.g., doctor, friend, family member, psychologist, etc.) of ALL the people that you have told]

      _____
      _____
      _____

7. *At this moment*, are you SERIOUSLY CONSIDERING committing suicide?
   Yes___ No___

a. Have you selected a method?   Yes ___ No ___

b. What is the method? (Please be as specific as possible)

   _____

c. For how long have you been seriously considering suicide?

   _____

d. Have you written a suicide note?   Yes ___ No ___

e. Do you have a plan thought out?   Yes ___ No ___

f. How detailed is this plan?

   Detailed   1   2   3   4   5   6   7   Not detailed

g. Rate the degree to which you really want to *end your life* at this time:

   Absolutely   1   2   3   4   5   6   7   Absolutely
   want to   want to
   stay alive   end life

h. Have you told anyone about this? Yes ___ No ___

i. Who have you told? (Please the relationship to you (e.g., doctor, friend, family member, psychologist, etc.) of ALL the people that you have told)

j. What has prevented/made it difficult for you to tell someone about your difficulties?

   _____
   _____
   _____

---

8. Have you ever engaged in behaviour that, while not intended to end your life, could have resulted in death for you and/or other individuals?
                                                        Yes ___ No ___

a. Please describe such events.

   _____
   _____
   _____
   _____
   _____
   _____
   _____

b. Rate the degree to which you really wanted to end your life at that time:

Absolutely   1   2   3   4   5   6   7   Absolutely
wanted to   wanted to
stay alive   end life

The person most near and dear to me is_____. Please keep this person in
mind when answering the questions about "the person who is most near and dear to me."

APPENDIX B

RESOURCES

COMMUNITY RESOURCES

Please keep this sheet for your own information.

Dr. Michael Kral, C. Psych.   **253-4232 x2220**

Office of Student Services   **253-3410**
(For students in residence)   Room 50, Vanier Hall

Psychological Services   **973-7012**
(For all students)   Sunset Ave.

Windsor Distress Centre   **256-5000**
(All crises)

Kids Help Phone   **1-800-668-6868**

APPENDIX C

CONSENT FORM

.

I, _____ (please print), hereby understand and consent to the following:

I am being asked to complete a series of questions asking about my attitudes and my experience with suicide. Although many of these questions are of a general nature, many of them ask about matters that are potentially upsetting to some people. The purpose of this study is to learn what we can about suicide from many different people's responses.

I am aware that my participation is completely voluntary. I have the right to withdraw from participation at any time without explanation or penalty, and I may also refrain from answering any questions that I prefer to omit. I may ask any questions during my participation, and M. David Wallace (graduate student) or Dr. Michael Kral (supervisor) can be contacted at 253-4232 x2217 after I have finished for any further questions, comments, or discussion. Confidentiality regarding my responses will be protected by not having my name or any other identifying information appear on the survey. The results of this study may be published at a later date, but my identity or that of the other participants will not be known. My own individual results will not be available. Information sheets summarizing the results will be posted in the psychology department at the University of Windsor once data collection and analysis are completed.

I am being asked to participate on one occasion for approximately one hour and 30 minutes. On the discretion of my psychology instructor, I will receive experimental credit points for my participation.

This procedure has been cleared by the University of Windsor Department of Psychology Ethics Committee. Concerns can be directed to the Ethics committee Chair, Dr. Sylvia Voelker, at 253-4232. I have received a copy of this form and a list of community resources for crises. The copy I submit to the researcher will be kept separate from my survey to protect my identity.

I understand this information and voluntarily-consent to participate in this study.

_____
Signature

_____
Date

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