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David Michael. Ledgerwood

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Attachment, Individuation, and Perceptions of Early Caregiver Relationships
Among Suicidal and Non-Suicidal Adolescents

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A Dissertation
Submitted to the Faculty of Graduate Studies and Research
Through the Department of Psychology
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Degree of Doctor of Philosophy at the
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Windsor, Ontario, Canada
2003

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Abstract

This study sought to investigate how attachment, individuation, perceptions of family life, and family related experiences and relationships contribute to our understanding of suicidal ideation and attempt in adolescents. Adolescent volunteers (N = 153, 98 female and 55 male) recruited from four youth centers in Southwestern Ontario participated in a survey. Participants completed a series of questionnaires consisting of questions about early experiences (e.g., close relationships, abuse, addiction, suicide history), attachment in romantic relationships, emotional autonomy from parents, relationship with parents, perceptions of family life, depression and suicidal ideation. Results revealed significant differences based on suicide history (i.e., past attempt or ideation) with greater suicide history related to greater chance of loss due to separation, personal psychiatric problems, paternal alcohol problems, history of physical, emotional and sexual abuse, and knowledge of the attempted or completed suicide of another. Adolescents who had attempted were more likely to have experienced personal drug and alcohol problems, and paternal drug problems, while those with a history of suicidal ideation were less likely to report experiencing such problems. Suicide attempters and ideators were more likely to fall into groups typified by preoccupied and fearful attachment, and less likely than those who reported no suicide related history to characterize themselves as secure or dismissive in relationships. History of suicide attempt and ideation were significantly associated with greater attachment anxiety, lower family cohesiveness and emotional expressiveness, greater family conflict, greater individuation, de-idealization of parents and perception of parents as separate people. Lower levels of family organization was associated with greater current suicidal ideation. Greater levels of hopelessness were
associated with greater de-idealisation of parents, lower tolerance for close relationships, and greater satisfaction in close relationships. Current depression mediated the relationship between attachment anxiety and hopelessness, and between ability to depend on others and hopelessness. Depression did not mediate the relationship between tolerance for relationship closeness and hopelessness, and only partially mediated the relationship between the multiplicative term (Close X Depend) and hopelessness. The results of this study suggest important ways in which our understanding of family factors can assist in our understanding and treatment of suicidality among adolescents.
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Many people helped me along the road to completion of this dissertation.

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My family and my wife’s family were supportive, emotionally and financially. I am grateful to each member of both families for everything from a few encouraging words, to a bed to sleep on while attending conferences and dissertation meetings.

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Chapter I: Introduction and Literature Review

*The calm,*
*Cool face of the river*
*Asked me for a kiss.*

*Langston Hughes, Suicide Note*

This poem by Langston Hughes presents a romantic view of suicide, embodying, in a few short words, the romanticized picture of life and death that becomes a part of many adolescents' perceptions. Perhaps this is part of the reason why so many young people attempt to end their lives.

If we are to begin to understand the phenomenon of suicide, we have to ask questions. Asking (and attempting to answer) questions has led us, as researchers, clinicians, and concerned people, to understand that there are links between suicide and personality, biology, society, development, psychopathology, and so on. Yet, we do not have a solid understanding of the simple question, *"Why suicide?"* So we keep asking new questions, and trying to find new answers.

This dissertation is an addition to the accumulation of knowledge designed to answer the question, *"Why do adolescents kill themselves?"* Since the field of suicidology does have the distinction of knowing a lot about suicide already, and since we do know the discouragement of not knowing enough, it is vital that work being done in the area be well thought out and contribute significant new information to what we already know. This is what I hope to accomplish in this document.

The main purpose of this dissertation is to focus on adolescent suicide. In beginning
this project, I wished to further examine how developmental factors, such as attachment, individuation and perceptions of family life might be associated with adolescent suicidal thought and behaviour.

*Importance of Studying Adolescent Suicide*

Why is it important to study adolescent suicide? Data from North America places suicide among the leading causes of death in teens, but suggest that it is still generally a rare event. United States data indicate that suicide is the fourth leading cause of death in young adolescents, ages 10-14 years, and the third leading cause of death in the 15-24 age range (CDC, 1995). Furthermore, the rate of suicide among young people has increased substantially in the United States since 1950.

Canadian data demonstrates similar findings. For example, data from the Quebec Health Survey (QHS) reveal a substantial increase in the suicide rate among males in the 15-19 and 20-24 age groups (Boyer, Legere, St-Laurent & Previle, 1998). In the 1990-1992 period, these groups carried rates of 27 and 41 per 100,000 respectively, compared with rates of 3 and 8 per 100,000 respectively in the same groups in the 1960-1964 time frame. While some of this difference may be due to differences in reporting suicide, the data suggest a large increase in teen suicide over the past three decades.

At a national level, official statistics indicate that there has been a significant rise in the suicide rate of 15-19 year olds, from 1951, when the rate was approximately 1.8/100,000 (Health Canada, 1994), to 1998, when the rate was roughly 12/100,000 (Health Canada, 1998). Rates for suicide attempt are also significant. Particularly notable
are the facts that women are 1.5 times more likely than men to be hospitalised because of suicide attempts, and that many individuals who attempt suicide are not hospitalised, either receiving help from members of the community or not receiving any help at all (Health Canada, 1998). The rate of suicide attempt for girls between 15 and 19 years of age was 221 per 100,000 in 1998/1999 (Langlois & Morrison, 2002). For boys of the same age range, during the same time period, the rate of attempt was 87 per 100,000 (Langlois & Morrison, 2002). A major limitation of this data is that the prevalence data were gathered during hospitalizations. There is evidence that many suicide attempters do not report, or seek treatment for an attempt (Health Canada, 1998). Therefore, this data does not tell the whole story in terms of suicide attempt rates in Canadian youth.

Finally, the most recent data on adolescent suicidal ideation from Ontario revealed that, among adolescents from the 7th grade through high school, roughly 11% had seriously considered suicide within the past year (Adlaf, Paglia, & Beitchman 2002). These researchers did not report data on lifetime suicidal ideation. However, it is clear that in any given year, more than one in ten adolescents has experienced serious thoughts about killing themselves in the past 12 months.

These studies demonstrate that, while there has been a rise in suicide rates over the past decades, adolescent suicide in predominantly Caucasian North American culture is relatively rare compared with other phenomena. Suicide attempt and ideation, on the other hand, is somewhat more frequent, but still difficult to identify because it frequently goes un-reported. This has some significance for suicide research. First, while suicide is
ranked among the leading causes of death, it receives little money or attention in terms of
development of prevention techniques. As a result, research in this area is lacking.
Second, because the base rate of adolescent suicide is relatively small, it is a difficult
phenomenon to study. Finding samples of suicidal adolescents who have serious
intentions to end their lives is very difficult. As a result, there has been a debate in the
literature concerning how we define suicide attempts, gestures and ideation. Each of
these terms suggests a different degree of seriousness, intentionality with regard to death,
and degree of behaviour actually engaged in. A suicide attempt is generally considered to
be a bonafide attempt to end one's life, while a gesture is seen as an attempt to
demonstrate distress and obtain help. Ideation is an even murkier term, suggesting
anything from an individual having a fleeting thought about ending his or her life, to very
serious ideation involving the development of a lethal plan and an intention to carry out
the plan when given the opportunity.

This study will attempt to evaluate and document the seriousness of the attempts and
ideation of the participants by having participants rate their seriousness about dying.
However, these basic limitations of research into suicidal behaviours must be kept in
mind. No study of suicide risk, save those that study individuals who have made very
serious and lethal attempts and lived, can be totally without this limitation, and the
present study is no exception. The reader of this dissertation may best view the results as
an indicator of serious distress that often leads to either suicidal gestures or attempts, and
keep in mind that both categories of behaviour warrant serious attention from mental
health professionals. Both indicate that the individual engaging in them is in need of assistance that he or she is not getting.

Why Focus on Family, Attachment and Individuation?

Numerous studies have been conducted examining the issue of adolescent suicide and risk factors generally. Some have focused on child and parent psychopathology (Kashani, Goddard, & Reid, 1989). Other studies have raised the question of whether an interaction between biological and socioeconomic factors may be implicated in adolescent suicide (Brown & Goodwin, 1986). Additional studies have emphasized the role of other factors such as bullying (Rigby & Slee, 1999), depression (Shaffer et al., 1988), social-support (Rigby & Slee, 1999), genetics (Glowinski et al., 2001), firearm ownership (Birckmayer & Hemenway, 2001), sexual orientation (D’Augelli, Hershberger, & Pilkington, 2001), exposure to violence (Cohen, 2000) and others in adolescent suicide.

With this said, it is clear that there are many different factors that contribute to suicide. Further, not all suicides are caused by the same factors. The purpose of this investigation is not to find a single unitary answer to the question of suicide. Nor is it to vilify the families of those who attempt or commit suicide. Rather, it is to identify some important facets of suicidal behaviour, namely family relationships and attachment in interpersonal relationships, that may be effective in identifying some at-risk youth.

As has already been stated, this study emphasized only one major set of predictors of
suicidal behaviour. It is clear that suicides may occur among adolescents who have intact, loving, caring and involved families. Like all other studies of suicide and suicidal behaviour, this one cannot expect to find a single set of factors that predict suicide in every case. The reader of this dissertation should keep in mind these caveats as he or she reads this dissertation.

The present study will focus on familial predictors of suicidal behaviour, with a specific emphasis of evaluating self-reported attachment, individuation, family and intimate relationship factors that could potentially serve as measurable indicators of suicide potential. The goal of this dissertation is not to discount other perspectives of suicide, but to offer a family framework in which the phenomenon of suicide can be understood, and a potential model of assessment and intervention.

Family environment, attachment and individuation have been studied as predictors of suicide in the past. However, there are many gaps in the research literature in each of these areas. First, each of these factors have been studied separately, but they have not been studied collectively in the same study. Conducting research this way will help us to begin to understand the interrelation between these psychological and environmental factors. Second, although each area of study proposed here has been studied previously, in some areas, such as the relationship between suicide and attachment, or suicide and individuation, there are very few studies overall. Thus, although we can consider these areas to be “studied”, we may also view them as “under studied”. This study will add to the research literature by using a divergent research strategy to add additional evidence
for the relationship between attachment, individuation, family environment and suicide.

Finally, an additional gap in the research literature concerns studies that are directly relevant to Canadian adolescents. The small number of studies conducted in Canada with Canadian adolescents are appreciably overshadowed by the very large number of studies conducted in the United States with American adolescents. Although there are similarities between American and Canadian culture, we may not be complacent that American data seamlessly generalizes to Canadian adolescents.

This study aims to acquire a greater understanding of the importance of family in suicide. With this greater understanding of the implications of parenting to suicidality, interventions that focus on problematic family relationships may be developed that will decrease the danger of suicide among adolescents. If these family factors are found to be robust predictors of suicidality, then those who design and implement interventions to reduce suicide risk have a potentially powerful point of entry in to the lives of at-risk adolescents.

In the following sections, research and theory concerning suicide, attachment, individuation (including object relations research), and perceptions of family life will be reviewed. Further, other family and attachment related factors, such as addiction and mental illness in the family, abuse, and loss due to death or separation will be explored. This will lay a foundation for the present study.
Attachment Theory

*Early Attachment Theory*

*Bowlby's Model*

The concept of attachment, so widely used today, was defined by the analyst, John Bowlby, who formulated a model based on psychoanalytic, biological, learning, and Darwinian thinking. Bowlby defined attachment and attachment behaviour as follows,

To say of a child that he is attached to, or has an attachment to, someone means that he is strongly disposed to seek proximity to and contact with a specific figure and to do so in certain situations, notably when he is frightened, tired or ill. The disposition to behave in this way is an attribute of the child, an attribute which changes only slowly over time and which is unaffected by the situation of the moment. Attachment behaviour, by contrast, refers to any of the various forms of behaviour that a child commonly engages in to attain and/or maintain a desired proximity. At any one time some form of such behaviour may be either present or absent and which it is is (sic), to a high degree, dependent on the conditions obtaining at the time. (1969, pp. 371-372)

This definition distinguishes between attachment, which is a way of relating to others that develops only slowly over time, and attachment behaviour, which is the behaviour that an individual exhibits in attachment relationships in order to maintain relationships.
Children who have formed an attachment to their primary caregivers will be more likely to seek them out in order to protect them from dangers in the environment. According to Bowlby’s work, this developmental process breaks down when an interference of the protective relationship occurs between parent and child. As an extreme example, Bowlby (1973) points out that parents who threaten to leave the child if they are not good, perhaps even through their own suicide, may create in the child a “genesis of anxiety” where the child becomes frightened that the parent will abandon him or her. Citing research discussed more fully below (i.e., Adam, 1973), Bowlby (1980) notes that, in fact, the actual separation or loss of a parent from a child may be a powerful enough impetus for that child to later go on to commit suicide.

Mary Ainsworth’s Strange Situation

What Bowlby did for the theory of attachment, Mary Ainsworth did to operationalize the concepts. Through creation of procedures to observe young children, Ainsworth revolutionized the way childhood development is studied. Ainsworth, like Bowlby, defined attachment:

“Attachment” refers to an affectional tie that one person (or animal) forms to another specific individual. Attachment is thus discriminating and specific. Like “object relations,” attachments occur at all ages and do not necessarily imply immaturity or helplessness. To be sure, the first tie is most likely to be formed to the mother, but this may soon be supplemented by attachments to a handful of
In this definition she is comparing attachment with object relation theories, and notes that in traditional psychodynamic theory, dependency has implied immaturity and lack of independence. Object relations shares the view that attachment relationships are important at all ages.

Object relations theories, on the other hand, focus on development from a symbiotic emotional relationship with an object (usually beginning with the mother) that begins in infancy, into an individuated (separated), autonomous individual (Mahler, 1968). In this view, a number of relational experiences provide information that is integrated into the individual’s developing sense of self. Mahler (1968) for example theorised that separation anxiety in infancy (a stage lacking in object permanence) is the result of fear of self-annihilation when the object is not present. What distinguishes object relations from attachment models is the disagreement that difficulties in attachment need be tied to the individual’s development with regard to individuation from the object (Bowlby, 1973). That is, in order to become fully developed, a child/adolescent requires both a healthy attachment with caregivers, and a healthy sense of him/herself as a separate, individuated person. Individuation represents an emotional maturity, or emotional separation from caregivers. This is different from independence in a more common conception as an ability to live and survive on one’s own.

Ainsworth went on to note that Bowlby sought a term to replace dependence, and coined attachment as a term that presented interdependence with another individual in a
less negative context. In this respect, attachment is focused more on the development of social relationships while object relations focuses more on the development of an individuated self (Blatt & Blass, 1996). Ainsworth noted that attachment relationships are not dependencies on others or transient relationships with others (1969).

In her famous study of Ugandan families, for example, Ainsworth (1963, 1967) demonstrated that an infant begins to demonstrate attachment behaviour in the first year of life. Attachment behaviours in the case of the Ugandan children included crying when mother left the room and attempting to follow, and were evident in at least one child as early as 15 weeks old. These attachment behaviours were evident in nearly all of the children by 6 months of age. This study demonstrates that a child does engage in attachment behaviours, particularly in relation to the mother.

Perhaps the most important contribution Ainsworth made, as far as this study is concerned, was her work on the infant strange situation response (Ainsworth, Blehar, Walters & Wall, 1978; Ainsworth & Witting, 1969). The strange situation research was concerned primarily with assessing secure and insecure attachments to parents (mothers) among infants and young children. In the strange situation, the infant is first brought into the study room by his or her mother and a researcher, then he or she is left alone with the researcher, and then totally alone for a few minutes. Ainsworth and her colleagues alternated conditions in which the child was left totally alone, with his or her parent, or with the stranger. The researchers observed the behaviour of the children when their
mothers returned, and when left in the strange situations (i.e., with a stranger or alone).\footnote{Ainsworth et al. (1978) described the strange situation as consisting of 8 episodes in the following order: 1) mother, baby and observer together (30 secs.); 2) Mother and baby together (3 mins.); 3) stranger, mother and baby together (30 secs.); 4) stranger and baby together, mother out of the room (3 mins); 5) mother and baby together (3 mins.); 6) baby alone (3 mins.); 7) stranger and baby (3 mins.); 8) mother and baby together (3 mins.). During this time, the researchers observed the actions of the baby when alone, when with the stranger, and when the mother returned.}

Ainsworth et al. (1978) described three patterns of behaviour observed in these strange situations: 1) \textit{Secure attachments}, in which the infant demonstrated signs that he/she missed the parent when first separated from her, cries during the second separation from the mother, and when she returns, seeks out the parent for nurturance, followed by the child settling and returning to his or her play activities; 2) \textit{Insecure/avoidant attachments}, in which, rather than crying when separated from the parent, the infant continues play activities, and ignores the returning parent, attempting to move away from her, without any signs of emotional upset, when she initiates contact; and 3) \textit{Insecure/resistant/ambivalent attachment}, in which the infant is visibly upset at time of separation from his or her mother, and when the mother returns, the infant will sometimes avoid and sometimes seek contact, he or she may show anger towards the parent, and his or her mother is unable to comfort the child when she returns. In her general observations on her studies, Ainsworth noted that children described as securely attached tended to have a more harmonious relationship with their mothers, tended to be more compliant and cooperative, and demonstrate more positive and less ambivalent affect toward their mothers (Ainsworth et al., 1978). This group demonstrated greater ability to use mother as a secure base from which exploration of the environment could take place.
(1978). Those characterized as insecure, demonstrating ambivalent attachments tended to have mothers who were less responsive to crying and other communications the infant made than the mothers of securely attached children (1978). These children appeared unable to use their mother as a secure base, and demonstrated more social/separation anxiety than the securely attached group. They also cried more often and appeared in distress more than securely attached infants when their mothers left them alone or with a stranger. Finally, Ainsworth et al. (1978) noted that those babies in the group labelled avoidant tended to have mothers who may have unwittingly made close body contact with others undesirable for the infant by rebuking the infant's advances for close contact. Ainsworth suggests that the ignoring of the mother in the strange situation in this group may be a defensive reaction against the perceived physical distance or rejection demonstrated by the mother.

In their analyses, Ainsworth et al. (1978) suggest that the interactions observed between mother and infant (or child) serve to form the basis for the child's personality and the way he or she interacts with others in the world later. These researchers cite research which suggests that insecure attachments may influence a child's ability to interact with his or her world, for example through anxiety in new situations (e.g., Ainsworth & Bell, 1974; Main, 1973, 1977; Matas, 1977; Connell, 1974). Others have demonstrated that attachment styles measured in infancy endure into pre-adolescence (Elicker, Englund, & Sroufe, 1992). A primary focus of the present investigation is on attachment styles in adolescence and their relation to suicide. The next section, therefore,
focuses primarily on the application of Ainsworth's work to adolescent and adult attachment, and its relation to psychological outcomes.

*Contemporary Issues in Adult and Adolescent Attachment*

*Operational Definitions of Attachment in Adults*

Based largely on Ainsworth's research, researchers have adapted childhood attachment models to adults and adolescents. Much of this work has been conducted by Mary Main and her colleagues and the development of the Adult Attachment Interview (AAI), an assessment tool designed to assess attachment in adult relationships (George, Kaplan, & Main, 1996; Main, & Goldwyn, 1994). Evidence suggesting the validity of self-report measures has also been noted in the literature (Crowell, Fraley & Shaver, 1999). The implications for attachment style in adulthood have been mainly for the relationship between attachment style and psychopathology. In this branch of attachment research, typical attachment styles endorsed by participants in adulthood and adolescence include three general categories (Simpson, 1990), including: 1) *Secure attachment* in which an individual is comfortable becoming close to or relying on other people, and has no worries about being abandoned by others; 2) *Avoidant (or Dismissive) attachment* in which the individual is uncomfortable being attached to others, dislikes closeness and is distrustful of others; and 3) *Anxiously attached (or Ambivalent)* in which the individual feels that others are not as close to him or her as is desirable, leading to fears of abandonment in relationships. Other interpretations of Ainsworth et al. (1978), and
Bowlby's (1980) writings have determined alternative names and constructs within the measurement of attachment, however, the three mentioned here are the core triad based on Ainsworth's original work. A fourth style, *unresolved-disorganised*, although not evaluated in the current study, is evident when an individual is unable to maintain organisation of reasoning, and expresses illogical beliefs with regard to traumatic experiences (Adam, Sheldon-Keller & West, 1996).

*Adult Attachment in Studies of Psychopathology*

From the original conceptualization of attachment, and its later adaptation to research with adults, grew the study of attachment and psychopathology. Among adults, a number of studies have examined psychopathology and attachment. In one recent study, four attachment self-report measures\(^2\) were used to examine differences between 49 psychiatric inpatients with a primary diagnosis of borderline personality disorder (BPD), and 53 non-diagnosed university students (Sack, Sperling, Fagen, & Foelsch, 1996). On one measure, the Attachment Style Inventory (ASI), these researchers found that in friendship, romantic, and parental relationships, those diagnosed with BPD tended to rate themselves as more anxious than the college sample. BPD patients also rated attachments with both parents as hostile compared with college students. The college sample tended to be more likely to characterize their attachments in friendship, sexual

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\(^2\) The measures used in this study were the Attachment Style Inventory (ASI; Sperling & Berman, 1991), Reciprocal Attachment Questionnaire (RAQ; West, Sheldon & Reiffer, 1987), Hazan and Shaver's Attachment Self-Report (HS; Hazan & Shaver, 1987), and the Attachment History Adjective Sort (AHAS; Sack et al., 1996).
and parental relationships as more dependent than the inpatient sample\(^3\). On an overall assessment of security versus insecurity in attachment relationships, those with BPD were significantly more likely than the college sample to endorse a more insecure attachment style as being characteristic of their relationships.

Research in the domain of attachment style or organization has begun to examine adolescent attachment patterns and relationship to psychopathology. In one study, for example, researchers examined 60 severely disordered, hospitalized adolescents with primary diagnoses of affective disorder, conduct disorder and/or substance use disorder (Rosenstein & Horowitz, 1996). Attachment style in this study was measured with the AAI. Consonant with the predictions of the study, adolescents with a primary diagnosis of conduct disorder or who had a substance use disorder (either primary or comorbid), tended to demonstrate a dismissing (avoidant) attachment style, while those diagnosed primarily with affective disorder tended to be characterized by an ambivalent (anxious) attachment style. Also of note in this study, concurrence between an adolescent's attachment style and his or her mother's attachment style (27 of the 60 mothers in the study agreed to an interview) was 81%. This result suggests stability in attachment style, and provides suggestive evidence for the transmission of attachment style intergenerationally. Further, it suggests that parents learn how to parent from their parents. Female patients were much more likely to demonstrate an ambivalent attachment style and be diagnosed with affective disorder than male patients, who were more likely

\(^3\)"Dependent" as a attachment classification may be seen as being analogous to the term "avoidant" already defined.
to demonstrate dismissive attachment style and be diagnosed with conduct disorder
and/or substance use disorder. In spite of the small sample size, this study found
significant differences in the degree of psychological difficulty between different
attachment classifications, suggesting that attachment style is a feasible personality factor
that may contribute to the development of psychopathology.

Another study compared 71 psychiatric inpatient adolescents with 71 matched high
school students in an 11 year longitudinal study on psychiatric diagnosis in adolescence
(at age 14), and attachment classification and psychopathology in early adulthood (at age
25; Allen, Hauser & Borman-Spurrell, 1996). While these researchers found no
significant differences in terms of DSM-III-R diagnosis and attachment, they did find that
those who were hospitalized at initial interview demonstrated overwhelmingly more
insecure attachment than the non-hospitalized students. Specifically, the attachment
interview (again using the AAI) demonstrated that 44.7% of the high school students, and
only 7.6% of the previously hospitalized sample could be classified as demonstrating a
secure attachment style. Additional research revealed that those with a dismissive
attachment style were more likely to have engaged in criminal behaviour than securely
attached individuals. Furthermore, the previously hospitalized group demonstrated less
ability to actually describe attachment experiences clearly and consistently, higher levels
of derogation of attachment, lack of resolution of past traumas (e.g., from abuse as well
as separation situations in childhood).

These studies demonstrate that various forms of psychopathology are related to
insecure forms of attachment. The research on attachment has advanced on the goal of understanding how various manifestations of insecure attachment style may be useful in predicting a variety of psychological difficulties.

The Question of Adolescent Attachment

In this study, the interest is in adolescent attachment, and the relationship between attachment and suicidality. Adolescent attachment poses special problems for measurement. Many of these problems are discussed in a review article written by Allen and Land (1999). An important issue is that adolescence is a transition period in which there is an increasing striving for independence from parents and increasing reliance on peers. These authors note “This transfer also involves a transformation from hierarchical attachment in relationships (in which one primarily receives care from a caregiver) to a peer attachment relationship (in which one both receives and offers care and support)” (1999, p. 323). Adolescence is a time when individuals initially become interested in forming romantic relationships for purposes of both sex and establishing a sustained attachment relationship. Relationships with parents also transform, from being completely emotionally dependent, to a more reciprocal attachment bond.

An important criticism of the attachment literature levelled by Allen and Land (1999) is the lack of an answer to the question “what is attachment in adolescence?” Some have argued that adolescent and childhood attachment is an epiphenomenon reflecting stability of parents’ attachment (van Ijzendoorn, 1996). The primary difficulty is in determining at
what stage of development attachment traits and emotion regulation skills solidify within an individual. This question of whether we can attribute an attachment pattern to an internal stable trait has been left unanswered to date, and will be a limitation to the present study.

**Measurement of Attachment**

Numerous surveys and interviews of attachment relationships have been developed, each with reasonable reliabilities and validity scores. Much of the work on attachment recently has used the Adult Attachment Interview (AAI) which focuses on Ainsworth's categories of attachment (i.e., secure, avoidant and anxious) (George, Kaplan, & Main, 1996). Although this appears to be a valid measure of attachment, there were reasons it seemed imprudent to select it for the present study. First, due to its relative length (1.5 hours) of administration, it was deemed that recruitment of adolescents would be exceedingly difficult, particularly in light of the little compensation available for participants' time. Second, also in relation to time of administration, the present study is examining attachment as a potential vulnerability factor to understand and predict suicidality among adolescents. In a clinical setting, expectations of an hour and a half interview for only one facet of suicide prediction is an unrealistic demand on the clinic's resources.

As a result of this exclusion, alternative (and shorter) measures of attachment were sought. Some criticisms of the use of short self-report measures have been documented
and reviewed by Crowell et al. (1999). First, the question of validity of self-report measures has been questioned because much attachment behaviour is outside of conscious awareness. Crowell et al. (1999) noted three counter arguments to this. First, most people are reasonably adept at providing information about the role of emotions in their relationships. Second, most people have some insight into their experience of close relationships, and know what their partners and others have said about their involvement. Finally, they note that many unconscious and conscious goals are “in the same direction”. These authors also note that being defensive in particular ways is often a reflection of a particular attachment style (they use the example of an individual with an avoidant attachment pattern who believes he/she is self-sufficient and does not need to rely on others).

The measures reviewed for this study included the Hazan-Shaver Attachment Self-Report (HS; Hazan & Shaver, 1987), the Attachment Style Measure (ASM; Simpson, 1990), the Reciprocal Attachment Questionnaire (RAQ; West, Sheldon, & Reijmer, 1987), the Adolescent Attachment Questionnaire (AAQ; West, Rose, Spreng, Sheldon-Keller, & Adams, 1998), the Adult Attachment Scale (AAS; Collins & Read, 1991), Relationship Style Questionnaire (Bartholomew & Horowitz, 1991), and the Attachment Style Inventory (ASI; Sperling & Berman, 1991; Sperling, Berman, & Fagen, 1992). Only one survey, the AAQ (West et al., 1998) was designed specifically for adolescents. This measure, however, only addresses attachment to parents. There is no analysis of attachment to peers or romantic partners, and thus the measure was deemed inappropriate
to the research question, which emphasises studying the development of relationships that are more reciprocal, such as with peers or romantic partners.

Among the adult attachment inventories, two measures, ASM and AAS are continuous measures derived from the HS measure, a three item categorical measure which is used to measure an individual's primary attachment style (i.e., secure, avoidant, or anxious/ambivalent; Collin & Read, 1990; Hazan & Shaver, 1987; Simpson, 1990). Another similar questionnaire by Bartholomew focused on overall self-reported attachment (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994). Each of these questionnaires also match Bartholomew’s conceptualisation of attachment that assesses attachment as secure, dismissing, preoccupied or fearful (Bartholomew & Horowitz, 1991). The HS, ASM, and AAS deal solely with sexual/romantic relationships. These were considered appropriate to the current research because romantic attachment is particularly important in the understanding of individuation issues. Part of adolescence is the formulation of romantic relationships. Of these three measures, the AAS was considered to be the best measure for use with this population. Thus, in this study, attachment is measured as attachment in romantic relationships.
Emerging Emotional Autonomy: Individuation in Adolescence

"The voluntary act of taking one's own life represents a failure in communication between the individual and his meaningful object relationships, together with an inability to cope with the stresses of life."

Joseph Sabbath

The Second Individuation Process

One factor that has not received as much attention in the field of suicidology research is the object-relation concept of individuation. Individuation has been defined as not merely self-reliance, but as a process that involves the development of emotional autonomy from parents (Blos, 1979; Steinberg & Silverberg, 1986). Steinberg and Silverberg (1986) have operationalized emotional autonomy (analogous with individuation) as being comprised of an ability to view parents as people outside their parental role, non-dependency on parents, and deidealization of parents. These processes occur throughout childhood development, but particularly in the adolescent years as the teen progresses from hierarchical relationships with parents to reciprocal relationships with peers, parents and romantic partners. With the development of these more mature types of relationships with parents comes an ability to view one self as a separate individual who is capable of forming relationships with others, independently of parents. That is, the adolescent becomes able to navigate emotions in relationships separate from parents, and able to accept his or her emotions as his or her own, separate from those of
his or her parents.

Building on both the Object-Relations school and on Bowlby's attachment model, Peter Blos (1967, 1968) eloquently describes the "second individuation process" that adolescents must go through. Blos notes that, as many object-relations theorists have noted, infantile attachments are necessary in childhood, and the parent serves as the infant or child's "legitimate ego extension" (1967, p. 164). In this sense, as the child relies primarily on libidinal urges, he/she must rely on parents to be his or her ego. The first individuation stage, described by Mahler (1963) and others, involves a shift that typically occurs in toddlers, and is completed by age 3. In this shift, the toddler's relationship to his or her parent becomes much less symbiotic and much more autonomous. Symbiosis in psychological relationships involves a sense of being merged with another person emotionally (Richman, 1986). As the toddler develops emotionally, he/she begins to experience his or her existence as separate from the caregivers around him or her. This is a process of growing from being undifferentiated from another emotionally (a symbiotic relationship) to the recognition of self as separate and fundamentally different from the other (an individuated position relative to caregivers). Mahler (1963) notes that the symbiotically attached infant becomes an individuated toddler developmentally. This individuation allows the child to explore his or her world, and become more independent and capable of handling emotional experience separate from parents. Thus, the individuated child is able to form emotional bonds independently of parents. When a child is symbiotically related to his or her parents, the child can not independently make
and maintain autonomous emotional bonds with others.

Blos (1967) wrote that this process occurs again in adolescence, and spans the entire length of that developmental period. Individuation is, for Blos, "The disengagement from internalized objects - love and hate objects - [which] opens the way in adolescence to the finding of external and extra familial love and hate objects" (p. 163). He goes on to note, "Without a successful disengagement from infantile internalized objects, the finding of new, namely, extra familial, love objects in the outside world either is precluded, hindered, or remains restricted to simple replication and substitution" (p. 164). Individuation is necessary in order to break away from infantile dependencies on parents, and to begin forming more adult love and hate relationships. That is, there is a decrease in symbiosis in the relationship with parents, and an emergence of emotional autonomy. Adolescence is seen as the time when this process occurs. The role of the parent in this process is to help foster the adolescent’s sense of independence, and ability to handle emotional experiences. Additionally, the parent provides support and is allowed to receive support from the adolescent. The adolescent is allowed to develop a sense of his or her own self. The adolescent’s ideas, interests, feelings and thoughts are more explicitly their own, and do not necessarily have to match those of their parents. Developmentally, these processes occur throughout childhood, beginning roughly around that age of two. However, during adolescence there is a blossoming of the adolescent’s personal emotional resourcefulness that assists the adolescent in navigating complex social relationships independently. The child does not lose his or her emotional bond with
parents. Rather, the quality of that bond changes to incorporate the adolescent's emerging autonomy. When the adolescent's family relationships remain symbiotic, however, there is little room for the adolescent to grow emotionally, and the adolescent remains dependent on parents, rather than transcending those dependencies and learning sophisticated ways of coping autonomously in relationships.

Bloch views adolescence as a time of natural oscillation between regressive and progressive processes. The regression is toward symbiosis, and progression is toward individuation. In fact, he noted that adolescence is the only period in which ego regression "constitute[s] an obligatory component of normal development" (p. 172). According to Bloch, adolescence is meant to be a time when the individual ego develops toward adulthood, and old, "outmoded" ways of relating to the world are rejected. Those adolescents who experience various psychopathologies experience some difficulty in progressing from old ways of coping. Bloch notes that these adolescents "side-step" the individuation process, and as a result, may attain a pseudo-individuation that may result in difficulties.

Also, the adolescent period appears to be a critical time for development and practising adult roles. Bloch notes that this is a time of superego development. Rather than see his or her parent as an omnipotent figure, the child begins to see both the good and bad in caregivers, and to interact with same-age peers (de-idealisation). In this peer interaction, the adolescent is able to try on particular roles and relationships without any sense of permanence. As a result, though, there is a sense of ambivalence associated with
adolescence, between moving forward and moving backward. Blos likens the individuation process to mourning a loss. The loss is the symbiotic attachment to infantile objects.

The parent role in this individuation process, therefore, is an important one. Parenting provides a child with an organisational structure for life, and plays a major role in a child's development of relationships. As we see in the work of Richman (1986), and others, this critical adolescent individuation process may also play a major role in adolescent suicidality.

Thus, individuation in adolescence is a mechanism of growth. Healthy individuation from parents and adult caregivers paves the way for the development of healthy, emotionally reciprocal relationships with peers and romantic partners. Without such a developmental process, an adult will experience difficulties in reciprocal relationships with others, and be unable to have a genuine give-and-take emotional relationship with others.

Attachment and Object-Relations Theories as Explanation of Suicide

Individuation and attachment, as they have appeared as constructs in early writings, have been used to help explain suicidal behaviour. These theories originated from the work of Sigmund Freud, who also discussed factors that he believed contribute to suicide. Additionally, Bowlby and a number of contemporary object-relation oriented writers have discussed how their theories may predict suicide.
Suicide and Attachment

Freud's Mourning and Melancholia

Sigmund Freud's theory (1917, 1920) described suicidality as a result of early conflicts with caregivers that led to an emotional state where the individual experiences intense hatred toward parents at the same time she or he experiences intense love. The result of these conflicting intensities is an equally intense anxiety and guilt. In 1920 he wrote:

Probably no one finds the mental energy required to kill himself unless, in the first place, in doing so he is at the same time killing an object with whom he has identified himself, and, in the second place, is turning against himself a death-wish which had been directed against someone else. (p.162)

Freud's view on suicide has been summarised elsewhere (Ledgerwood, 1999). Suicide, according to Freud, occurs when there are conflicting drives to simultaneously maintain and move away from symbiotic relationships.

The ambivalence of this love-hate relationship creates a conflict in the child (later adult), that may be carried forward in future relationships. In terms of attachment relationships, it would be expected that those adolescents who are prone to suicidal behaviour would be more likely to experience ambivalence in their attachment relationships. This ambivalence may result in attachment related anxiety in the individual, since the individual simultaneously wishes to be close to, and be rid of the attachment object.
Bowlby on Depression and Suicide

Bowlby was an analyst who was influenced by Freud's work. However, in developing his theory of attachment, Bowlby emphasized psychoanalytic, cognitive, and genetic explanations of attachment. With these perspectives in place, Bowlby cited research that suggested that disruptions in a child's early attachments are associated with both depression and suicide later in life (1980). In his final volume of his attachment series, he distinguished between sadness, depression and depressive disorder (1980). For Bowlby, sadness is a natural reaction to a significant loss, and one that should be seen as normal. He notes that depression occurs in the face of hopelessness, and when the individual's sense of his/herself and the world is disorganized (1961).

Bowlby notes consistency between his approach and the helplessness approach of the cognitive theorists. "In most forms of depressive disorder, including that of chronic mourning, the principal issue about which a person feels helpless is his ability to make and to maintain affectional relationships. The feeling of being helpless in these particular regards can be attributed, I believe, to the experiences he has had in his family of origin" (1980, p. 247). Depressive disorder occurs when sadness is chronic and coupled with a sense of hopelessness in relationships. Bowlby suggests, however, that the cognitive perspective does not take into account the potential origins of the problem.

Bowlby (1980) notes three possible scenarios under which depression may occur in children. First, the child may be unable to form a secure relationship with parents, in spite of efforts to do so. In this situation, the loss becomes failure to make or maintain a
secure caregiver relationship in the first place. Second, the child may be told repeatedly by parent how unlovable or inadequate or incompetent he or she is. The child learns that his or her parent is rejecting or punitive, and eventually learns to expect hostility in new relationships. Finally, the child may experience an actual loss, e.g., death of a parent. In this case, depression arises when the perception that any effort to fix this situation will not work overrides any sense that the loss should be mourned rather than fixed.

Bowlby also noted that a parent's threat of abandonment may lead to severely anxious attachments (1973). He noted that real, imagined and threatened loss of a primary caregiver is related to increased suicide potential later in childhood (1980). Bowlby's main point with regard to suicide was primarily that threats of a parent's suicide, or actual suicide by a parent, invoke an intense anxiety within the child, and that this anxiety may become chronic, particularly if the threats last throughout childhood and adolescence (1973).

Models of Suicide and Individuation

Object relations theorists such as Mahler and Blos did not comment at depth on suicide. However, a number of contemporary writers have explored how the concept of individuation could be applied to adolescent suicide. Some of the most compelling suggestions of an association between suicide and individuation comes from therapy accounts.
Joseph Richman on Suicide and Family

Richman (1986), for example, noted a number of family factors based largely on attachment and object-relations theories that contribute to suicidality in adolescents:

1. The adolescent's family is generally characterized by a *symbiotic* relationship in which the family is a closed unit (i.e., allows no outside influence or connection). Family members do not exist as autonomous people; rather they are psychologically merged (i.e., in a symbiotic relationship with family members), fearing an independent existence.

2. The family relationship often involves one parent who is “domineering” and one who is emotionally “distant” from the family. The relationship with the “domineering” parent is purported to be characterized by enmeshment and lack of boundaries while the relationship with the “distant” parent is characterized by dissociation and lack of emotion.

3. Suicide is generally related to a direct threat to the family dynamics or system. Even normal developmental tasks (e.g., growing up, becoming independent, beginning a family of one's own) are seen as a threat to the family system.

Richman concludes his argument by indicating that if autonomy can be increased among family members, if realistic boundaries can be erected, if there is a respect for the need of a child to grow, the threat of suicide or other difficulties decreases (Richman, 1986).

Richman's theory has been examined empirically. In one study conducted by Miller, King, Shain & Naylor (1992), 15 suicidal adolescents, 14 psychiatric controls and 14 normal controls rated their families on a number of dimensions including cohesiveness,
adaptability, communication, parental caring, and parental over protectiveness. The results of the study indicated lower family cohesion and higher levels of family rigidity among the families of suicidal adolescents than either the psychiatric or non-psychiatric control group. This study also found that non-psychiatric controls experienced significantly better communication with their parents than either suicidal adolescents or psychiatric controls. A valid criticism is that the patient's negative mood may have potentially affected his/her rating. However, the scores distinguished suicidal from non-suicidal clinical adolescents, when it may be expected that non-suicidal hospitalized adolescents may also very well be characterized by negative mood.

_Joseph Sabbath, Expendable Child_

Sabbath (1969) described how an adolescent can become suicidal by becoming the expendable child of the family. By expendable child, Sabbath meant that some aspect of parental communication - “conscious or unconscious, spoken or unspoken” - becomes a signal to the adolescent that tells him or her that the parents want to be rid of him. He notes that “The parent perceives the child as a threat to his well-being, and the child sees the parents as persecutors or oppressors”. Sabbath continues,

When the situation develops in which the parents either consciously or unconsciously, verbally or nonverbally, wish for the adolescent to die, the child is faced with an actual loss which is tantamount to being abandoned. He has become expendable and he knows it, as evidenced by his subsequent suicidal
behavior. The expendable child refers to one who no longer can be tolerated or needed by his family.

This theory is consistent with the concept of anger toward the love object experienced by the adolescent espoused by Freud (1917/1957, 1920/1957), as well as with Richman's (1986) model.

Kalman Kaplan, Development and Pseudo-development

The work of Kaplan and his colleagues (Kaplan & Maldaver, 1993; Kaplan & Schwartz, 1993; Kaplan & Worth, 1993) has further added to the literature on development of attachment relationships and suicide. Kaplan's model can be seen largely as a developmental one focusing primarily on completion of each of Erikson's (1950, 1968) psychosocial stages of development. As in Erikson's theory, Kaplan indicates that an individual must face a natural ego crisis at each stage of development before he or she may be able to successfully proceed to the next developmental stage. Failure to mature in the face of the crisis can lead to a stunted developmental growth that may appear as a pseudo development to the next level. At the adolescent level, this means that the teen must go through a period of confusion concerning identity issues, through which he or she "tries on" different identities. This conceptualization comes from Erikson's (1950, 1968) that the primary issues of self, concerning adolescence are of questioning who one will become, and what the future holds. The struggle at this age is against confusion over what the adolescent's role in life is. The adolescent must confront these confusions in the
face of rapid physical, sexual and cognitive development (Erikson, 1950). At the same time, he/she becomes autonomous from parents through a second individuation process (Blos, 1967). Attachment and reliance on parents becomes less important, and reliance on friends and mates more important.

Kaplan notes that suicidality may occur in adolescents when they are trapped in caregiver relationships that are overly enmeshed, disengaged, or a combination of the two. In *enmeshed* relationships, family members are bonded to one another to the point of being psychologically merged. There is no autonomy, for fear that this will weaken or destroy the family structure. In this family, the adolescent experiences a lack of individuation. In families characterized by *disengagement*, family members are emotionally detached from others. They often fear intimacy, according to Kaplan, and lack a capacity to bond. The most problematic family relationship, according to Kaplan, involves a *rejection-intrusion* style of relating. In this type of family relationship, the relationship of one of the caregivers to the child is characterized by enmeshment and lack of boundaries, while the other parent is disengaged emotionally.

Kaplan's work provides a more rare instance of empirical examination of these issues as they relate to suicide. In one study (Kaplan & Maldaver, 1993) researchers examined the parenting style of 18 couples who recently lost an adolescent to suicide and 25 control couples. Using a measure of parental individuation and attachment designed by Kaplan, the study found that families identified as "healthy" (i.e., not characterized by enmeshment or disengagement) included 16.7% of the adolescents who suicided, and 40
% of the control teens. Families characterized by one parent who was either enmeshed
with or disengaged from the children, represented 44.4% of the suicides, and 40% of the
control adolescents. Finally, families that fell into the rejection-intrusion category
included 38.9% of the suicides, and only 12% of the controls. These results, although
generalizing from a relatively small sample and based on measures that require greater
development, suggest that suicide occurs more often in families characterized by
pathological attachments.

_Cynthia Pfeffer’s Studies of Suicidal Children_

Pfeffer (1986) notes that her view of the family of a suicidal child or adolescent rests
primarily on psychodynamic and systems theories. It focuses, not just on the relationship
between the child and parent, but also the effect that spouse and other familial
relationships have on the parent-child relationship. It is also a model centring around
development of ego functioning and defences in the child.

She notes that families with suicidal children tend to have certain characteristics in
common, including: 1) a lack of boundaries between members of the family characterized
by “insufficient individuation of the parents from their family of origin”, and “strongly
felt and expressed hostility, feelings of deprivation, low self-esteem, and magnified
attachments to the parents' families of origin” (1986. P. 147); 2) An inflexibility in the
spousal relationship, as evidenced by ambivalence and intense anger, dependency and
constant threat of separation; 3) An inflexibility on the part of the parent to adapt to the
child’s temperament, feelings or behaviour which appears to be related to a projection of feelings onto the child, and which results in chronic conflicts between the parent and child; 4) There exists, in Pfeffer’s view, a symbiosis between parent and child in which the child is not allowed to progress through his or her natural individuation process; and 5) There is a general inflexibility in the family system as a whole, and change is threatening.

Kenneth Adam on Predisposing Factors

Adam (1994) suggests that there are certain “predisposing” and “precipitating” factors that lead to suicide. Predisposing factors are those things that affect the system of attachment directly and include factors such as inadequate or adverse parenting, and the early attachment experience. In Adam’s model, the adequate/adverse parenting dimension is defined by the internal sense of self and of the attachment figure, and the resulting ability to form secure attachments with others into adulthood. Precipitating factors are events in the life of the suicidal person that act to reveal the difficulties they experience in attachment relationships. They lead to specific incidences of suicidality (ideation, attempt, etc.) and include loss of relationships, rejection experiences, disappointments in relationships. In Adam’s model, early attachment experiences predispose the adolescent (later) to be more or less vulnerable or resilient to precipitants like break-ups in relationships, loss events, rejection, etc. Those individuals who do not have attachment difficulties tend to be more resilient to current loss and react to the
resultant *attachment crisis* with adequate coping, leading to resolution of the crisis and interpersonal growth. Those individuals who experienced early adversities that led to attachment difficulties, on the other hand, are more vulnerable to interpersonal loss and rejection, and tend to react with a greater degree of anxiety, anger and hopelessness. Early “protective factors” can direct the child who is on the path to suicide toward the path of resilience, according to Adam. These factors include high self-esteem, stable relationships (even if the parental relationship is not stable), and optimism.

While a common theme in much of this body of research and theory focuses on negative or inadequate parenting, it is important to acknowledge that suicide is not always or simply related to parental or family flaws. It is a multi-dimensional action that is in part influenced by development and family life. While the theories of Freud, Sabbath, Richman and others are informative in helping to understand family processes that may foster suicidal feelings in people, it is important to also keep in mind that suicide is also associated with multiple interactions between inter- and intra-personal, biological, genetic, sociological and ecological domains. The current investigation will help to further explore how perceived difficulties in the family relationship may be associated with suicide on a more specific level.

As has already been discussed, however, there is some initial evidence that family factors may constitute a significant vulnerability factor with regard to suicidal behaviour of adolescents. This study is necessary to expand the literature and gain a better understanding of the psychological and environmental processes that may contribute to
suicidal ideation and attempt among adolescents. This greater understanding will help to inform the interventions that clinicians develop in order to prevent suicides.

Research Examining Family Factors, Attachment, Individuation and Suicide

Although the research on the mainly psychodynamic concepts discussed above has been relatively minimal, there have been studies that have examined important family predictors of suicide. In this section, research examining interpersonal loss, family psychopathology and disorganization, attachment, individuation processes and current coping with stressful interpersonal situations in relation to adolescent suicide is reviewed. Of particular note is that no one study has brought each of these components together in a coherent model of suicide among adolescents. Each of these factors is of particular importance to an understanding of family dynamics and the development of attachment styles. Interpersonal loss, for example, may have a negative impact on attachment style, as may factors such as abuse, loss due to suicide and other family problems. Factors such as parental psychopathology and substance abuse may further impact of family environment indicators, such as conflict or cohesion. Each of the variables identified here are expected be important in helping to understand adolescent suicidality.

Interpersonal Loss

Stemming mainly from a psychoanalytic perspective, research on significant interpersonal loss has typically revealed that suicide is associated with interpersonal loss.
This is a topic that has been explored in a number of studies over the years. The general understanding of interpersonal loss is that it may predispose the individual to have difficulty forming trusting relationships later in life, and may result in the person being very sensitive to potential abandonment in current relationships. Although much of the evidence in this area comes from published case studies (e.g., Hutchinson & Draguns, 1987) much has been learned about the effect of a parent's suicide on an adolescent or child in recent investigations and therapy accounts.

One of the earliest studies linking a parent's suicide with psychopathology in a child was conducted by Cain and Fast (1966). These researchers noted that the guilt experienced by the child, and the avoidance and distortions of communication about the suicide by the other parent were particularly damaging facets of the suicide on the child. Although the sample of 32 boys and 13 girls in this study ranged widely in terms of age, and amount of time past the suicide of the parent, it represents one of the few descriptions of the factors that accompany a parent's suicide.

Pfeffer has noted in an early case study that loss of a parent to suicide can be a traumatic event for children who have not yet resolved individuation issues in toddlerhood (Pfeffer, 1981). Pfeffer (1981) suggests that an unresolved loss of a caregiver can result in an unhealthy symbiotic relationship with that caregiver. In one study, Pfeffer et al. (1979) examined a number of correlates of suicidal behaviour in psychiatric child inpatients. In total, 58 children were studied, between the ages of 6 and 12. Since the children studied were inpatients with severe psychological difficulties, their
parents tended to have more psychological and familial difficulties than seen in the population. Some of these included parental separations, absent fathers, and abusive or violent home environments. Additionally, depression among the mothers of these children was associated with the severity of suicidality among the suicidal children. Those in Pfeffer's study who were suicidal were more preoccupied with death, worried more about family dying, and were more upset over the death of a loved one.

Adam (1973) has noted that general loss is associated with greater suicidality. He compared suicidal ideation among three groups: 1) those who lost a parent by death in childhood; 2) those who lost a parent through divorce or separation; and 3) a matched control group who did not lose a parent in childhood. Adam found that nearly 16% of those who lost a parent in childhood attempted suicide at some point. It did not seem to matter whether the relationship was lost due to death or divorce. Among those from intact families on the other hand, only 4% had ever attempted suicide. Furthermore, the participants who lost a parent in childhood demonstrated more serious ideation than those from intact families. Adam concluded that there was a significant link between suicide and loss.

In another study by Adam (Adam, Lohrnez, Harper & Streiner, 1982), researchers examined the relationship between parental loss and suicidality among university students. These researchers compared 76 participants who lost a parent prior to age 17 with 61 participants who came from intact homes. This study looked at availability of caretakers, quality of parenting, and responsiveness to physical and emotional needs.
These researchers found striking differences in suicidality between the parental loss and intact groups. In the loss group, 47% of the participants had experienced some serious suicidal ideation, while only 15% from the intact group experienced such suicidal ideation. Out of 17 participants who had made suicide attempts at some time in the past, 14 came from the parental loss group. The researchers noted that whether loss occurred as a result of parental death, or of separation/divorce, made little difference in suicidality.

The researchers further concluded that parental loss was a serious suicide risk factor only when child care was further jeopardized before and/or after the loss, a result that these researchers followed up in a later study (i.e., Adam, Bouckoms, & Steiner, 1982).

More recently, loss and separation has been studied further. In a study of psychological autopsies of people younger than 20 who had committed suicide, and a group of non-suicidal participants, for example, it was found that those who had committed suicide were more likely than controls to have come from non-intact families, to be living with neither parent at the time of suicide, and to have experienced the parent-child separation more recently rather than earlier (Gould, Shaffer, Fisher & Garfinkel, 1998). Interestingly, these researchers found that the predictive power separation/divorce factor diminished when parental psychopathology was considered. They also noted that those who had committed suicide had, generally, poorer relationships with both parents.

Yet another study by Adam, Bouckoms, and Steiner (1982) examined both loss of a caregiver and stability in the home. This study marks a shift from others in that it examined the effects of parental loss at different stages of life, from birth to age 25.
Adam et al. (1982) compared 98 patients who had attempted suicide with 102 matched (on age and sex) controls. Family stability was defined as the level and consistency of care available from parents and one of three classifications were given: Stable (adequate and consistent care was available and there was never any “material hardship”); Unstable (adequate care from parents was available, but inconsistently; There may or may not have been material hardship); Chaotic (“gross deprivation of adequate parental care associated with prolonged separation from parental figures and often with material and emotional deprivation for prolonged periods” p. 1082). The study revealed a number of important factors in the link between attachment and suicide. Adam et al. (1982) found that over 90% of those adolescents who attempted suicide came from homes labelled “unstable” or “chaotic”, compared with 40% of the control patients4. Loss was also significant, these researchers finding that loss among the suicidal patients tended to occur mostly either between birth to 5 years old, or between 17 and 20 years old. Significantly more loss was found among suicidal patients than among controls.

A divergent finding was that significant differences were found between suicidal and non-suicidal patients in loss or separation due to divorce, but not due to death of a parent. This result contradicts the general literature. What was consistent, however, was that in homes where a loss occurred, control patients tended to be in families that were characterized by relative stability before and after the loss, relative to those who attempted suicide. Furthermore, attempters tended to come from less stable homes, even

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4 In fact, Adam et al. (1982) note that in the group of suicidal patients, 53% fell into the “unstable” category, while 38% fell into the “chaotic” category. Contrast this with 34% of controls falling in the “unstable” category and only 6% falling in the “chaotic” category.
when the families were intact. These results suggest that the attachments formed in stable home environments tend to buffer the adolescent from the suicidogenic effects of loss, and that an unstable environment itself is as significant - perhaps more so - as actual loss in leading to suicidality.

*Family Psychopathology*

There have been numerous demonstrations of this relationship in the suicide research literature. Research has demonstrated that suicide in adolescents and children is often associated with greater levels of parental depression (Pfeffer et al., 1979; Tishler, McKenry & Morgan, 1981), psychosis (Shaffer, 1974), substance or alcohol use (Cohen-Sandler, Berman, & King, 1982; Tishler, McKenry & Morgan, 1981), and personality disorders. Familial disorganization or disarray has been implicated as a risk factor (Gould et al., 1998). Associations have also been noted between adolescent or child suicidality, and the suicidality or completed suicide of a close relative (Guitierrez, King & Ghaziuddin, 1996; Cain & Fast, 1966).

Another study conducted by Kashani et al. (1989) explored both adolescent and parental psychopathology related to suicidality. These researchers noted that, in addition to increased depression, conduct disorder, anxiety, impulsivity, and anger in the adolescents examined, there was also evidence of increased parental psychopathology in parents of suicidal versus non-suicidal adolescents, as measured by parents’ self-report. There was also evidence from adolescents' report for greater family difficulties among
suicidal adolescents when the participant was female.

Family suicide also tends to be related to suicide in adolescence. For example, a study by Roy (1985) examined this relationship. In a sample of 137 Canadian adolescents with a discharge diagnosis of affective disorder, he found 23% of the suicide attempters in the group had a 1st or 2nd degree relative who committed suicide, and 14.8% had more than one relative who had committed suicide at some time in the past.

Physical, Sexual and Emotional Abuse

Pfeffer notes that physical and sexual abuse are also contributors to suicide. For example, one study by Green (1978) found that, of 60 physically abused children, 30 neglected children, and 30 non-neglected/abused children between the ages of 5 and 12 years, those who experienced abuse or neglect were more likely to engage in self-destructive behaviours (e.g., self-hitting, self-cutting, self-burning, hair pulling, head banging, and suicidal threats or attempts) than those who did not. Specifically, of those who experienced physical abuse, 40% engaged in self-injurious behaviours, compared with 17% of the neglected children and 7% of the non-abused/neglected children. In a study of childhood sexual abuse (Adams-Tucker, 1982), researchers found that when compared with children who suffered no such abuse, those who did experienced a greater frequency of numerous pathologies, including among them, suicidal and self-destructive behaviours. The majority of the perpetrators of the sexual offences in this study were close family members (i.e., in order of frequency father 50%, adult or teenage male
relative 19%, and mother 7%).

Similar results have been found in other studies of youth suicide. Physical and sexual abuse and victimisation were more common among runaway street-youth with a history of suicide ideation or attempt (Yoder, 1999). Other studies of youth have also found differences in suicide history based on history of sexual and physical abuse (Fergusson, Woodward, & Horwood, 2000; Johnson et al., 2002; Tyler, 2002).

A few studies have found less compelling evidence for a definitive link between suicide and abuse. A recent study of adolescent inpatients found sexual abuse and emotional neglect to be associated with suicide attempt and self-mutilation (Lipschitz, et al., 1999). However, physical and emotional abuse, and physical neglect were not found to be significantly associated with suicidal behaviour. Similarly, in two studies of the association of physical abuse and suicide, the association between the two variables in adolescents recruited from child abuse registries, and matched controls, physical abuse was found to be either not related, or indirectly related to suicidal ideation and attempt (Kaplan et al, 1997, 1999). Thus, the exact impact of abuse on suicidal ideation and attempt is unclear. This study will attend to abuse as a predictor of suicide history, and will attempt to understand the relationship between abuse and suicide.

**Knowledge of the Suicide of Others**

The suicide of a close relative is related to further suicide. A detailed study by Gutierrez, King and Ghaziuddin (1996) focused on exposure to family and peer
suicidality, and its influence on attitudes about death. The study was designed to measure relationships between attitudes toward death, and exposure to suicide attempt and completion, other types of death, and ones own suicidal history in a sample of adolescents in an inpatient facility. In this group, 67.6% had history of suicidal behaviour (either serious contemplation or attempts), 20.6% had at least one second degree relative who committed suicide, 8.8% had a close friend commit suicide, and 26.5% knew at least one person who killed him or her self. In the sample, 14.7% of the adolescent participants had a parent with a history of at least one suicide attempt. Those teens who had a close relative commit suicide (i.e., parent, sibling or close friend) scored higher on measures assessing attraction to death and repulsion by life. Further, those individuals who experienced the completed suicide of a close family member or close friend noted a weaker attraction to life and stronger attraction to death than those who did not have this experience. Even those who lost a loved one to something other than suicide experienced a weaker repulsion by death than those who did not.

Knowledge of the suicide of another person has frequently been associated with greater probability of one's own suicide attempt and ideation. This is true, for example with the suicide death of a peer (Brent et al., 1989, 1993; Yoder, 1999), and of a close relative (Gutierrez et al., 1996; Roy, 1985).

*Family Environment*

The role of family environment in suicide has been explored. A recent study (Hollis,
1996) examined psychopathology (i.e., depression and conduct disorder), and family relationship factors among suicidal and non-suicidal young adolescents and children. Family relationship factors, familial lack of warmth, family discord, disturbed child-parent relationships, anomalous family situations, inadequate or inconsistent parenting, and inadequate communication, were determined by clinicians on 3,338 hospital cases seen between the years 1977 and 1991, and included in the analyses. The final sample consisted of 284 cases which indicated unspecified suicidal behaviour, and 3,054 non-suicidal cases. Despite the obvious limitations of this study (particularly lack of knowledge about the level of consistency among raters, lack of information about what suicidal behaviours were engaged in, and lack of interviewer blindness to suicide status), these researchers found that diagnosis of depression, familial discord, disturbed mother-child relationship, and lack of warmth accounted for the greatest proportion of the variance in suicide status.

Gould et al. (1998) conducted a study examining the effects of family structure, parent-child relationships, parental psychopathology and adolescent psychiatric diagnosis on suicidality among adolescents. They completed psychological autopsies on 120 adolescents who had committed suicide and compared these results with 147 randomly selected control participants. The results indicated that those who committed suicide were more likely to come from non-intact families. In the suicides, divorce (if a factor) tended to occur later in life compared with non-suicides. There was evidence that the suicide victims had poorer relationships with father, and experienced poor
communication with their mother when compared with controls. Suicide victims were less likely to be living with a parent at the time of death than controls. There was no difference, however, between the suicide victims and the control group in whether there were one or two caregivers in the family home. These results, taken as a whole, suggest that significant family disruption is a correlate in adolescent suicidal death, particularly disruption in social relationships within the family.

A series of studies have examined a number of “family climate” variables in relation to suicide. Many of these studies have been conducted using the Family Environment Scale (FES), which is a measure of 8 family environment factors grouped into three groups as follows: 1) Relationship Dimensions including family Cohesion or commitment and support, emotional Expressiveness and openness of family members, and level of Conflict or expressed anger among family members; 2) Personal growth Dimensions including family member Independence, Achievement Orientation, Intellectual/Cultural Orientation, Active-recreational Orientation and Moral-Religious Emphasis; and 3) System Maintenance Dimensions including importance of Organization (or structure) in family activities and responsibilities, and the extent of family Control in the form of set rules and procedures in family life (Moos & Moos, 1994; See Appendix C for a more detailed description).

Early studies found relationships between suicide and family environment, the majority in inpatient pre-adolescents. One study found that hospitalized children who were suicidal tended to view their families as less cohesive and emotionally expressive,
less controlled and more conflictual than non-suicidal hospitalized children (Asarnow, Carlson, & Guthrie, 1987). Another study extending this work found more reports of family conflict, disorganization, lack of achievement orientation, less family cohesiveness, and less emotional expressiveness among hospitalized suicidal children than hospitalized non-suicidal children (Campbell, Milling, Laughlin, & Bush, 1993). Using a discriminant function analysis, again with hospitalized pre-adolescents, another study found that a family cohesion score (i.e., the degree to which family members support and are committed to one another) derived from a factor analysis of the FES proved to be the best predictor of suicidality status, correctly classifying 100% of the suicide attempters in the group (Asarnow & Carlson, 1988). Although severely limited because of small sample size, these studies demonstrate that family factors can play a significant role in childhood suicidality.

Another study examining this relationship examined children who were not hospitalized, but rather were selected from the 9th grade of a rural high school (Meneese & Yutrenka, 1990). A stepwise multiple regression analysis revealed four FES factors to be predictors of suicidal ideation. These were, in order, organization, family conflict, independence and expressiveness, suggesting that families with suicidal children tend to be less organized in terms of family rules and activities, be characterized by greater family conflict and open expression of anger, allow for less independence among family members, and allow for less emotional expression among family members.

Despite its use in studies examining childhood suicidality, the FES has not been used
to examine suicidal ideation or attempt among adolescents and their families. The FES provides a good measure of family cohesiveness and structure and will be used in the present study.

Direct Examinations of Attachment and Suicide

Few studies have examined the relationship between attachment style and suicide history or risk in either adolescents or adults. Determination of the utility of such constructs as security vs. insecurity, or ambivalent or dismissive attachment in contributing to the assessment of suicide risk can be seen as relatively uncharted territory in personality and psychopathology research.

There are very few exceptions to this. Adam and his colleagues (Adam, Sheldon-Keller, & West, 1995, 1996) compared 69 adolescents with a significant history of suicide ideation or behaviours, with 64 adolescents with no such history. All of the adolescents were selected from a small number of inpatient and outpatient programs from three cities. Adolescent psychopathology, suicide history and attachment organization were all assessed by a research assistant. Results indicated that the prevailing attachment pattern among those with a history of suicide ideation and attempt was "unresolved-disorganized", a pattern characterized by an inability to maintain any type of continuity in thinking while discussing traumatic attachment related experiences (e.g., cases of loss due to death, or of abuse) (Adam et al., 1996). These children were also characterized by a preoccupied pattern of attachment, characterized by high emotional involvement in
attachment relationships, including in interview lengthy, often incoherent, and angry or vague responses (Adam et al., 1996). The attachment trauma experienced by these adolescents was most typically abuse by parents, to a lesser extent due to death of a parent, and to the least extent due to separation from the parent. The comparison group typically displayed different attachment patterns, with males in this group demonstrating primarily dismissive attachment patterns, characterized by minimization or devaluation of the significance of attachment experiences, and the female group demonstrating predominantly an autonomous (secure) pattern, characterized by clearly organized and coherent evaluations of, and thoughtful attention to attachment experiences (Adam et al., 1996).

One notable limitation of this study, however, was that the research assistant who conducted the AAI was the same who conducted the interview in which suicide status was assessed. Furthermore, suicide status was consistently assessed up to 2 weeks before attachment organization was. Thus, it is possible that not having a blind rater at the second interview in which attachment status was assessed may have influenced the course of the attachment interview, biasing the results in favour of a classification of insecure attachment.

Another study, conducted by Lessard and Moretti (1998) looked at attachment organization and suicide among 116 clinical adolescents. These researchers followed Bartholomew's (Bartholomew & Horowitz, 1991) conceptualization of attachment organization. The results of this study indicated that adolescents with a history of
suicidality were more likely to be characterized by an attachment style typified by preoccupation with close relationships (i.e., over-dependence on relationships) or fear of intimacy (i.e., because of fear of rejection). Those with dismissing and secure attachment styles were less likely to have a history of suicidality. Higher scores on the suicide risk scales used were associated with higher levels of preoccupation and anxiety in attachment, and higher levels of preoccupation were associated with a higher level of lethality associated with the suicidal adolescent’s plan to kill him/her self.

A third study examined attachment among 126 undergraduate students: 42 with a significant history of serious suicidal ideation or attempt, 42 who were currently depressed, and 42 who were neither depressed nor had a history of suicide behaviour or ideation (deJong, 1992). This study focused primarily on security of attachment rather than specific attachment style. The primary findings of this study were that suicidal youth exhibited the lowest level of parental attachment security and of individuation from parents, as well as rating their mother as less emotionally available through their childhood than depressed and control participants. Interestingly, loss of a parent was not a significant predictor of suicidality status, however, suicidal and depressed youth were more likely than controls to report that their parents argued with each other a lot, that they worried that their parents would break up, and that their parents threatened to separate during their childhood.
Research Examining Individuation and Suicide

There is a notable collection of research examining adolescent functioning, and individuation and autonomy (e.g., Allen, Hauser, Bell, & O'Connor, 1994; Grotevant & Cooper, 1985; Steinberg & Silverberg, 1986). Although the body of research on individuation and suicide is small, some questions and conclusions can be drawn from work focusing on parental overprotectiveness, family rigidity, and other factors related to freedom of expression and independent development in families of suicidal and non-suicidal adolescents. One study, already mentioned, found that greater familial rigidity and lower family cohesiveness was higher among adolescents identified as suicidal than those identified as non-suicidal (Miller et al., 1992). Similarly, research already mentioned by Kaplan and Maldaver (1993) found those who completed suicide to be more likely to come from a family characterized by enmeshment between parent and child (i.e., lack of boundaries emotionally), or (emotional) disengagement than non-suicidal controls.

The Present Study - Rationale and hypotheses

Recent studies examining the relationship between attachment and suicide have focused primarily on the work of Ainsworth and the Adult Attachment Interview (e.g., Adam et al., 1996). The current study focuses more on the adolescent's perceptions of familial and relationship factors of attachment. That is, the adolescent's view of family life and relationship with parents was studied, as was attachment style in peer/romantic
relationships. Individuation, parental loss/separation (e.g., through death or divorce), and perceptions of family organisation were examined. It was considered important to study adolescent perceptions of family life because the adolescent’s perception constitutes his or her experiential reality. By focusing on the adolescent’s perception of family life, it is possible to measure the adolescent’s feelings about their place in the family, and about how the family functions.

Much of the work already presented suggests that there is a vulnerability factor that links suicidality with various aspects of family dysfunction. Whether the focus is on disorganized family patterns, loss or separation from a caregiver, parental psychopathology, lack of family boundaries, or abusive situations, research has demonstrated that adolescents who are exposed to adverse family factors tend to be more likely to be troubled by thoughts of suicide. They are also more likely to attempt and/or commit suicide. “Vulnerability”, as it is presented here, refers to early events that helped to shape the adolescent’s view of relationships, and ways of approaching relationships that develop early in life as a result of childhood experiences (e.g., attachment style).

Vulnerability factors are underlying or long-standing elements of a person’s life that place an individual at greater risk for suicide if other, more immediate, precipitating factors become relevant. They need not be family related factors. For example, such predisposing vulnerabilities as genetics (Glowinski et al., 2001), low self-worth (Zweig, Phillips & Lindberg, 2002), and others, have been identified and found to influence suicidal behaviour among adolescents. Vulnerability factors are those that make it
difficult for the adolescent to cope with more immediate problems in their lives.

Family related vulnerability factors have been identified among adolescents. Among the factors that have been shown to increase vulnerability to suicide are abuse (Green, 1978; Johnson et al., 2001, 2002; Yoder, 1999), loss (Adam, 1973; Adam et al, 1995, 1996; Gould et al, 1998), and family environment (Asarnow, Carlson & Guthrie, 1987; Meneese & Yutrzenka, 1990; Zweig, Philips & Duberstein-Lindberg, 2002). Others have also been identified in the suicide literature. One study, for example, revealed that children of parents who have a mood disorder and who attempted suicide are at greater risk of suicide attempt (Brent et al., 2002). The same study also revealed the importance of transmission of sexual abuse through the family, and of lower family cohesion and adaptability, greater exposure of aggression, and a style that is characterised by greater interpersonal aggression. In another study, family support, physical abuse and sexual abuse tended to predict whether adolescents would have a history of suicidal ideation or attempt (Perkins & Hartless, 2002).

As has also, already been mentioned, certain attachment styles may also be vulnerability factors for suicide (Adam et al., 1995, 1996; deJong, 1992; DiFilippo & Overholser, 2000; Lessard & Moretti, 1998). In this study, attachment variables were examined as vulnerability factors in a mediational design. Attachment styles characterised by less security, and greater anxiety and preoccupation may place an adolescent at greater risk for suicide. On the other hand, adolescents who have less security in attachment relationships are not suicidal all of the time. The question posed in
this study concerns what mediates the relationship between suicidal ideation and relationship attachment style. This is important because it will help to determine how attachment, which creates a greater risk, and hence a vulnerability to suicide, predicts suicide, and under what conditions.

Along this line of reasoning, in addition to early attachment relationships acting as vulnerability factors, we must take into account events that more directly precipitate suicide attempt and ideation. Sroufe, Egeland and Kreutzer (1990) have pointed out, in relation to attachment relationships and psychopathology, an individual who experienced inadequate care or other adversity as a child or infant, but who receives that care later in life, may appear to be undamaged by the early experiences. If that individual, however, is again subjected to a period where caregiver-support is inadequate, or some other significant difficulty is faced with inadequate resources, he or she may be more likely to succumb to psychological difficulties than children thrown into this situation who have received adequate support as a child. Sroufe et al. (1990) suggested that the child who receives inadequate support early in life will be vulnerable to disruptions in support later in life. He suggests that this is related to fear of abandonment.

In relation to suicide, it can be hypothesized that an individual who has sustained significant interpersonal deprivation as an infant or young child may appear psychologically healthy much of the time. If that individual is exposed to situations in which there is a threat of abandonment, however, that individual may experience severe depression, hopelessness and suicidal thoughts. Thus, it is predicted that those
individuals who have experienced significant disruption in their bond with caregivers may have a more prominent history of suicidal ideation or attempt. Additionally, however, mainly those adolescents who experience difficulty in attachment, and who are currently experiencing depression or dissatisfaction with their current support systems will be the individuals who are experiencing current suicidal ideation and hopelessness. Hopelessness has been included in this relationship because is has shown to be a significant predictor of eventual completed suicide (Beck, et al., 1988, 1990).

Only a few examples from the literature explicitly demonstrate effects of vulnerability and more immediate factors empirically. For example, Shaffer, Garland, Gould, Fisher and Trautman (1988) present a model which suggests that individual predisposition, social milieu and triggering factors contribute to place an adolescent at risk for suicide. In their paper, the factors that lead to suicide include past suicide attempts, or depressive disorder. As far as triggering factors, they focused on factors such as hopelessness and availability of method. They note that their data indicate that prevention should be aimed at teenage boys who have made a previous attempt, and who are depressed. Shaffer et al. (1988) are correct in noting that the above subset of adolescents are at the greatest risk within that group. What they do not take into account, however, is: 1) if a teen has made an attempt before, it would not have been identified if professionals took this advice; and 2) depression is a transient mental illness, often lasting a short period of time, and often not identified in teens because of its internal nature, and a teen's reluctance to approach mental health professionals. Rather than solely focusing on these criteria which are
transient and therefore easily missed, the present study focuses on factors that are usually more enduring, and which are generally over-looked because of lack of serious study linking family relationships and suicide prevention. Focusing on enduring predictors, such as attachment style, perceptions of family life, and individuation offer potential ways of being proactive in identifying adolescents at risk for suicide.

The present study will take two approaches to examine the research presented. The first will be to use the factors mentioned - i.e., attachment organization, family interaction style, individuation, early loss experiences, current family or relationship difficulties - to predict whether adolescents reporting problems in these areas have a history of suicidal ideation or attempt. It is predicted that factors such as insecure attachment organization, complete absence of individuation, and significant early losses will be significant predictors of past suicidal ideation and attempt. Figures 1 and 2 demonstrate the expected findings for the second approach. That is, using a mediation design, it is expected that those who experience attachment difficulties, while predisposed to greater suicide potential, will be more likely to experience hopelessness and suicidal ideation if they are also currently experiencing current relationship problems or current depression. Thus, self reported attachment style may be viewed as a vulnerability factor that may affect suicidal ideation later in life, when they are faced by difficulty in their social networks or are emotionally overwhelmed by depression.
Specific Hypotheses

1) Participants who have a history of suicidal ideation or attempt would be more likely to identify significant periods in childhood where they experienced separations from caregivers (e.g., a parent passes away, or leaves the family through divorce), and would be more likely to report incidences of abuse, problem substance use and psychiatric difficulties in the home;

2) Participants with a history of suicidal ideation or attempt would be more likely to indicate that their family was characterized with lower levels of cohesion, expressiveness, and organization, and greater levels of conflict than those without such a history;

3) Participants with a history of suicidal ideation and attempt would be more likely to identify their family relationships in their first 16 years of life as more dismissive or rejecting, less caring, and more controlling and overprotective than those with no such history;

4) Those who demonstrate more difficulty in family dimensions would also report higher levels of hopelessness than those who report fewer family difficulties;

5) Those with a history of suicidal ideation or attempt would be more likely to report an attachment style reflecting greater anxiety and avoidance, and less security in relationships than those without such a history. They will also report lower levels of individuation; and

6) The model presented in figure 2 would best explain the complex relationship between attachment (vulnerability) factors, current relationship factors and depression, and current
suicide risk. The model asserts that attachment style is affected by early family experiences. The relationship between attachment, and eventual suicidal ideation and hopelessness, is mediated by depression and satisfaction with current close relationships. Thus, those who are characterized by less secure attachment styles will be more likely to experience suicidal ideation currently if they also experience significant depression and difficulties in interpersonal relationships. The current investigation tests the hypothesis that depression and relationship satisfaction will in fact mediate the relationship between attachment and suicide. Family factors are presumed to be related factors in this model, but were not examined directly within the context of the model.
Figure 1. Mediation model of suicidal ideation, early attachment and current relationships.
Figure 2. Mediation model of suicidal ideation, attachment style and current relationships.
Chapter II: Method

Preface

Before outlining the methodology of this study, some points about the study of suicide should be made. Berman and Jobes (1991) point out a number issues that suicide researchers must consider in research with adolescents. For example, they note that suicide is a relatively rare phenomenon, meaning that the ability of researchers to come up with valid and reliable assessment tools to determine risk is impeded. They noted, too, that even a test for predicting suicide that is 95% accurate will result in 5% of cases being misclassified. These writers conclude that to this date, suicidologists have not been able to develop predictive tools able to account for the dynamic and interactive nature of suicide. Past efforts have not been able to consider, for example, the fact that suicidality often dissipates and returns in the individual, and is not always present. The present investigation does not claim to account for all predictive aspects of suicide. However, it is hoped that the dynamic model will be effective at distinguishing those at higher risk from those at lower risk. If the family factors presented here provide a model for predicting suicidal thoughts and behaviours, practitioners who work to prevent suicide will have a tool to identify and intervene with adolescents and their families. An understanding of the processes that occur in families that may contribute to suicide offer a point of intervention, and provide a focus for the development of intervention and prevention programs.

A final consideration must also be made. Much research has demonstrated differences
between suicidal ideators, attempters and completers, meaning that despite the evident similarity between these groups, there may be serious differences that make assessment and intervention of one group inappropriate for the others. For example, Berman and Jobes (1991) note that many attempters studied typically demonstrate very low lethality attempts (attempts not likely to end in death). To further complicate this, research has demonstrated that up to 50% of adolescents surveyed about their suicidal behaviour report at least one aspect of an episode in an unreliable manner, often confusing a suicide attempt (where death was intended) with a gesture (where no death was intended), or confusing an attempt with ideation (consideration of suicide as an option) (Velting, Rathus & Asnis, 1998). While the present study is examining suicide attempters rather than completers, participants were asked to rate how seriously they wished to die at the time of their suicidal attempt or ideation.

_Ethics Approval_

An ethics application was submitted to, and approved by, the University of Windsor Ethics Committee. The application was re-submitted each time an additional research site was added, and approved each time. All participants were informed of the purpose and procedures of the study prior to their participation. Each participant was approached, and asked to participate in the study by the primary investigator. Each site director was given a detailed written version of the study protocol, and gave permission for the P.I. to approach prospective participants on the premises. Participants who were of age to
participate in the study without consent of a parent were given full written consent, and
allowed to participate. Participants who were under the age of consent were required to
have a parent or guardian give written, informed consent for him or her, and the
adolescent gave written assent if they were willing to participate in the study. All study
participant responses were kept confidential. No names were included on the
questionnaires. Code numbers were used to link a name to a particular questionnaire for
follow-up purposes. However, the list that included names and code numbers was kept in
a separate location from the questionnaires. Further, consent forms were not kept with the
participants’ questionnaires. Participants were informed of the limits of confidentiality.
Primarily this involved contacting a guardian or therapist if the participant was at risk of
suicide.

Research Participants

The research participants in this study were 153 adolescents (98 female, 55 male)
between the ages of 14 and 20 years old (average age 17.22, SD = 1.50). Participants
were recruited at one of four community agencies whose mandate is to serve an
adolescent population. One centre, The Teen Health Centre, is a treatment facility where
adolescents receive a variety of services including medical, psychological/psychiatric,
general counselling, drug counselling and family planning. The other three centres —
House of Shalom, Sandwich Teen Action Group, Harrow Youth Centre — are free-
standing youth drop-in and activity centres. One centre, House of Shalom, was originally
a Catholic based facility. However, currently, adolescents holding a variety of religious beliefs attend the centre. The two most frequently noted denominations of House of Shalom adolescents were Catholic (50.0%) and athiest/agnostic (42.9%). None of the other centres have a religious background or mandate. Participants were reimbursed for their time with gift certificates worth $5, redeemable at various restaurants and record stores in town. Written informed consent was received from each participant, and those under the age of consent also obtained written permission from a parent to participate in the study (Appendix A). Participants were informed both in the consent document and verbally that if considered to be at risk for suicide currently, this risk would be disclosed to either the participant's parent or counsellor. Thirteen participants were at significantly elevated risk for suicide at the time of completion of the study. Of those adolescents, 7 agreed to allow the investigator to contact their counsellor (in most cases psychologist, guidance counsellor, centre counsellor or psychiatrist), 2 allowed a parent to be contacted, and 1 participant was escorted to a local emergency room because of imminent risk. Another 3 participants who were legally adults and who were not imminently suicidal did not allow the researcher to contact parents or counsellors. However, all within this group allowed the researcher to make a referral to a local agency (i.e. Teen Health Centre).
Table 1. Demographic data for the total sample, broken down by suicide history and sex.

<table>
<thead>
<tr>
<th></th>
<th>Non-Contemplators</th>
<th>Serious Ideators</th>
<th>Attempters</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (n=40)</td>
<td>Male (n=30)</td>
<td>Total (n=70)</td>
<td>Female (n=28)</td>
</tr>
<tr>
<td>Age (Mean)</td>
<td>17.3</td>
<td>17.2</td>
<td>17.3</td>
<td>17.5</td>
</tr>
<tr>
<td>Race (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>77.5</td>
<td>73.3</td>
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<td>78.6</td>
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<td>7.1</td>
<td>3.6</td>
</tr>
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<td>Religion</td>
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<td></td>
<td></td>
<td></td>
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<td>None/Athiest</td>
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<td>17.1</td>
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<td>10.0</td>
<td>7.1</td>
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<td>Teen Health</td>
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<td>25.4</td>
<td>21.4</td>
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<tr>
<td>Family Planning</td>
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<td>7.5</td>
<td>14.3</td>
</tr>
<tr>
<td>Other</td>
<td>18.4</td>
<td>13.8</td>
<td>16.4</td>
<td>17.9</td>
</tr>
</tbody>
</table>
Measures

Demographics, Family and Suicide History

Demographic and history of suicidal ideation and attempt questionnaire. This questionnaire was prepared by the author and addresses basic demographic factors (i.e., age, sex, religion, racial and ethnic identification), history of suicidal ideation and attempt (including questions to ascertain the seriousness of ideation and attempt), as well as history of family and relationship separations, deaths and suicides. This measure also assesses the participant's experience of family psychopathology and drug use, and abuse. The suicide-history variable was assessed by asking the participant questions about suicidal ideation and attempt. Participants who acknowledged that they had seriously considered suicide, but had never attempted suicide were considered to be past suicide ideators. Those who acknowledged that they had made a suicide attempt were considered to be past suicide attempters. All other participants were considered to be non-ideators. This questionnaire is presented in Appendix B.

Attachment

Adult Attachment Scale (AAS) - The AAS is an 18-item measure of attachment in romantic or sexual relationships which includes three primary dimension: 1) ability to Depend on others; 2) Anxiety; and 3) desire for Closeness (Collins & Read, 1990). Participants were instructed to rate (on a 5-point scale) the extent to which phrases describing feelings are characteristic or uncharacteristic of their own feelings in
relationships. Test-retest reliability values for each factor were .68, .71, and .52 for Close, Depend and Anxiety, respectively (Collins & Read, 1990). This measure has also achieved good internal consistency, achieving alphas of .72, .80, and .71 for the Close, Depend and Anxiety scales respectively with a sample of college students as well as good concurrent validity with other attachment measures (Sperling, Foelsch, & Grace, 1996). The AAS has also been used to examine the relationship between attachment and emotional adjustment and regulation in adolescents (Cooper, Shaver & Collins, 1998), social support and coping (Ognibene & Collins, 1998), and support seeking and caregiving in intimate relationships (Collins & Feeney, 2000).

*Measures of Individuation and Family Environment*

*Emotional Autonomy Scale (EAS).* The EAS is a 20-item measure of four aspects of adolescent autonomy: viewing parents as individuals beyond the parenting role, non-dependency on parents, de-idealization of parents, and individuation (Steinberg & Silverberg, 1986). This measure was designed to reflect Blos’ (1967; 1968) conception of autonomy and individuation. Research has demonstrated that autonomy increases with age (Steinberg & Silverberg, 1986). Participants rated each of the 20 items on a four point semantic differential scale ranging from “strongly agree” to “strongly disagree”. Steinberg and Silverberg (1986) calculated inter-item reliability, yielding alpha coefficients of .61 (“perceives parents as people”), .63 (“parental deidealization”), .51 (“parental non-dependency”), and .60 (“Individuation”).
Parental Bonding Instrument (PBI). The PBI (Parker, Tupling & Brown, 1979) is a measure of the quality of the bond between parent and child, administered to the child when he or she is grown. This is, therefore, a retrospective measure of the adolescent’s parental relationships. It covers the participant’s perceptions of their parents in the first 16 years of his or her life. The measure consists of 25 items for each of which the participant chooses among four response options, ‘very likely’, ‘moderately likely’, moderately unlikely’, and ‘very unlikely’. Item scores correspond to two factors found by Parker et. al. (1979). The first factor is bipolar and has been called “acceptance versus rejection”; Parker et. al. (1979) note that responses closer to the acceptance pole reflect “positive evaluation, sharing, expression of affection, emotional support and equalitarian treatment” (p. 2) while the rejection pole reflects “ignoring, neglect and rejection” (p.2). The second factor was labelled “psychological autonomy versus psychological control”; the control pole reflects “intrusiveness, parental direction and control through guilt” (p. 2) while the autonomy pole reflects an allowance of the individual to grow as an autonomous individual without the intrusiveness or guilt. Parker et al. (1979) renamed the first factor as a care sub-scale and the second as a overprotection sub-scale. These researchers found test-retest Pearson reliability coefficients of .76 for the care scale, and .63 for the overprotection scale. Inter-rater reliability was reported to be .88 for the care scale and .73 for the overprotection scale.

Theoretically, the PBI reflects the work of the object-relations theorists, their concepts of individuation/attachment (e.g., Blos, 1967, 1968; Mahler, 1963), and the work of the
attachment theorists in their conception of the bond with the caregiver - whether it is considered to be overly enmeshed, distant or whether it is considered to be caring (e.g., Bowlby, 1969, 1973, 1980).

Other research, however, has suggested that attachment aspects of the PBI demonstrate concurrent validity with the Adult Attachment Interview (AAI) when optimal attachment histories are present, but not when the adolescent demonstrates anger toward his or her mother (Manassis, Owens, Adam, West & Sheldon-Keller, 1999). Therefore, the PBI's use in this project is meant to provide a strictly subjective measure of felt caring and overprotection between adolescent and parent.

*Family Environment Scale (FES)* - The FES form R is a 90 item questionnaire which measures an individual's perceptions regarding a number of aspects of their nuclear family (Moos & Moos, 1994). The participants marked true or false for each item depending on whether it accurately characterised their perceptions of their family. As noted previously, items correspond to one of 10 primary factors that are organised into three dimensions as illustrated in Appendix C. Alpha coefficients and two month test-retest reliabilities for each scale (reported in Moos & Moos, 1994) are reported in Appendix C.

Past research has demonstrated that many of these factors, including Cohesion, Expressiveness, Conflict and Organization were important predictors of suicidal ideation and attempts among hospitalized and outpatient children. Similar findings have been found elsewhere in the literature. For example, research on adolescent adjustment to
parent's divorce has found that in both intact and divorced families, higher levels of
conflict were associated with low self-esteem, higher levels of anxiety and less self-
control (Slater & Haber, 1984). Among adolescent boys from both intact and non-intact
(i.e., father absent) families, lower levels of expressiveness was associated with greater
levels of disturbance (Kagel, White, & Coyne, 1978).

The current study focused explicitly on four factors of the FES that have
demonstrated correspondence with suicidality in the past. These variables included family
cohesion, emotional expressiveness, conflict and organization.

*Suicide, Hopelessness and Depression Measures*

*Suicidal Ideation Questionnaire (SIQ)* - The SIQ is a measure to assess suicidal
ideation in an individual, rather than being a specific predictor of suicide (Pinto,
Whisman, & McCoy, 1997). It is a 30-item self-report inventory that assesses thoughts
of suicide on a 7 point scale with the bi-directional poles of *almost every day* to *never had
the thought* (Reynolds, 1987, 1988). The types of suicidal thoughts addressed in the SIQ
range from thoughts about ones own death (i.e., “what it would be like if I were dead”) to
serious thoughts about one’s own suicide. Research on the reliability of this measure
among American suicidal and non-suicidal adolescents revealed a Cronbach’s coefficient
alpha of .97, an average inter-item correlation of .55, and average item-total correlations
of .74 (Pinto et al., 1997). Research has also demonstrated that psychiatric controls score
lower on the SIQ than suicide attempters and ideators (Pinto et al., 1997). A cut-off score
of 20 on the SIQ has demonstrated the greatest utility in separating suicidal from non-suicidal youth, however, even this "Optimal" cut-off score incorrectly classified 30% of the sample when attempters and controls were compared, and 27% of the sample when ideators and controls were compared. Regardless of this difficulty, the SIQ remains among the best indicators (along with the Beck Hopelessness Scale) of suicidal ideation available, and therefore will be used as a measure of current suicidal ideation in the present study.

Beck Hopelessness Scale (BHS). The BHS is a self-report survey, consisting of 20 true-false items, designed to assess the degree of negative life outlook, or pessimism about the future held by the participant (Beck, Weissman, Lester, & Trexler, 1974). Psychometric data has been presented elsewhere (Beck, Kovacs, & Weissman, 1975). Early research suggests that hopelessness may accurately predict eventual completed suicide among psychiatric outpatients and inpatients (Beck et al., 1985, 1988, 1990). Thus, the BHS is used in the current study as a secondary measure of suicide risk.

Beck Depression Inventory (BDI). The BDI is a self-report survey of depression. The measure consists of 21 multiple-choice items reflecting different phenomenological experiences related to depression. The BDI is a well-established measure of depression symptomatology that has achieved high internal reliability (Beck, Steer & Garbin, 1988).

Procedures

Participants were recruited from one of four local adolescent drop-in or health centres.
Participants were recruited directly by the principal investigator. Written informed consent was sought from participants, as well as from parents in situations where the adolescent was under the age of consent. Each participant was asked to fill out the questionnaire and meet briefly with the investigator when finished. The principal investigator ran all data collection sessions. After each participant completed his or her questionnaire, she or he was interviewed briefly by the investigator. The questionnaire was reviewed for quality control, and critical items on the SIQ and BDI were reviewed to assess for current acute suicidal ideation. In cases were the adolescent was at elevated risk for suicide, (as evidenced by a score of 40 or more on the SIQ, a score of 2 or more on item 9 of the BDI, or verbal report of current suicidal ideation) imminent acute risk was assessed, and the adolescent’s parent or therapist was notified. In cases were the participant was an adult, had no therapist, and refused to authorise the investigator to inform a parent, the participant was given a referral to the Teen Health Centre or other counselling agency in the Windsor area. One participant who was determined to be acutely suicidal was admitted to hospital immediately after completing the study. All participants who completed the study received a $5 gift certificate to a local music store to compensate them for their time.

Analyses

In order to answer the hypotheses of this study, the following analyses were planned. All analyses in this study were conducted using SPSS for Windows Version 8.
Initial data entry and screening involved conducting analyses for outliers, skewness, kurtosis and inter-item reliability (Presented in Appendix D). To analyse the data for outliers, frequency counts were completed for each of the variables to determine whether any variables might have been entered incorrectly. The data, itself, was also examined for quality control purposes. Skewness and kurtosis were examined using SPSS Version 8. Some significant skewness as found for the Beck Depression Inventory, Beck Hopelessness Scale and Suicide Ideation Questionnaire. This was expected, as these measures are intended to assess psychological difficulties that are not normally distributed in the population. Transformation was considered for these variables. However, transformation of the variables was not chosen because interpretation of the variables would become problematic (Tabachnick & Fidell, 1989).

Frequencies were calculated for grouping or dichotomous variables that were used in further analyses. For each variable analysed, frequencies were calculated for the entire sample, as well as broken down by gender and suicide history. Suicide attempt, ideation, and non-ideation were the levels of suicide history used for these analyses. The dichotomous and grouping variables analysed included race, religion, recent relationship break-up, history of close death, history of close separation. They also included history of personal, maternal and paternal drug, alcohol and psychiatric problems. History of physical, emotional and sexual abuse was included, as was knowledge of another person’s suicide attempt and completed suicide. Additionally, the frequency of each self-identified attachment style was calculated.
Means and standard deviations were calculated for continuous variables included in further analyses. As with dichotomous and grouping variables, calculations were made for the entire sample, as well as broken down by gender and suicide history. The variables included are Family Environment Scales cohesion, expressiveness, conflict and organization indexes, Parental Bonding Instrument indexes (i.e., maternal and paternal caring and overprotectiveness), Emotional Autonomy Scale indexes (i.e., individuation, de-idealization of parents, non-dependency on parents, and viewing parents as autonomous people), Adult Attachment Scale indexes (i.e., attachment closeness and anxiety), Beck Depression Inventory, Beck Hopelessness Scale, and Suicide Ideation Questionnaire.

In order to answer the first hypothesis concerning differences in separation, abuse and substance abuse based on suicide history, a series of chi-square analyses were conducted using suicide history and gender as grouping variables. Chi-square analyses were also conducted for attachment style.

In order to answer the second, third and fifth hypotheses concerning perceptions of family life, self-reported individuation style, and self-reported attachment style, four 3 X 2 multivariate analysis of variance (MANOVA) analyses were performed. The independent variables were suicide history (non-ideation, serious suicide ideation, and suicide attempt) and gender (female and male). In the first MANOVA, the dependent variables included in the analysis were three indexes of the Adult Attachment Scale (relationship closeness, dependence in relationships, and attachment anxiety). In the
second MANOVA, four scales from the Family Environment Scale (conflict, expressiveness, cohesiveness and organization) were used as dependent variables. The third MANOVA included the four scales of the Parental Bonding Instrument (maternal and paternal overprotection and caring). In the final MANOVA, all of the scales from the Emotional Autonomy Scale (de-idealisation of parents, non-dependency on parents, individuation and ability to see parents as independent people) were included as dependent variables. Since four analyses were conducted, a family-wise alpha of .01 was used as criteria for statistical significance for multivariate results, to adjust for type I error. Following the initial analyses, it was discovered that dependent variables were significantly correlated with each other. As a result, univariate and Roy-Bargman stepdown analyses were conducted on each independent individual variable, to identify overlapping variance of the dependent variables. Stepdown procedures treat MANOVA in a way similar to a hierarchical regression analysis, where order of entry of variables is chosen by the researcher. The first dependent variable is examined first against the independent variables as in a univariate ANOVA, and each subsequent dependent variable is added individually as a covariate to the first. Thus, variance in the independent variables is attributed to the first dependent variable, and each subsequent variable is added to determine if it adds to the prediction of variance in the independent variable, in a hierarchical fashion. Tabachnick and Fidell (1989) have noted that this procedure may be used even when order of entry of the dependent variables is arbitrary. Interpretation of the results is made by examining both the univariate and stepdown results. After
completing univariate and stepdown analyses, Bonferroni post-hoc analyses were performed to determine where specific differences existed.

Bi-variate correlations were calculated for the continuous variables used in the MANOVA analyses, in addition to suicidal ideation, depression and hopelessness. Following this, two multiple regression analyses were performed. Each of the continuous variables used in the MANOVAs were included as predictor variables. However, attachment closeness and dependence were replaced with the multiplicative term Close X Depend. The first multiple regression analyses included hopelessness as the criterion variable. Thus, this regression analyses was a test of the fourth hypothesis concerning hopelessness and family difficulties among those with suicide histories. The second multiple regression analysis was conducted using current suicidal ideation as a criterion variable.

Two series of mediation analyses were planned to test the final hypothesis. That is, the relationship between self-reported attachment style and current suicidal thought will be mediated by current depression and satisfaction with closeness in current relationships. Two series of mediation analyses will be conducted, examining suicidal ideation and hopelessness as separate criterion variables representing suicide risk. For this series of analyses, Baron and Kenny’s (1986) procedure for calculating the effect of a mediating variable was to be used. Using their formulation, a variable mediates another if four conditions are met: 1) The proposed predictor variable, when regressed on the proposed mediator, are statistically significant; 2) The proposed predictor variable significantly
correlates with the criterion variable; 3) The proposed mediating variables, when regressed on the criterion variable, is statistically significant; and 4) when the predictor and mediator variables are regressed onto the criterion variable simultaneously in the same regression equation, the mediator variable is significantly associated with the criterion, while the predictor variable is not. The proposed predictors were the four attachment measure indexes. The proposed mediators were depression (BDI), and satisfaction with current relationships. The proposed criterion variables tested were suicidal ideation and hopelessness.
Chaper III: Results

Demographic data

Demographic data for participants, broken down by gender and suicide history, is presented in Table 1. Roughly 81 percent of the sample was Caucasian. The remaining participants were African Canadian, Asian, Arab, Hispanic or identified themselves as biracial. The sample was somewhat more diverse in religious identification, with the majority of participants identifying as Catholic or none/atheist (See Table 1). Study site and visit reason variables are also presented in Table 1. Most of the participants were recruited from the Teen Health Centre, followed by House of Shalom, STAG and Harrow Youth Centre, in that order. Information from each of these centres concerning the number of adolescents who typically frequent the centre differs, with some centres collecting very specific numbers, and other able to offer only estimates. House of Shalom and Harrow Youth Centre each estimated that they had 150 adolescents within the age range studied here enrolled at the centre at the time of data collection. Numbers from STAG were somewhat more specific. The number of adolescents attending STAG at the time of data collection was 477 (calculated for July 2001). Teen Health Centre data was not available at the time of writing.

Few participants were seeking counselling at their visit (8.7%). Most participants indicated that they were attending a “youth drop-in centre”, followed by medical appointments, other appointments, family planning and counselling in that order. There were no statistically significant differences in suicide history (i.e., suicide attempt or
ideation) between the four youth centres ($\chi^2 = 12.16, N = 152, p = .06$)(see Table 1).

However, the trend was toward slightly higher suicide ideation and attempt history at House of Shalom, and slightly lower history at Harrow Youth Centre, and Sandwich Teen Action Group. There were no significant age differences between the centres ($F=2.24$, $p=.09$). Further, there were no age differences based on sex ($F=2.04$, $p=.16$) or history of suicide attempt and ideation ($F=.836$, $p=.44$). Ages by sex and by suicide history are presented in Table 1.

In Table 2, percent data are presented for dichotomous and nominal variables. These variables include presence of recent break-ups, close deaths, separations, personal drug, alcohol or psychiatric problems, maternal and paternal drug, alcohol or psychiatric problems, experience of physical, emotional or sexual abuse, first hand knowledge of another's suicide attempt or death, and attachment style (i.e., secure, preoccupied, dismissive or fearful). In Table 3, means and standard deviations are presented for continuous variables that were used in subsequent analyses. These variables included the continuous variables that will be included in multiple regression and multivariate analyses.

Participants who endorsed suicide ideation and attempt were asked to rate how seriously they wished to die at their most serious point of suicidal ideation and suicide attempt. Among all of those who endorsed some serious suicidal ideation during their lifetime, on a scale of 1 (not seriously at all) to 7 (I very much wanted to die), the average rating was 5.35 (SD=1.49). When suicidal attempters were partialled out of this analyses
Table 2. Dichotomous and nominal variables for the total sample, broken down by suicide history and sex.

<table>
<thead>
<tr>
<th></th>
<th>Non-Contemplators</th>
<th>Serious Ideators</th>
<th>Attempters</th>
<th>Total</th>
</tr>
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<tr>
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<td>Male (n=30)</td>
<td>Total (n=70)</td>
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</tr>
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<td>13.3</td>
<td>9.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>4.8</td>
<td>6.7</td>
<td>5.6</td>
<td>17.2</td>
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<tr>
<td>Maternal Drug Problem</td>
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<td>Paternal Drug Problem</td>
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### Table 2. Continued

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<td>Physical</td>
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Table 3. Mean and standard deviation of continuous variables for the total sample, broken down by suicide history and sex.

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<th>Attempters</th>
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Table 3. Continued

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<th>Total</th>
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<td>Close * Depend</td>
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<td>3.5 (.68)</td>
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</table>
(i.e., including only those who have experience serious thoughts of suicide), the average rating dropped to 4.89 (SD=1.47). When attempters were asked how seriously they wished to die at the time of their most serious attempt, the average rating (again out of 7) was 5.83 (SD=1.41).

*Suicide History Chi-square analyses*

A series of Pearson chi-square analyses were conducted to analyze whether nominal and dichotomous predictors of suicidal behaviour in fact differed between suicide attempters, serious ideators and non-ideators. Frequency of positive responses to nominal and dichotomous variables, broken down by suicide history and sex are presented in Table 2. The variables were analyzed with suicide history (i.e., ideation/attempt) as the independent variable. The dependent variables included sex, recent breakup, close death, close separation, personal drug problem, personal alcohol problem, personal psychiatric problem, maternal and paternal drug, alcohol and psychiatric problems, physical, emotional and sexual abuse in the family, knowing someone who has attempted suicide, knowing someone who died by suicide, and attachment style.

*Sex, Relationships, and Separation*

There was no difference between males and females on suicide history ($\chi^2=3.257$, N=152, p=.20). Similarly, history of recent relationship break-up did not differ by suicide history ($\chi^2=1.270$, N=152, p=.53). Nor did experience of a close death ($\chi^2=.084$,
N=152, p=.96). The frequency of history of separation from a loved one did differ based on suicide history ($\chi^2=18.53, N=152, p<.001$). Those who had been separated from a loved one during childhood by some mechanism other than death (e.g., divorce of parents) showed greater frequency of suicide attempt and ideation relative to individuals who had never experienced such a separation (see Figure 3).

The question of whether type of relationship, or age at the time of loss may have influenced these findings. First, concerning the non-significant findings with regard to death, three additional chi-square analyses were conducted, one for maternal death, one for paternal death, and one for parent death. A total of 15 participants revealed that at least one parent had died, with 12 noting that a father had died and 4 reported that their mother had died. These numbers are very low (particularly death of mother) and
the power of chi-square analyses were also lower than optimal. According to these analyses, suicide history did not significantly distinguish those who lost a mother ($\chi^2 = 1.21, df=2, p=.55$), father ($\chi^2 = .959, df=2, p=.62$) or either parent ($\chi^2 = .492, df=2, p=.78$). In order to examine possible trends, the frequencies for each group are presented in Appendix E. No trends were evident in the data.

Next, with regard to age of loss, three analyses of variance were conducted. The first examined participant age at the time of first loss due to death. The IV was suicide history. There were no significant differences between groups based on suicide history on age of first loss due to death ($F = 0.866, p = 0.42, N = 103$). Age at first separation from a loved one was examined next. Participants did not differ on the basis of suicide history on the age at which they were first separated from a loved one for reasons other than death ($F = 1.369, p = 0.26, N = 63$). Finally, the same separation analysis was conducted again, only on those who had experienced a separation from a parent. Suicide history did not significantly distinguish adolescents on the basis of their age at the time of separation from a parent ($F = 1.189, p = 0.31, N = 49$).

**Drug, Alcohol and Psychiatric Problems**

Substance use, alcohol and psychiatric problems also evidenced significant trends. Participants who said they had a drug problem were more likely to report suicide attempt, and less likely to report suicidal ideation than those who reported no drug problem ($\chi^2 = 13.112, N=152, p<.001$, Figure 4). Self-reported alcohol problems also differentiated
suicide history groups, with the greatest proportion endorsing an alcohol problem falling in the attempt group, and the lowest number among those who endorsed serious suicidal ideation ($\chi^2=11.981$, N=152, p<.003). This trend was different from those without an alcohol problem who evidenced declining membership in increasingly severe suicide history groups (Figure 5).

Among those reporting psychiatric problems, the greatest proportion of individuals self-identified as attempters, followed by ideators, and finally those who never contemplated suicide (Figure 6). This trend was significantly different from those who reported no psychiatric problems ($\chi^2=26.291$, N=152, p<.001), and in fact examination of Figure 6 suggests that the two groups (psychiatric vs. no psychiatric) presented as a mirror image to one another.

Among participant-reported maternal problems, results suggest that maternal difficulties did not significantly account for a participant’s suicide history. Among the variables included were maternal drug problem ($\chi^2=4.126$, N=152, p=.13), alcohol problem ($\chi^2=2.743$, N=152, p=.25), and psychiatric problems ($\chi^2=2.743$, N=152, p=.25). The trend, however for all maternal variables, including drug problems, alcohol problems, and psychiatric problems, was for increased membership in the suicide attempter group, while there was a declining proportion of individuals at increasingly serious suicide history levels for those who denied maternal problems. The non-significant findings for maternal problem variables may be a result of low base rate of these problems among the current sample.
Paternal problems, however, did produce some significant results. Those who stated that their father had a drug problem were most likely to have had a suicide attempt, and least likely to report suicide ideation without a history of attempt (Figure 7). This was significantly different from the trend of participants who reported that their father had no drug problem ($\chi^2=8.040, N=152, p<.018$). Similar significant results were also the case for paternal alcohol problems ($\chi^2=17.310, N=152, p<.001$, Figure 8). Those who said that their father had a psychiatric problem were not significantly more likely to have a history of suicidal ideation or attempt ($\chi^2=1.499, N=152, p<.47$).

*Physical, Sexual and Emotional Abuse*

Participant-reported history of abuse also distinguished participants based on suicide history. Those who reported past physical ($\chi^2=23.448, N=152, p<.001$, Figure 9), emotional ($\chi^2=26.239, N=151, p<.001$, Figure 10) and sexual abuse ($\chi^2=12.281, N=150, p<.001$, Figure 11) were significantly more likely to have a history of suicidal ideation or attempt than those who denied abuse.

*Knowledge of Another's Suicide*

Knowledge of the suicidal behaviours of others significantly distinguished participants based on suicide history. Those participants who knew someone who had attempted suicide, but did not die, were fairly evenly distributed among the three suicide history levels, while a greater proportion of the participants who never knew anyone who had attempted were more likely to have no suicide history ($\chi^2=12.281, N=152, p<.002$, Figure
Figure 3. Loss due to separation by suicide history

Note: This comparison was statistically significant at p<.001.
Figure 4. Self reported drug problem by suicide history

Note: This comparison was statistically significant at p<.001
Figure 5. Self-reported alcohol problem by suicide history

Suicide History

Note: This comparison was statistically significant at p<.003.
Figure 6. Self-reported psychiatric problems by suicide history

Suicide History

Note: This comparison was statistically significant at p<.001.
12). Similarly, participants who knew someone who died by suicide were more likely to identify a suicide history than not, while those who never knew anyone who died by suicide were less likely to fall in either suicide history category ($\chi^2=8.488$, $N=152$, $p<.014$, Figure 13).

*Self-reported Attachment Style*

Finally, attachment style significantly differed by suicide history ($\chi^2=24.298$, $N=151$, $p<.001$). As seen by examining Figure 14, a smaller proportion of participants with a history of suicidal ideation or attempt identified themselves as having a secure or dismissive attachment style. Those with a history of suicidal ideation or attempt were more likely to report having a preoccupied or fearful style.
Figure 7. Paternal drug problem by suicide history

Note: This comparison was statistically significant at $p<.018$. 
Figure 8. Paternal alcohol problems by suicide history

Suicide History

Serious Ideation

- Never Contemplated
- Attempted

Paternal alcoh
- no
- yes

Percent

60
50
40
30
20
10
0
Figure 9. Physical abuse by suicide history

Note: This comparison was statistically significant at p<.001.
Figure 10. Emotional abuse by suicide history

Note: This comparison was statistically significant at p<.001.
Figure 11. Sexual abuse by suicide history

Note: This comparison was statistically significant at p<.001.
Figure 12. Knowledge of another's suicide attempt by suicide history

Suicide History

Note: This comparison was statistically significant at \(p<.002\).
Figure 13. Knowledge of another's suicide by suicide history

Note: This comparison was statistically significant at p<.014.
Figure 14. Attachment style by suicide history

Suicide History

- Secure
- Preoccupied
- Dismissive
- Fearful
Four 3 X 2 multivariate analysis of variance (MANOVA) were conducted, focusing on variables obtained from the Family Adult Attachment Scale Environment Scale, Parental Bonding instrument, and Emotional Autonomy Scale. The independent variables for each analysis were suicide history (non-ideation, serious suicidal ideation and suicide attempt), and sex (female and male).

Attachment variables

The first MANOVA included three dependent variables that were scales of the Adult Attachment Scale. These were closeness in attachment relationships (Close), ability to depend on others in relationships (Depend) and attachment anxiety (Anxiety). A total of 152 cases were analysed. One case was eliminated due to missing data. The interaction between sex and suicide history was not statistically significant ($F = 1.79, p = .10, \eta^2 = .07$). The main effect for sex was also non-significant ($F = 1.07, p = .36, \eta^2 = .02$). The main effect for suicide history was significant ($F = 5.45, p < .001, \eta^2 = .19$).

Significant univariate main effects for suicide history were found for ability to depend on others ($F = 7.25, p < .001, \eta^2 = .09$), anxiety in attachment ($F = 15.35, p < .001, \eta^2 = .17$).

Since the dependent variables evidenced substantial intercorrelation, a Roy-Bargman stepdown analysis was conducted to further explore the impact of this main effect on each dependent variable. The stepdown procedure reveals the unique variance accounted for by dependent variables in the identified independent variable. Stepdown
main effects for suicide history for both ability to depend on others \( (F = 6.15, p < .005, \eta^2=.08) \) and attachment anxiety \( (F = 9.04, p < .001, \eta^2=.11) \) remained statistically significant, suggesting that each accounts, independently for significant variance in suicide history.

The analyses were re-run using SPSS GLM procedures, and Bonferroni post-hoc comparisons were conducted. Results revealed that those who have never considered suicide reported being significantly more likely than those who have significantly contemplated suicide \( (p < .001) \) or attempted suicide \( (p < .05) \) to be able to depend on others in relationships. Similarly, those who never contemplated suicide were less likely to experience attachment anxiety than those who experienced serious ideation \( (p < .001) \) or suicide attempt \( (p < .001) \). No significant differences existed between serious ideators and attempters on either variable.

*Family Environment*

The second MANOVA included four dependent variables that were scales of the Family Environment Scale. These were family cohesion, expressiveness, conflict and organization. A total of 152 cases were analysed. One case was eliminated due to missing data. The interaction between sex and suicide history was not statistically significant \( (F = .624, p = .76, \eta^2 = .03) \). The main effect for sex was also non-significant \( (F = 2.49, p = .49, \eta^2 = .07) \). The main effect for suicide history was significant \( (F = 2.69, p < .01, \eta^2 = .14) \).
Significant univariate main effects for suicide history were found for family cohesion ($F = 7.26, p < .001, \eta^2 = .09$), expressiveness ($F = 5.99, p < .01, \eta^2 = .07$), and conflict ($F = 6.60, p < .01, \eta^2 = .08$).

As with attachment, the dependent variables evidenced substantial intercorrelation, and a Roy-Bargman stepdown analysis was conducted to further explore the impact of the main effects on each dependent variable. The stepdown procedure reveals the unique variance accounted for by dependent variables in the identified independent variable. Stepdown main effects for suicide history for family cohesion ($F = 7.26, p < .001, \eta^2 = .09$) remained statistically significant, suggesting that this variable accounts, independently for significant variance in suicide history. The other variables significant in univariate analyses, expressiveness ($F = 1.37, p = .26$) and conflict ($F = 2.02, p = .14$), did not significantly contribute to prediction of differences in suicide history. Thus, the variance accounted for in suicide history by all three variables, cohesion, expressiveness and conflict, overlap with each other.

The analyses were re-run using SPSS GLM procedures, and Bonferroni post-hoc comparisons were conducted. Results revealed that those who never considered suicide reported greater family cohesion than those who experienced serious suicidal ideation ($p < .01$) and suicide attempt ($p < .05$). Those who reported a history of serious suicidal ideation experienced lower emotional expressiveness in their families than those who had never had serious thoughts of suicide ($p < .01$). Family conflict was reported more by those with a history of suicidal ideation ($p < .01$) and attempt ($p < .01$), and by those
without a history of suicidal ideation.

**Parental Bonding**

The third MANOVA included four dependent variables that were scales of the Parental Bonding Instrument. These were maternal and paternal caring and overprotection. A total of 142 cases were analysed. Most of the missing cases (n = 10) resulted because the adolescent reported that they have had no father, and could not answer questions related to paternal relationships. The interaction between sex and suicide history was not statistically significant at the alpha of .01. However, it did reach marginal significance ($F = 2.46, p = .014, \eta^2 = .13$). The main effect for sex was also non-significant ($F = .63, p = .64, \eta^2 = .02$). The main effect for suicide history was also non-significant ($F = 1.69, p = .10, \eta^2 = .09$).

The non-significant univariate interaction for suicide history and sex suggested a trend for interaction on the dependent variable paternal overprotection ($F = 4.90, p < .01$). This trend is presented graphically in Figure 15.

**Emotional Autonomy and Individuation**

The final MANOVA included four dependent variables that were scales of the Emotional Autonomy Scale. These were de-idealisation of parents, individuation, non-dependency and ability to see parents as separate individuals. A total of 152 cases were analysed. One case was eliminated due to missing data. The interaction between sex and suicide history was not statistically significant ($F = .60, p = .78, \eta^2 = .03$). The main effect
for sex was also non-significant (F = .83, p=.51, η² = .02). The main effect for suicide history was statistically significant (F = 4.54, p<.001, η² = .21).

Significant univariate main effects for suicide history were found for all four of the dependent variables, de-idealisation (F = 9.15, p < .001, η² = .11), individuation (F = 8.07, p<.001, η² = .10), non-dependency (F = 3.09, p < .05, η² = .04), and seeing parents as people (F = 11.96, p<.001, η² = .14).

Since the dependent variables evidenced substantial intercorrelation, a Roy-Bargman stepdown analysis was conducted to further explore the impact of the main effect on each dependent variable. The stepdown procedure reveals the unique variance accounted for by dependent variables in the identified independent variable. Stepdown main effects for suicide history for deidealisation (F = 5.20, p < .01, η² = .07), individuation (F = 8.07, p < .001, η² = .10) and viewing parents as independent people (F = 4.55, p < .01, η² = .06) remained statistically significant, suggesting that each accounts, independently for significant variance in suicide history. The step-down results for non-dependency was not statistically significant. Thus, non-dependency evidenced significant intercorrelation with the other emotional autonomy variables.

The analyses were re-run using SPSS GLM procedures, and Bonferroni post-hoc comparisons were conducted. Results revealed that those participants who experienced a suicide attempt reported greater de-idealisation of parents than those who had seriously considered suicide (p < .05) and those who had never considered suicide (p < .001). Attempters (p < .001) and suicide ideators (p < .05) both reported greater
Figure 15. Interaction between suicide history and sex for paternal overprotectiveness.
individuation than those who had never considered suicide. Similarly, attempters (p < .001) and serious suicide ideators (p < .01) had both reported a greater propensity to view parents as separate, independent people than those who had never considered suicide.

Correlational Analyses

Pearson correlation coefficients were calculated for attachment variables, individuation, FES factors, PBI scores, depression, hopelessness, satisfaction with current relationships, and suicidal ideation. The correlation coefficients are presented in Table 4. Of particular interest are the bivariate correlations between suicidal ideation, depression and hopelessness on the one hand, and each of the predictors on the other. Greater suicidal ideation was associated with lower family cohesion, greater conflict, less family organization, less maternal and paternal caring, greater paternal overprotection, and greater individuation. Those with higher suicidal ideation scores were more likely to see parents as separate people, experience less attachment closeness and ability to depend on others, and greater anxiety in relationships.

Depression and hopelessness were similarly correlated with predictor variables. Those participants who were more depressed reported that their families tended to be less cohesive, less expressive, be characterised by greater conflict, and be less organised. Those who reported greater depression also tended to describe their mother and father as both less caring and more overprotective. They were more individuated,
Table 4. Pearson correlations coefficients.

| Variable                  | 1   | 2   | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------------------|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FES Cohesion              | 1.00| .57**| -.52**| .37**| .43**| .51**| -.32**| -.20*| -.38**| -.44**| -.33**| -.30**| -.31**| -.35**| -.25**| .27**| .30**| -.31**| .33**| .43**|
| FES Expressiveness        | 1.00| -.26**| .09 | .38**| .40**| -.34**| -.21*| -.38**| -.30**| -.37**| -.31**| -.22**| -.21*| -.16 | .06 | .12 | -.21**| .11 | .32**|
| FES Conflict              | 1.00| -.39**| -.42**| -.44**| -.28**| .30**| .36**| .51**| .34**| .40**| .32**| .33**| .22**| -.32**| -.40**| .19*| -.42**| -.34**|
| FES Organization          | 1.00| .24**| .14 | -.04| -.03| -.19*| -.22**| -.22**| -.21**| -.30**| -.27**| -.30**| .27**| .32**| -.18*| .34**| .25**|
| PBI Mother caring         | 1.00| .32**| -.36**| -.08| -.26**| -.39**| -.37**| -.32**| -.27**| -.30**| -.17*| .18* | .24**| -.19**| .24**| .34**|
| PBI Father caring         | 1.00| -.19*| -.36**| -.29**| -.47**| -.31**| -.34**| -.22**| -.29**| -.23**| .17* | .29**| -.27**| .27**| .29**|
| PBI Mother overprot.      | 1.00| .27**| .26**| .25**| .21**| .24**| .19* | .17* | .14 | -.20*| -.14 | .13 | -.19*| -.19*|
| PBI Father overprot.      | 1.00| .11 | .23**| .04 | .28**| .18* | .27**| .20* | -.16| -.08 | .02  | -.14| .02  |
| EAS Individuation         | 1.00| .35**| .38**| .44**| .24**| .19* | .25**| -.10| -.31**| .27**| -.24**| -.32**|
| EAS Deidealization        | 1.00| .55**| .34**| .17* | .17* | .14 | -.14| -.27**| .12 | -.24**| -.24**|
| EAS Nondependence         | 1.00| .29**| .04 | .13 | -.02| -.02| -.09 | .00 | -.06| -.23**|
| EAS Parents as ppl.       | 1.00| .28**| .26**| .24**| -.22**| -.30**| .27**| -.30**| -.22**|
| BDI Depression            | 1.00| .70**| .80**| -.38**| -.45**| .41**| -.48**| -.26**|
| BHS Hopelessness          | 1.00| .59**| -.40**| -.35**| .32**| -.43**| -.12|
| SIQ Suicide Ideation      | 1.00| -.22**| -.35**| .36**| -.33**| .19|
| AAS Closeness             | 1.00| .52**| -.33**| .86**| .13|
| AAS Depend                | 1.00| -.51**| .88**| .34**|
| AAS Anxiety               | 1.00| -.49**| -.40**|
| AAS Close-Depend          | 1.00| .27**|
| Perceived closeness       | 1.00|   |

p < .05 *, p < .01 **
expressed less idealization of parents and less dependence on parents, and were more likely to see their parents as individual people. Those who were depressed also described themselves as less comfortable with closeness and dependence in relationships, described themselves as more anxious in relationships, and perceived their closest relationships as less close than those who scored lower on depression.

Those who reported greater hopelessness also reported lower family cohesion, expressiveness and organisation, and more conflict. Greater hopelessness was associated with lower maternal and paternal caring, and greater over-protectiveness. Hopeless individuals tended to be more likely to be more individuated and more likely to see their parents as separate individuals. They also tended to be less secure with closeness and dependence in relationships, and experience greater anxiety in relationships.

Multiple Regression Analyses using Hopelessness and Suicidal Ideation as Criterion Variables

Two multiple regression analyses were conducted. In the first regression analysis, the continuous variables included in the MANOVA were regressed onto hopelessness. The predictors used in both regression analysis included Family Environment Scale indexes reflecting family cohesion, emotional expressiveness, conflict and organization, Parental Bonding Instrument indexes of maternal and paternal caring and overprotection, Emotional Autonomy Scale indexes of individuation, de-idealisation of parents, non-dependence on parents, acknowledgement of parents as separate people, and attachment
measure indexes of anxiety and closeness in relationships. Perceived closeness and satisfaction in close relationships were not used in the analysis of variance, but were included in the regression equations. The predictors were all entered in the same step as a standard regression equation.

*Hopelessness as Criterion Variable*

The first multiple regression analyses tested predictors of hopelessness. Results of this analysis are presented in Table 5. The overall model was significant ($F = 4.64, p < .001$) and accounted for 38.5% of the overall variance in hopelessness. Three variables accounted for significant unique amounts of variance in hopelessness. The first was de-idealisation of parents, which was higher in participants who had higher overall hopelessness scores. De-idealisation alone accounted for 3.1% of the variance in hopelessness. The second predictor that accounted for a significant proportion of unique variance was the attachment variable reflecting tolerance for close relationships, which alone accounted for 3.7% of unique variance in hopelessness. Those who obtained higher hopelessness scores tended to score lower on tolerance for closeness and dependence. The third significant factor was satisfaction with close relationships alone accounted for 2.7% of the unique variance in hopelessness. Those who noted greater closeness and satisfaction with their closest relationships also reported lower levels of hopelessness. Three additional variables, family cohesion (1.9% of unique variance), family conflict (2.1% of unique variance) and father overprotection (1.7% of unique variance),
Table 5. Multiple regression analysis with hopelessness as criterion variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>sr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FES family cohesion</td>
<td>-0.053</td>
<td>0.029</td>
<td>-0.212</td>
<td>0.019</td>
</tr>
<tr>
<td>FES expressiveness</td>
<td>0.0201</td>
<td>0.036</td>
<td>0.060</td>
<td>0.002</td>
</tr>
<tr>
<td>FES conflict</td>
<td>0.0668</td>
<td>0.035</td>
<td>0.204</td>
<td>0.021</td>
</tr>
<tr>
<td>FES organization</td>
<td>-0.0413</td>
<td>0.034</td>
<td>-0.107</td>
<td>0.008</td>
</tr>
<tr>
<td>PBI maternal caring</td>
<td>-0.0352</td>
<td>0.048</td>
<td>-0.070</td>
<td>0.003</td>
</tr>
<tr>
<td>PBI paternal caring</td>
<td>-0.0113</td>
<td>0.048</td>
<td>-0.023</td>
<td>0.000</td>
</tr>
<tr>
<td>PBI maternal overprotection</td>
<td>-0.0211</td>
<td>0.052</td>
<td>-0.035</td>
<td>0.001</td>
</tr>
<tr>
<td>PBI paternal overprotection</td>
<td>0.0907</td>
<td>0.052</td>
<td>0.152</td>
<td>0.017</td>
</tr>
<tr>
<td>EAS individuation</td>
<td>-0.154</td>
<td>0.122</td>
<td>-0.119</td>
<td>0.009</td>
</tr>
<tr>
<td>EAS de-ideation of parents</td>
<td>-0.385</td>
<td>0.163</td>
<td>-0.246 *</td>
<td>0.031</td>
</tr>
<tr>
<td>EAS non-dependence</td>
<td>0.357</td>
<td>0.195</td>
<td>0.194</td>
<td>0.019</td>
</tr>
<tr>
<td>EAS parents as separate people</td>
<td>0.114</td>
<td>0.110</td>
<td>0.093</td>
<td>0.006</td>
</tr>
<tr>
<td>AAS anxiety</td>
<td>0.730</td>
<td>0.400</td>
<td>0.168</td>
<td>0.019</td>
</tr>
<tr>
<td>AAS closeness X depend</td>
<td>-1.521</td>
<td>0.588</td>
<td>-0.242 *</td>
<td>0.037</td>
</tr>
<tr>
<td>Satisfaction with closeness</td>
<td>0.014</td>
<td>0.006</td>
<td>0.200 *</td>
<td>0.027</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001; R² = .385, p < .001

Note: “SE B” = standard error of B; “sr2” = square semi-partial correlation
approached, but did not reach statistical significance as unique predictors of hopelessness.

The trend for these variables was for greater hopelessness to be associated with lower family cohesion, greater family conflict and greater paternal over-protectiveness.

_Suicidal Ideation as Criterion Variable_

The second multiple regression analysis used the same predictor variables, but substituted current suicidal ideation as measured by the Suicide Ideation Questionnaire as the criterion variable. The results of this analysis are presented in Table 6. The overall model was statistically significant (F = 2.34, p < .01) and accounted for 24% of the variance in suicidal ideation. Only one of the predictor variables accounted for a significant proportion of unique variance in suicidal ideation. The significant variable was family organization measure on the Family Environment Scale, which accounted for 6.6% of the unique variance in suicidal ideation. Greater family organization was associated with lower suicidal ideation. One additional predictor variable, attachment anxiety, which accounted for an additional 2.5% of unique explained variance in suicidal ideation, approached, but did not meet statistical significance. The trend was for those higher on suicidal ideation to also perceive their father’s as more overprotective, and to self-report greater anxiety in their attachment relationships.
Table 6. Multiple regression analysis with suicidal ideation as criterion variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>FES family cohesion</td>
<td>0.083</td>
<td>0.230</td>
<td>0.046</td>
<td>0.001</td>
</tr>
<tr>
<td>FES expressiveness</td>
<td>-0.033</td>
<td>0.288</td>
<td>-0.014</td>
<td>0.000</td>
</tr>
<tr>
<td>FES conflict</td>
<td>0.018</td>
<td>0.275</td>
<td>0.007</td>
<td>0.000</td>
</tr>
<tr>
<td>FES organization</td>
<td>-0.846</td>
<td>0.273</td>
<td>-0.0305</td>
<td>0.066</td>
</tr>
<tr>
<td>PBI maternal caring</td>
<td>0.098</td>
<td>0.386</td>
<td>0.027</td>
<td>0.000</td>
</tr>
<tr>
<td>PBI paternal caring</td>
<td>-0.319</td>
<td>0.379</td>
<td>-0.091</td>
<td>0.005</td>
</tr>
<tr>
<td>PBI maternal overprotection</td>
<td>-0.013</td>
<td>0.412</td>
<td>-0.003</td>
<td>0.000</td>
</tr>
<tr>
<td>PBI paternal overprotection</td>
<td>0.603</td>
<td>0.413</td>
<td>0.141</td>
<td>0.015</td>
</tr>
<tr>
<td>EAS individuation</td>
<td>0.537</td>
<td>0.971</td>
<td>0.058</td>
<td>0.002</td>
</tr>
<tr>
<td>EAS de-ideation of parents</td>
<td>-0.400</td>
<td>1.296</td>
<td>-0.036</td>
<td>0.000</td>
</tr>
<tr>
<td>EAS non-dependence</td>
<td>0.027</td>
<td>1.549</td>
<td>0.002</td>
<td>0.000</td>
</tr>
<tr>
<td>EAS parents as separate people</td>
<td>0.199</td>
<td>0.876</td>
<td>0.023</td>
<td>0.000</td>
</tr>
<tr>
<td>AAS anxiety</td>
<td>6.042</td>
<td>3.184</td>
<td>0.195</td>
<td>0.025</td>
</tr>
<tr>
<td>AAS closeness X depend</td>
<td>-4.402</td>
<td>4.685</td>
<td>-0.098</td>
<td>0.006</td>
</tr>
<tr>
<td>Satisfaction with closeness</td>
<td>0.014</td>
<td>0.050</td>
<td>0.029</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001; R² = .385, p < .001

Note: “SE B” = standard error of B; “sr²” = square semi-partial correlation
Mediation Analyses

Mediating factors of attachment and suicide were explored. Specifically, current depression and perceptions of closeness in relationships were proposed to serve as mediators between attachment factors on the one hand, and suicidal ideation and hopelessness on the other.

Mediation of Attachment and Suicidal Ideation

Two problems arose when conducting the analyses for current suicidal ideation. First, as evidenced in the correlation table (Table 4), perceptions of closeness in relationships was not significantly correlated with current suicide ideation. Thus, it does not meet Baron and Kenny’s (1986) criteria for significant correlation between a mediator and dependent variable. In order to address this issue, closeness ratings for participants’ mothers and fathers were separately correlated with suicidal ideation. Neither parental closeness variable was significantly correlated with suicidal ideation, indicating that current perception of closeness to parents is not a strong correlate of suicide risk.

The opposite problem occurred when current depression was considered. That is, the correlation between suicidal ideation and depression was so high (r = .80) that multicollinearity must be suspected (Bryman & Cramer, 1990). Since significant problems were evident for both mediator variables, these analyses could not be completed. Multicollinearity causes instability in statistical matrix inversion, which is roughly analogous to mathematical problems faced when attempting to divide a number by zero.
Mediation of Attachment and Hopelessness

The mediation analyses were next considered using hopelessness as a criterion. The mediators explored were satisfaction with closeness in current relationships and current depression. The attachment measures were analyzed as predictors. The first step in Baron and Kenny's (1986) procedure is to regress the predictor variables onto the criterion variable. Each of the attachment scales were regressed separately onto hopelessness, and each one significantly predicted hopelessness. Higher hopelessness scores were associated with lower attachment closeness in relationships ($R^2 = .16, p < .001$), lower ability to depend on others ($R^2 = .12, p < .001$), greater relationship anxiety ($R^2 = .10, p < .001$) and lower scores on the multiplicative term of closeness and dependence on others ($R^2 = .18, p < .001$). The second step was to regress the mediator variables, current perceived closeness and current depression onto hopelessness. While depression was significantly correlated with hopelessness ($R^2 = .49, p < .001$), satisfaction with closeness in current relationships was not ($R^2 = .02$). Depression and hopelessness were highly correlated (.70), but not so highly correlated as to suggest multicolinearity. Finally, each predictor variable was paired with the proposed mediator, depression, and both were regressed onto hopelessness. Depression can be considered to be a mediator variable if, when it and a predictor are regressed onto the criterion, the previously significant relationship between the predictor and criterion is no longer significant. Affinity for
attachment closeness in relationships was first regressed with depression onto
hopelessness. Both depression (Beta=.621, p<.001) and closeness (Beta=-.166, p<.01)
remained significant unique predictors of hopelessness, indicating that depression does
not mediate the relationship between hopelessness and attachment closeness. When
depression and attachment dependence were regressed onto hopelessness, depression
remained a significant predictor (Beta=.660, p<.001), while dependence did not (Beta=-
.051, p=.448). Thus, the predictive ability of attachment dependence was mediated by
depression. Attachment anxiety (Beta=.048, p=.466) also was mediated by depression
(Beta=.664, p<.001). Finally, the multiplicative term of attachment closeness and
dependence (Beta=-.134, p<.05) was only partially mediated by depression (Beta=.620,
p<.001). Thus, while each attachment variable individually significantly predicts
hopelessness, the predictive ability of two, dependence in relationships and attachment
anxiety, is mediated by depression.
Chapter IV: Discussion

A primary contribution of this investigation is that it addresses many of the family related variables frequently explored separately in the suicide literature, within the same sample of adolescents. Many of the hypotheses posed in this study were supported by the data. However, there were also some unexpected findings.

The sample represented a fairly diverse group of Canadian adolescents. The participants in this study were primarily white, with black, Asian, Arab, Hispanic and multi-racial adolescents represented to varying degrees. The largest group of adolescents identified as Catholic, many of whom were at House of Shalom. The next largest groups were Atheist/None, Christian/other, and Protestant. It is interesting to note that Catholic participants were no less likely to report suicide history than other religious groups. This is potentially an unexpected finding given the strong prohibition against suicide in the Catholic church. The overall rate of suicidality among adolescents was also surprising. In this sample, fully 26.8% of adolescents had seriously considered suicide, and the same number had attempted suicide during their lifetime. These groups did not differ based on sex or age. These results differ from a recent large scale study of Ontario adolescents that found that roughly 11 percent of adolescents had seriously considered suicide in the past year (Adlaf, Paglia & Beitchman, 2002). Thus, the adolescents in this study seem to be somewhat different from the “average” adolescent. That is, there appears to be a greater incidence of suicidal ideation and attempt in the present investigation.

In the following sections, the hypotheses examined with respect to suicide,
attachment, individuation, and family life are explored.

_Death, Separation, Substance Use, Psychiatric, Abuse and Suicide History_

The hypothesis that adolescents who experienced separation, substance abuse, psychiatric problems and abuse would be more likely to have a history of suicidal ideation or attempt was largely confirmed by this study. However, some notable exceptions occurred. Among the variables of participant age, recent relationship break-up, death of a loved one, maternal substance use and psychiatric problems, and paternal psychiatric problems, none significantly distinguished participants based on suicide history. On the other hand, loss of a loved one due to separation, self-reported substance and alcohol use and psychiatric problems, paternal substance and alcohol use problems, physical abuse, sexual abuse and verbal abuse all distinguished participants based on suicide history. In nearly every case, greater severity of suicide history (i.e., suicide attempt vs. ideation) was associated with a greater likelihood of the problem (e.g., abuse was more likely). The most notable exceptions to this were around self-reported and paternal substance use and alcohol problems. Suicide attempters had a greater likelihood of experiencing these problems relative to non-contemplators, while suicide ideators were less likely to report these particular substance and alcohol use problems.

_Interpersonal Loss_

The literature on both loss and family disruption are largely consistent with the results
of this study. Bowlby’s (1980) theory on the relationship between loss and depression is consistent with the results presented on separation and suicide history. However, it is not consistent with the current findings on death of a loved one. Similarly, these results are consistent with Adam’s (1973; Adam et al., 1982) results that suggest that those who have been separated from a parent in childhood were at greater risk for suicide, but not consistent with his findings on the death of a loved one. Adam’s study focused more exclusively on the loss (death or separation) of a parent, while the current study focused more on death among “close relationships” in childhood, because it was predicted that loss of any significant relationship would affect suicidality. In order to further explore this discrepancy, three more chi-square analyses were conducted examining suicide history. Those variables examined included were “death of mother”, “death of father” and “death of a parent”. There were still no significant differences based on suicide history and parental death. Little can be said about trends for mother’s death, due to very low frequency of maternal deaths, and the number of paternal deaths was also low. It is notable, however, that there is no trend toward greater frequency of paternal death related to suicide history. Further research is needed to explore this discrepancy with the early findings of Adam and his colleagues (Adam, 1973).

Age of death and separation were also examined. In this study, those with and without a history of suicidal ideation and/or attempt who had lost a loved one due to death or
separation did not differ on the age of that loss. Attachment theory would suggest that early losses may be more significant than losses in the teenage years. The present study did not find this with respect to suicide. Further research explicitly on loss and suicide risk could further help to explain these linkages.

Potentially, additional research can continue to focus on specific factors that mediate the relationship between suicide risk and death of a parent or loved one (e.g., Gould et al., 1998). Separation through factors other than death, however, clearly are consistent with other studies examining the relationship between separation and suicide (Adam, 1973; Gould et al., 1998).

Addiction and Psychopathology

Turning to alcohol, substance abuse and psychiatric problems, there is consistency with the suicide literature for most of the findings. Garfinkel, Froese and Hood (1982) found that children and adolescents who had attempted suicide were more likely to have experienced personal substance abuse, psychiatric problems, medical illnesses and contact with psychosocial services than those who have never attempted. Kelly et al. (2001) found that adolescent boys and girls who had an alcohol use disorder were more likely to have had at least one suicide attempt. Among homeless adolescents, however, drug abuse, but not alcohol abuse, distinguished teens on suicide history (ideation or attempt) (Yoder, 1999).

Research focusing on parental mental illness, addiction and abusive behaviours has
been fairly extensive. There have been a number of studies that have demonstrated
associations between adolescent suicidality with parental depression (King et al., 2001;
Pfeffer et al., 1979; Tishler et al., 1981), psychosis (Shaffer, 1974), and drug/alcohol
abuse (Tishler et al., 1981). Garfinkel et al. (1982) found that the families of suicide
attempters were more likely than the families of non-attempters to have a history of
mental illness, history of suicidality in the family, and history of parental absence.
Overall parental psychopathology has been found to be associated with suicidality in
children (Kashani, et al, 1989). Compared with non-suicidal (i.e., depressed or other
psychiatric) inpatient children in another study, those children admitted because of
suicidal behaviour were more likely to have experienced parental drug and alcohol abuse,
but were not more likely to have had a family psychiatric history (Cohen-Sandler,
Berman, & King, 1982).
A clear difference between the current investigation and the others reported here is that the participants in this study are reporting their own perceptions concerning the difficulties of their parents, while other studies have focused on the self-report of the parents, themselves. Thus, this study is limited to what the adolescent knows of the parent’s difficulties, and their willingness to disclose these difficulties. While participants’ perceptions in this study may be affected by their lack of knowledge of their parents’ conditions or their own psychological processes, it is notable that the results of this study are mainly consistent with previous studies. The most notable exceptions in this study are results showing that, while those who have attempted suicide are elevated on certain factors, those who are considered suicide-ideators were less likely than non-contemporaries and attempters to report personal drug and alcohol problems, maternal drug problems, and paternal drug problems.

The reason for the inconsistency between suicide ideators and attempters on these factors is unclear. However, it is also important to note that the methods of data collection are not immediately suspect because parental self-report of symptoms may be affected adversely by impression management issues, as much as the adolescents’ self-reports are. The results presented here suggest that suicide ideators who do not attempt suicide may have familial and personal experiences that are qualitatively different from those who attempt suicide as well as those who do not contemplate suicide.
Physical, Sexual and Emotional Abuse

Physical, sexual and emotional abuse factors have been studied in relation to suicide. One study focused on abuse, and found that self-destructive behaviours (i.e., self-mutilation, self-biting, cutting, burning, hair pulling, head banging, suicide attempts and suicide threats) were more common in children who experienced abuse in childhood (Green, 1978). In a recent study of homeless and runaway teens, history of suicidal ideation and attempt was associated with greater prevalence of physical and sexual abuse in family, and sexual and physical victimisation in the street (Yoder, 1999). The majority of studies that have focused on the relationship between sexual or physical abuse have demonstrated a relationship between suicide attempt and/or ideation and abuse (Fergusson et al., 2000, Johnson et al. 2002; Tyler, 2002). The results of the current study are consistent with these findings. In this investigation, suicide history (i.e., attempt and/or ideation history) were significantly associated with a history of emotional, physical and sexual abuse. The results of this study help to confirm the importance of an abuse history in the understanding of suicide risk. These results also help to place abuse, as a correlate of suicidality, within the context of psychological factors and family factors. Taken as a whole, the results presented here identify family related factors that account for risk of suicidal ideation and attempt in a number of adolescents. This interrelatedness of family factors help to add to an overall model that can be used to formulate interventions targeted improve family relations, potentially reduce abuse in families, and to reduce the risk of suicide.
At the same time, the results are inconsistent with studies that have found more direct links between sexual abuse and suicide, but no, or only indirect relationships between suicidality and physical abuse (Kaplan, et al., 1997, 1999; Lipschitz et al., 1999). In this regard, however, it is notable that the methodology of other studies may be somewhat limited. For example, in one study suicide attempters were not statistically significantly more likely to have experienced physical abuse, despite the fact that attempters had abuse rates three times higher than non-attempters (Kaplan, et al., 1997). As these authors point out, low power may have been an important impediment to identifying a significant result.

With this in mind, the present study may help to shed more light on the relationship between abuse and suicide. According to this study, whether the adolescent perceived experiencing physical, sexual or emotional abuse, the likelihood of a suicide history is elevated. This certainly suggests that abuse is an essential point of intervention for suicide prevention experts.

Knowledge of the Suicide of Others

An additional finding was that knowledge of another person’s suicide attempt or death by suicide increased the likelihood that the participant would report either suicide attempt or ideation. Brent et al. (1993) examined the effect of the loss of a peer to suicide on the suicidality of other adolescents. These researchers found that adolescents who had experienced a suicide of another in their lifetime were more likely to have a suicide
history themselves. These researchers found, further, that exposure to the suicide death of a friend was associated with elevated risk of major depression, post-traumatic stress disorder and suicidal ideation with plan, but not with suicide attempt. Similar results were reported by Brent et al. (1989). These researchers found that risk was further elevated by closeness to the deceased peer, and by one’s own depression or other psychopathology. Among homeless youth, knowledge of a peer’s suicide attempt or completed suicide distinguished adolescents on the basis of suicide history (Yoder, 1999). Others have noted that individuals with a history of suicide ideation and/or attempt are more likely to report death of a close relatives or friends to suicide (Guitredez et al., 1996; Roy, 1985). One researcher also noted that a very high proportion of adolescents who are suicidal have known someone who died by suicide, and evidence a greater attraction to death and lower attraction to life than those who have never known anyone who died by suicide (Guitredez et al., 1996). Thus, “suicide begets suicide” (Kral, 1994, 1998), suggesting that there is a social acceptance of suicide that results when it occurs.

_Perceptions of family life – Parental Bonding and Family Environment_

Two measures analysed in this study focused on the adolescent’s perceptions about family dynamics and relationships. Those were the Parental Bonding Instrument which focused on the perceived caring and over-protectiveness of parents, and the Family Environment Scale that focused on perceived conflict, organisation, expressiveness and cohesion within the family. The hypothesis that these factors would differ based on
suicidality was only partially confirmed. Most of the factors were significantly correlated with suicidal ideation when bi-variate correlations were examined. However, when analysed with other predictors in multivariate and multiple regression analyses, the predictive ability of these family related variables was diminished. This may likely be due, at least partially, to substantial overlapping variance between the variables.

When history of suicidal ideation and attempt was examined, while a marginally significant trend existed for both suicide history and sex on the dependent variable paternal over-protectiveness, there was little other evidence to suggest that perceived parental caring and overprotection directly impacted risk for suicide. The interaction did suggest, however, that adolescent boys who seriously considered suicide rated their fathers as highly overprotective, while boys who attempted rated their fathers as not being overprotective. Those boys without a history of suicidality fell between the other two groups. Adolescent girls, however, evidenced fewer differences based on suicidality, with attempters rating their fathers as somewhat more overprotective than serious ideators and suicide non-contemplators.

Suicide history main effects were found for perceptions of familial cohesiveness, expressiveness and conflict. Suicide history of greater severity (i.e., attempt over ideation) was associated with less cohesiveness and expressiveness, and more conflict in their families. However, when the unique contribution of these factors to the prediction of suicide history was explored through a stepdown procedure, there was significant overlapping variance between these variables, suggesting that each may be measuring the
same underlying constructs. Thus, while we may conclude that perceptions of family cohesiveness, expressiveness and conflict are important to the understanding of suicidality in adolescence, the degree to which each impacts on suicide risk cannot be gleaned from this study.

When current suicidal ideation was examined, on the other hand, the only family related variable that contributed significantly to the regression analyses examining suicidal ideation was the organisation factor. Thus, those with greater self-reported suicidal ideation tended to also report less organisation in their families. This result is in a direction opposite to the initial hypothesis that excessive organisation would predict suicidality. Other factors specific to parents or to the family as a whole did not significantly correspond to the adolescent reports of suicidal ideation. When hopelessness was examined instead of suicidal ideation, the results were somewhat different. Hopelessness has been found to be a predictor of eventual completed suicide (Beck et al., 1988, 1990). In this study, hopelessness was significantly associated with none of the family related factors. Three, however – family cohesion, family conflict and paternal overprotection - were marginally significant. These trends, although not significant, are consistent with the multivariate analyses of suicide history.

The findings of this study are consistent with Asarnow’s study of suicidality among pre-adolescent inpatients, who found lower cohesiveness and expressiveness, and greater conflict among families of suicidal children (Asarnow, Carlson & Guthrie, 1987). They are also consistent with those comparing the Family Environment Scale scores of suicidal
and non-suicidal hospitalised children (Campbell et al., 1993), and a study of non-clinical
9th graders (Meneese & Yutrzenka, 1990). Thus, although the current study was unable to
significantly predict large unique proportions of variance in suicidal ideation, it is clear
that there is an association between certain family climate factors and suicidal behaviour.

Other investigations focusing on family relationships have had diverse findings. King
et al. (2001) found that youth with a history of either suicide attempt or ideation
evidenced poorer family environments (specifically satisfaction with family support,
communication and leisure time), and low parental monitoring. Physical discipline and
family intactness did not, however, significantly account for suicidal history. In another
study, maladaptive maternal and paternal parenting practices were examined (Johnson et
al., 2001, 2002). In that study, maladaptive parenting was associated with increased risk
for anxiety, depression, personality difficulties and substance use disorders in late
adolescence and early adulthood. These difficulties were accounted for by maladaptive
parenting, even after parental psychopathology was accounted for.

Other researchers have found that adolescents who have parents with higher
expectations for education, who are closer to their parents, and who report better
relationships with parents are less likely to experience suicidal ideation or engage in high
risk behaviours (e.g., substance use, sexual activity) than those with poorer relationships
and fewer expectations (Zweig, Phillips & Duberstein Lindberg, 2002). The authors
focused on the protective role of these parental/familial characteristics.

Taken together, the current study and the literature on family suggest that the
relationship between suicide and family dynamics is a very complex one. However, it is possible to gain an understanding of the underlying processes of family life that may contribute to suicide in adolescence.

*Attachment Style and Suicide*

Most of the analyses conducted concerning attachment and suicide confirmed the original hypotheses of this study, which predicted that suicide would be associated with greater preoccupation and anxiety in relationships, and lower comfort with closeness and dependence in relationships. The multiple regression analyses conducted suggest that attachment is not a significant unique predictor of current suicidal ideation when other family and developmental factors are accounted for. However, the chi-square and multivariate analyses suggest that those who report a history of suicidal ideation or attempt differ in important ways on their self-reported attachment style. Attachment anxiety trended toward predicting suicidal ideation, although it did not reach statistical significance. Tolerance for close relationships was a significant unique predictor of hopelessness, with those who evidenced greater hopelessness being less likely to express tolerance for closeness. Further, multivariate analyses of variance found significant univariate and stepdown results for two of the attachment variables, suggesting that those with a history of suicidality evidence more anxiety in relationships and less tolerance for dependence in relationships. Thus, attachment variables appear to be fairly strongly related with suicidality.

The mediation analyses could not be conducted for attachment and suicidal ideation,
however. When hopelessness was analysed as a factor, it was evident that different
attachment factors accounted for variance in hopelessness in different ways with
tolerance or affinity for closeness not being mediated by depression, while the predictive
ability of attachment anxiety and dependence in relationships was mediated by
depression. Thus, some aspects of attachment may directly predict suicidality, while the
predictive ability of others may be mediated through depression or other factors.

These results are in keeping with Bowlby’s (1980) theories of attachment and
depression. By some mechanism of development, whether it is due to the child’s inability
to form relationships, the parents difficulty parenting the child, loss of a caregiver or
some combination thereof, the child’s ability to form healthy relationships is hampered,
and depression is a result. The literature on loss and suicide is consistent with this model
from a loved-one due to non-death separations were significantly related to suicide
history.

Direct examinations of suicide and attachment are also consistent with the findings of
the present investigation. Adam and his colleagues (1995,1996), using the AAI, found
that suicidal adolescents evidence a disorganised attachment style. While the present
investigation does not examine the disorganised style directly, it is notable that there is
consistency in reflecting the attachment style of suicidal adolescents as seriously
disrupted. In the current study, suicidality was associated with attachment anxiety,
fearfulness and preoccupation. Thus, the attachment relationships made by people with
current or past suicidality tend to be severely hampered.

Using a model more similar to the one used in this study (i.e., Bartholomew & Horowitz, 1991), Lessard and Moretti (1998) found higher suicidality to be associated with greater anxiety and preoccupation within attachment relationships. Similarly, in this study, increasingly serious suicide history was related to higher levels of fearfulness and preoccupation with attachment objects in romantic attachments. DeJong’s (1992) results also are evidence of corroboration of the current attachment results. The adolescents in that study who experienced suicidal behaviour or ideation were significantly less securely attached to parents. DiFilippo and Overholser (2000), focusing specifically on adolescent attachment to parents and peers, found that attachment to peers and mother (but not father) was associated with suicide risk. The results of the current study are largely consistent with these studies reported here, but extend the literature by simultaneously examining current suicidal ideation, hopelessness and past suicide history. By examining suicide in this way, we may explore how factors may be associated with a history of suicidality. We may also explore the role of current suicidality in the expression of attachment, individuation and perceptions of family life among adolescents. This study is unique also because attachment is examined as continuous variables as well as categorical variables. In nearly every analysis, suicidality was associated with less secure, more anxious attachment style.

Overall, the results of this study are also consistent with other studies that have focused on the relationship between attachment style and psychopathology. One study
found that adolescents who experienced psychopathology that resulted in minimising of symptomology and distress, such as conduct disorder and substance abuse, tended to have a dismissing attachment style (Rosenstein & Horowitz, 1996). Those adolescents who experienced higher levels of experienced distress, as in affective disorders, were more likely to experience a preoccupied attachment organisation. This result is consistent with the current findings. Depending on the social context in which they live, suicidal adolescents may be more likely to experience great distress or psychological pain (Shneidman, 1993), rather than symptom minimising.

These findings on the relationship of attachment to adolescent developmental adjustment, in general, and suicide in particular, are extremely important. There is evidence for and against the stable transmission of attachment style from childhood to adolescence and into adulthood (Allen & Land, 1999; van IJzendoorn, 1996). Thus, we cannot be certain at what point in an adolescent’s life attachment style ceases to be a reflection of parental style, and at what point it becomes an enduring trait in the child or adolescent. Although a great deal more evidence is needed from longitudinal studies, there is preliminary evidence that early childhood attachment may affect psychopathology and personality far into adulthood (Thompson, 1999). Research has suggested a link between disrupted attachment and such disorders as unipolar depression, borderline personality disorder, anxiety disorders, dissociative disorders and other disorders (Dozier, Stovall & Albus, 1999). More focused research is needed on the etiological role of disrupted attachment in psychopathology in order to formulate a solid
empirical base for the attachment model as it pertains to suicide and other forms of psychopathology. Such a base of knowledge would facilitate additional work on attachment based interventions for adolescent difficulties.

*Individuation and Suicide*

The results of analyses of individuation variables in this study are not consistent with the original hypothesis of the investigation. It was hypothesised that adolescents with a history of suicidal behaviour, or with current suicidal ideation, would be characterised by lower levels of individuation, suggesting that they were less socially autonomous than adolescents without such difficulties. In fact, results show that adolescents with higher scores on a measure of suicidal ideation scored as being more individuated overall than those with lower suicidal ideation scores. De-idealisation of parents was a significant predictor of suicidal ideation, with those scoring higher on ideation scales expressing less idealisation of parents. In multivariate analyses, adolescent suicide attempter and ideation increased the likelihood that an adolescent would see him or her self as more individuated, and more likely to see parents as separate, independent people than those who had no suicide history. Those who had never considered suicide differed significantly from past suicide attempters, being less likely to de-idealize their parents. Greater de-idealization of parents was also associated with greater hopelessness among adolescents.

These results are not consistent with object relations theory which suggests that
greater individuation is associated with healthier psychological adjustment. Further, individuation suggests a developmental process that involves emotional autonomy (Blos, 1979; Steinberg & Silverberg, 1986) that is not consistent with attachment relationships characterised by anxiety and preoccupation. Emotional autonomy or individuation was initially characterised as an important developmental step in which symbiotic relationships with parents were shed in exchange for a more mature, autonomous existence (Mahler, 1963).

Along this vein, it is also evident that there is only modest evidence for Richman’s (1986), and Sabbath’s (1969) conceptualisation of family relationships as characterised by symbiosis, intra-family rigidity and lack of caring. While participants with suicide history were more likely to view their families as more conflictual, and less expressive and cohesive, they did not view either parent as significantly more overprotective or less caring.

On the other hand, Blos (1967, 1968) has characterised individuation as a process in which there is an emotional individuation from internalised love and hate objects in which an adolescent searches for externalised objects, such as peer friends and romantic partners. The results on attachment already presented here suggest that those who have experienced suicidality in their lifetimes have had more difficulty in relationships with external romantic objects than those who have no such history.

Why did adolescents higher on suicidality score as being more individuated? Some other research has demonstrated similar results. For example, one study found that
exposure to physical abuse was associated with an increased ability to determine the
difference between one’s own and another’s perspective, and to create complex
relationships on a Thematic Apperception Test (Warren & Shercliffe, 1999). Another
study, comparing suicidal patients and their partners on a measure of capacity for
“mutually enhancing interactions between autonomous objects,” found no significant
differences between patients and their partners on emotional autonomy (Canetto,
Feldman & Lupei, 1989). Thus, there are some precedents for the results of the current
study.

Possible answers to this question are found within the object relations and attachment
literature. Steinberg and Silverberg (1986) suggest that adolescence is characterised by a
trading of dependency on parents with a dependency on peers, rather than simply growing
into an autonomous person. Perhaps, as adolescents with a history of suicidality also have
negative views of family life, they have a tendency to distance emotionally from parents,
and develop less autonomous relationships with peers than their own peers who have not
experienced suicidal thought. This explanation may be more consistent with object
relations models that suggest that the adolescent may be alienated from the family or feel
mistreated within the family (Kaplan & Maldaver, 1993; Kaplan & Schwartz, 1993;
Kaplan & Worth, 1993; Richman, 1986).

This finding may also be consistent with models that suggest that adolescents who are
less psychologically well adjusted go through a “pseudo-development” to a higher stage
of psychological functioning, without, in fact, truly developing in a way that promotes
emotional autonomy (Kaplan & Maldaver, 1993; Kaplan & Schwartz, 1993; Kaplan & Worth, 1993). Thus, adolescents with a history of suicidality may appear to develop an autonomous set of relationships when viewed in terms of their relationship with parents. But they may experience difficulties in relating to their peers and to other people. This appears to be the case in the present study when the attachment results are examined as those with no suicidal history were most likely to self-report secure attachment relationships, while those with suicide history were more likely to report preoccupied and fearful relationships (see Figure 14).

An alternative interpretation of the individuation data comes from the attachment literature, and stems from a distinction between inter-dependence and dependency. Object-relations models tend to view dependency as symbiotic and immature (Blos, 1968; Mahler, 1963; Richman, 1986). Attachment models, on the other hand, distinguish between dependency, which is an immature state, from inter-dependence with others, an essential feature of secure attachment (Bowlby, 1969). While these two concepts are distinctly different, there may be some overlap that is not adequately accounted for by the measures of emotional autonomy selected for this study. If this is the case, more research is needed to develop self-report measures that will distinguish dependency from inter-dependence.
Limitations and Future Directions

This study provides valuable information about suicidal behaviour among adolescents. However, there are limitations to the present study. A primary limitation is the inherent difference noted in the literature (Berman & Jobes, 1991) between suicidal attempts and ideation that do not lead to death, and completed suicide. This was a study of suicidal thinking and behaviour that may lead to suicide. The present investigation attempted to document the self-reported level of intent to die. Although this is a step ahead of much research that does not attempt to address intent, it stops short of truly addressing the dilemma, “what constitutes a serious attempt to end one’s life?” More prospective investigations examining the family, attachment and individuation factors that are related to eventual completed suicides are required to address this issue.

Another general limitation relates to the overall low base-rate of suicidal behaviour and ideation identified in the population. In the current investigation, however, a relatively large number of adolescents were found to have experienced suicidal ideation or attempt in their lifetime. The reasons for this large number are unclear. One hypothesis is that the results obtained here are due to the sampling methods used. Rather than seeking out adolescents completely randomly, or through high school enrolment, participants were recruited through youth drop in centres and an adolescent treatment centre. Although the treatment centre included a psychiatric component, the rate of suicidal ideation and attempt did not differ appreciably from the youth drop in centres. It is possible that adolescents who attend youth drop in centres are more likely to have
adjustment difficulties, including depression and suicidal thoughts. It is also possible, since adolescents were informed that the study was about suicide, that participants for whom the study was more salient were more likely to agree to participate, in an attempt to seek help. Further study is required to sort out these issues.

Finally, this study may be limited in that it uses developmental measures to assess attachment and individuation in adolescents within a fairly wide age range, 14 to 20. It is expected that younger adolescents would naturally be less mature on these measures than older adolescents. This must be considered when interpreting the findings of the current study.

Within the Context of Suicide Research with Adolescents

The results of this study provide strong evidence for the importance of attachment, individuation and family experiences in the development of suicidality among adolescents. It is important to note, however, again, that while family relationships are essential to adolescent development, they are not the only significant factors that may contribute to suicide. Many other areas of research have revealed important findings that suggest factors that may cause or contribute to suicide. For example, recent research has focused on bullying, and the impact of bullying on predicting suicide. One study found that both victims and perpetrators of bullying are at increased risk of suicidal ideation (Rigby & Slee, 1999). The availability of social-support is also important in understanding the impact of bullying on suicide risk.
Additional areas of research have proven important in the understanding of the roots of adolescent suicidality. Sexual orientation, and the adversities that accompany and identification as gay or lesbian, is another important contributor to understanding adolescent suicide. A recent study found that very large numbers of adolescents who self-identified as gay, lesbian or bisexual has experienced serious suicidal ideation or attempt at some time (D’Augelli, Hershberger, & Pilkington, 2001). An additional area of research that is showing promise is genetics. There is evidence that adolescent suicide risk may be at least partially genetic (Glowinski et al., 2001).

These examples are intended to highlight the fact that suicide is not solely related to difficulty in family relationships. Family relationships may combine with other factors such as bullying, sexual orientation, genetics or other factors to provide either a risk or protective factor of suicide. However, it is important to note that suicide may occur in the absence of adversities in the adolescent’s relationship with parents and family.

This point has been explored by those who wish psychology to guard against overarching theorizing of human behaviour. Kagan (1996, 1998) in particular has been vocal in this area. Focusing particularly on attachment and the impact of early family experiences, Kagan states that psychology in particular becomes caught-up in the notion that early childhood experiences must have broad and independent effects on subsequent development (1996). While he does not directly refute that this may be the case, Kagan does suggest that many experiences are not influenced by early infancy, and frequently psychology overlooks the fact that many “important truth[s]” in psychology are
complimentary (1996, p. 907). Thus, while the current study does not directly investigate the relationship between attachment and temperament, for example, does not mean that the two concepts are not conceptually intertwined, where adolescent suicide is concerned. It also does not mean that, however important the constructs may be, that family life, attachment and individuation are the most essential elements for understanding suicide risk.

With this said, an additional point seems pertinent. That is, within the context of complementary processes in psychology, one of the most frequently noted is that between development that occurs within the context of an environment, and biological predisposition or heredity. While there are frequently reports that suggest that this-or-that characteristic is highly related to a genetic predisposition, the expression of any trait that an individual is biologically predisposed to is constrained by one’s environment (Gould, 1996). Family is one important element of the environment, but not the only one. The merits of studying the family, and presumed outcomes of family life, such as attachment, are clear. However, it is important to keep in mind that interactional research is required in order to clearly understand what specific conditions (e.g., related to traits, or biological vulnerabilities, or fit between parent and child, or exposure to trauma, or poverty, or a multitude of other factors) lead to suicide ideation and attempt. Over the long term, research must attend to these issues, complex as they may appear.

_Implications for intervention with Suicidal Adolescents and their Families_

This investigation brought together a number of associated factors that are frequently
studied individually in the suicide literature. Factors associated with deprivation of caregiving relationships such as loss of a parent and abuse, were studied alongside psychological factors (i.e., attachment, individuation, and adolescent perceptions of family life). The results revealed strong associations between many of these factors and suicide. Suicide history was related to attachment difficulties, particularly anxiety, fearfulness and preoccupation with attachment relationships. Those who have a history of suicidal thought or behaviours tended to hold perceptions of family environment as less cohesive and expressive, and more conflictual. Suicidality was also linked to greater self-reported levels of emotional autonomy among teens. Physical, emotional and sexual abuse was more likely to occur among those with suicide histories, as was separation from a loved-one, paternal substance use (in the case of attempters), and greater exposure to the suicidality of others. These findings suggest that there is a powerful relationship between family life experiences and the experience of suicidal thought during adolescence.

Another factor that is important to consider is that this study represents one of a very few studies that examines family and attachment factors, as they related to suicide, among Canadian adolescents. The vast majority of the research cited in this study was conducted on American adolescents. Canadian studies comprised the second largest group of studies, followed by studies from New Zealand. The number of American studies far outweighs the number of Canadian studies in this area. While a few key articles on attachment, loss, parental bonding and suicide were conducted with Canadian
samples (e.g., Adam, 1973; Adam, Sheldon-Keller, & West, 1996; Lessard & Moretti, 1998; Manassis et al., 1999), there are still relatively very few Canadian studies in this area. Thus, the current study also provides an additional Canadian perspective on these family and attachment factors that predict suicidality.

The implications for adolescent suicide risk are great. A substantial portion of the adolescent population experiences suicidal thought, and a (smaller) sub-section of this group actually attempt to take their life. Further, in some cases, understanding family processes that may contribute to suicide risk may allow for intervention that would reduce this risk. This suggests that more research is needed to understand the implications for family dynamics on adolescent mental health, particularly in the area of family treatment and healing. Attachment theory can play an important role in the development of such a family perspective. Particularly important may be empirically investigated family, group and individual psychotherapy based on object relations and attachment theories.

Much has already been said about object-relations models of therapy in the introduction of this dissertation. Specifically, the work of Richman (1986) addresses how family healing may occur in family therapy. Richman’s model focuses on the adolescent as an outsider in a family system that is characterised by rigidity. Similarly, Kaplan has adapted object-relations and psychoanalytic (i.e., Erikson’s model) to family therapy (Kaplan, 1998; Kaplan & Schwartz, 1993). More empirical work is required to determine the efficacy of such therapeutic approaches.
Recent efforts have been made to address the efficacy of attachment based models of therapy. There is promise in the current literature on attachment related therapy approaches. This is not meant to be a thorough review of the literature, but it is notable that attachment and therapy is an emerging area in psychological literature in general, with researchers focusing on the development, implementation, evaluation and challenges of developing a new type of therapy based on attachment (Byng-Hall, 1999; Horowitz, Rosenberg, & Bartholomew, 1993; Kilmann et al., 1999; Lieberman & Zeanah, 1999; McCluskey, 2002; Slade, 1999). Although based on the classic works of Ainsworth and Bowlby, the prospect of the development of an attachment framework that might eventually evolve into a solid, empirically explored model of psychotherapy is promising.

This study provides evidence, also, that interventions that focus explicitly on family life and relationship processes will help, in many cases, to address suicidality among adolescents. In terms of intervention, the results of this study suggest a number of explicit types of interventions that may be used by therapists who serve adolescents. First, since adolescents with suicide histories have a tendency to view families as less expressive and cohesive, and more conflictual, it would be important that therapists engage in family therapy with suicidal adolescents and their families to explore family dynamics, and help improve communication. Implicit in these results is the idea that helping families increase their expressiveness and cohesiveness, and reducing conflict, will lead to fewer difficulties among adolescents, and in turn decrease the chance of future suicidality.

Research on family related intervention has demonstrated some efficacy. For example,
a recent study exploring a large scale parental education group geared to reduce suicide
risk among adolescents revealed changes in family conflict and maternal caring among
families who participated in the intervention (Toumbourou, & Gregg, 2002). The
curriculum of this intervention was designed around education about adolescent
development, listening, assertiveness, conflict resolution, authoritative parenting,
substance abuse and hopefulness, and assignment to the intervention was not explicitly
directed toward parents of suicidal adolescents. The intervention even demonstrated
positive effects with close friends of the adolescents whose parents participated in the
intervention group. This type of intervention is a novel concept with regard to suicide
prevention, and should receive further empirical attention.

Family therapy interventions that focus on family environment have also demonstrated
efficacy with regard to suicide risk among adolescents. A recent study, for example,
comparing individual cognitive behaviour therapy with a cognitive family therapy found
both to be efficacious in reducing suicide risk (Brent et al., 1997). In this study, the
family therapy focused on family communication and problem solving skills designed to
reduce conflict. Another study by Rotherman-Borus et al. (1994), examined a family
therapy intervention that focused on teaching constructive problem solving around family
conflict, and increasing positive interactions among family members through modelling
positive coping and identifying family strengths. This therapy has been linked to
symptom reduction among female adolescent suicide attempters (Piacentini, Rotherman-
Borus, & Cantwell, 1995).
Further, the psychological concepts of attachment and individuation will give therapists additional tools to identify youth at risk for suicide, and to understand therapy processes within the context of normal and abnormal development. Thus, for example with attachment, therapists who see an adolescent in an intervention setting may identify teens who have more preoccupied or anxious styles of attachment as being at elevated risk for suicide.

Thus, measurement of these psychological constructs also suggest points of intervention. Therapists may, for example, work with an adolescent to identify anxiety or ambivalence in attachment, and work toward developing more secure relationships with others that are characterized by greater comfort with relationship closeness, and greater ability to depend on others in a reciprocal manner.

Finally, the results of this study also emphasize that early experiences such as abuse, separation from caregivers, knowledge of the suicide of others, and other factors are associated with a greater vulnerability to suicidal thoughts and behaviours. The evidence is clear that there is a need for identification of, and intervention with children who experience traumas such as these. As much as with psychological and family environment factors, adolescents require intervention in the form of psychotherapy to assist in dealing with loss, and with abuse, in order to avert suicidal ideation. It is also true that better screening may be helpful to identify these vulnerable youth at an earlier age, and provide intervention before any suicidal thought or behaviour.
Conclusions

The implications of this study are clear, and speak to the need for intervention, and prevention of suicide. As was noted previously, the importance of understanding suicide from psychological, social, and biological perspectives is clear. That does not diminish, however, the critical importance of early childhood development and family life in the development of personality, attachment style, psychological difficulties and suicide. This study is but one part of an important development in psychological science. As has been revealed here, relationship attachment style, individuation, and family environment factors are significantly associated with history of suicidality, and a number of these factors were also associated with current hopelessness and some associated with current suicidal ideation. The implication of these results is that family related factors such as conflict, organization, cohesiveness, expressiveness, abuse, loss and others are important areas to focus on for the development of family interventions. Some work on developing family interventions has already begun, but more is needed. More research is also needed to understand the extent (and limitations) of the usefulness of using family related factors to identify adolescents at risk for suicide. The findings of this study may, then, provide a jumping-off point for more research and development of intervention that will benefit adolescents and their families.
References


Sarasota, FL: Professional Resource Press.


Appendix A

Consent Form

We are doing this study to examine factors related to making a suicidal gesture or attempt. If you agree to be in the study, we will ask you to fill out a questionnaire that asks about your experiences with relationships, and your experience with suicidal behaviour. The researchers know that it is important that only you know what your answers to the questions are. We will keep all of your responses confidential. Each questionnaire will be given an identification number, and will be kept separate from your name. Only in the case where your responses suggest that you may be in danger will your counsellor or parent be notified. If you decide to take the survey, you will receive a $5 gift certificate for a record store in Windsor. Some of the questions are of a sensitive nature. Please feel free to speak with the researcher if you have any questions or feel like you want to talk. The researcher will also give you some information about organizations in town that you can contact if you feel distressed or would like information of a particular kind.

Your participation in this study is completely voluntary. This means that you have the right to drop-out of the study at any time.

This study has been approved by the Ethics Committee of the Department of Psychology, University of Windsor. If you have any questions, please contact:

David Ledgerwood 253-4232 ext. 2216
Dr. M.H. Muldoon (University Ethics Committee Chair) 253-4232 ext. 3916
Dr. Michael Kral (Faculty Supervisor) 253-4232 ext. 2225

Thank you for participating.

Tear here and keep the top portion. Return the bottom portion to the researcher.

Please read the following. Sign and date below if you wish to participate.
I understand that the information obtained from me will be kept completely confidential, and that I may withdraw at any time from participation.

Participant

Signature

Date

Parent/Guardian (If under 16)

Signature

Date
Appendix B

1. I am:
   ___ female
   ___ male

2. Age: ___

3. What is your religion? _______

4. What is your racial identification (e.g., Asian, Black, White, etc.)
   __________________________

5. What is your ethnic identification (country/language background, e.g., Chinese-Canadian, English-Canadian, German, Italian, etc.)
   __________________________

6. Why have you come to the Centre today? (mark all that apply)
   ___ Medical Appointment (other than psychiatrist)
   ___ Psychiatrist/Psychologist Appointment
   ___ Family Planning Appointment
   ___ Other (please specify) __________________

8. What services have you used at this clinic in the past? (mark all that apply)
   ___ Medical Services (other than psychiatrist)
   ___ Psychiatric Services
   ___ Family Planning Services
   ___ Psychotherapy
   ___ Other (please specify) __________________

9. Who do you currently live with (e.g., parents, brother and sister; with foster parents, etc.)?
   __________________________

   How long have you been in these living arrangements?
   __________________________
10. List the 4 people in your life who you have been closest to (e.g., mother, father, friend, girl/boy friend, etc.). Also, rate how happy you are with the emotional closeness in your relationship with that person right now.

1) Relationship _______________

1 2 3 4 5 6 7 8 9 10
Completely
Unhappy
Neutral
Happily

2) Relationship _______________

1 2 3 4 5 6 7 8 9 10
Completely
Unhappy
Neutral
Happily

3) Relationship _______________

1 2 3 4 5 6 7 8 9 10
Completely
Unhappy
Neutral
Happily

4) Relationship _______________

1 2 3 4 5 6 7 8 9 10
Completely
Unhappy
Neutral
Happily

11. Have you recently broken up with a boy/girl friend? YES/NO

How did you feel about that breakup?

1 2 3 4 5 6 7 8 9 10
very
good

12. Describe your family growing up.

a. Who were the people in your family (i.e., those you were closest to, e.g.,
b. Do you live with your family now?

If no, how long have you lived on away from them?

c. Has anyone you were close to ever died _____ yes _____ no

d. If yes, fill out the section below. It asks you to write who died, your age when they died, and how close you felt to them. Fill out a section for each person who has died.

I. Name and Relationship: ___________ Your age at that time _____ How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

II. Name and Relationship: ___________ Your age at that time _____ How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

III. Name and Relationship: ___________ Your age at that time _____ How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

e. Have you ever been separated from an important person in your family because of something other than death (e.g., divorce or separation of parents, where you did not see your parent for a long time)?

_____ yes _____ no

I. Name and Relationship: ___________ Your age at that time _____ How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

Why were you separated and how long were you separated.
II. Name and Relationship: ______________ Your age at that time _____

How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

Why were you separated and how long were you separated.

III. Name and Relationship: ______________ Your age at that time _____

How close did you feel to that person emotionally?

Not close 1 2 3 4 5 6 7 Very close at all

Why were you separated and how long were you separated.

f. Have any members of your family ever had a drug, alcohol or psychiatric problem that you thought should have led to some kind of treatment (indicate with a checkmark for yes)?

<table>
<thead>
<tr>
<th>Drug</th>
<th>Alcohol</th>
<th>Psychiatric</th>
<th>Please Explain</th>
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<tbody>
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<td>Yourself</td>
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<tr>
<td>Mother</td>
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<td>Sister(s)</td>
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<td>Other close relative:</td>
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<tr>
<td>Relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
g. Have you ever experienced physical abuse by anyone in your family (e.g., hitting, punching, pushing, slapping, etc.)? **Yes/No** By whom ______

h. Have you ever experienced verbal/emotional abuse by anyone in your family (e.g., namecalling, insults, etc.)? **Yes/No** By whom ______

I. Have you ever experienced sexual abuse by anyone in your family? **Yes/No** By whom __________

13. Have you ever known somebody who has **attempted** suicide (tried to kill themself, but didn't die)? ____ yes ____ no

a. If yes, what was their relationship to you (e.g., mother, brother, friend) _______

b. If yes, how old were you at the time? ______

c. If yes, what is the closest (emotionally) you felt to the person who has attempted suicide? (if more than one, please rate each one individually)

   not close 1 2 3 4 5 6 7 very close

14. Have you ever known somebody who has **committed** suicide (died by suicide)? ____ yes ____ no

a. If yes, what was their relationship to you (e.g., mother, brother, friend) _______

b. If yes, how old were you at the time? ______

c. If yes, what is the closest (emotionally) you felt to the person who has died by suicide? (if more than one, please rate each one individually)

   not close 1 2 3 4 5 6 7 very close

15. Have you ever **SERIOUSLY CONSIDERED** committing suicide? ____ yes ____ no

a. How many times? ______
b. If yes, what was your age at that time (or if more than once, how old were you when you had your most serious thoughts about committing suicide)?

\[6\]

\[
\begin{array}{cccccc}
\text{I did not want} & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\
\text{I very much} & & & & & & & \\
\text{wanted} & & & & & & & \\
\text{to die at all} & & & & & & \\
\text{to die at that time} & & & & & & \\
\end{array}
\]

d. If yes, did you have a plan to commit suicide, yes no

e. If yes, what did you plan to do?

16. Have you ever attempted suicide? yes no

a. How many times?

\[6\]

\[
\begin{array}{cccccc}
\text{I did not want} & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\
\text{I very much} & & & & & & & \\
\text{wanted} & & & & & & & \\
\text{to die at all} & & & & & & \\
\text{to die at that time} & & & & & & \\
\end{array}
\]

d. If yes, what did you do (e.g., used medication (specify), jumped off house, cut myself, etc.)?

e. If yes, did you see a doctor or did an ambulance have to come?
### Appendix C
Factors and Reliability Coefficients of the Family Environment Scale

Moos and Moos (1994) FES Subscales and Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Subscale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>Cohesion</td>
<td>The degree to which family members offer each other help and support; degree of commitment.</td>
</tr>
<tr>
<td></td>
<td>Expressiveness</td>
<td>The amount of familial encouragement to openly express feelings</td>
</tr>
<tr>
<td></td>
<td>Conflict</td>
<td>The degree to which anger, aggression and conflict is openly expressed among family members.</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>Independence</td>
<td>Whether family members act independently, are self-sufficient, make own decisions and are assertive.</td>
</tr>
<tr>
<td></td>
<td>Achievement Orientation</td>
<td>Are certain activities (e.g., school or work) viewed largely in an achievement framework by the family.</td>
</tr>
<tr>
<td></td>
<td>Intellectual-Cultural Orientation</td>
<td>How interested in intellectual and cultural activities is the family?</td>
</tr>
<tr>
<td></td>
<td>Active-Recreational Orientation</td>
<td>Degree to which the family participates in social and recreational pursuits.</td>
</tr>
<tr>
<td></td>
<td>Moral-Religious Orientation</td>
<td>Amount of emphasis on issues of values, religion and ethics.</td>
</tr>
<tr>
<td>System Maintenance</td>
<td>Organization</td>
<td>Degree of emphasis on structure and organization in organising duties and activities within the family.</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>Degree to which rules are used in the family structure.</td>
</tr>
</tbody>
</table>
Moos and Moos (1994) FES Subscale alpha and two month test-retest reliabilities

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Subscale</th>
<th>Alpha(^5)</th>
<th>2 Month Test-Retest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>Cohesion</td>
<td>.78</td>
<td>.86</td>
</tr>
<tr>
<td></td>
<td>Expressiveness</td>
<td>.69</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>Conflict</td>
<td>.75</td>
<td>.85</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>Independence</td>
<td>.61</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td>Achievement</td>
<td>.64</td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intellectual-Cultural Orientation</td>
<td>.78</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>Active-Recreational Orientation</td>
<td>.67</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>Moral-Religious Orientation</td>
<td>.78</td>
<td>.80</td>
</tr>
<tr>
<td>System Maintenance</td>
<td>Organization</td>
<td>.76</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>.67</td>
<td>.77</td>
</tr>
</tbody>
</table>

\(^5\) Alpha coefficients reported in Moos and Moos 1994 were originally reported in Moos 1990.
Appendix D
Reliability, Skewness and Kurtosis of Continuous Variables used in Analyses

<table>
<thead>
<tr>
<th>Scale</th>
<th>Variable Name</th>
<th>Inter-item Reliability</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAS</td>
<td>Closeness</td>
<td>.72</td>
<td>-.505</td>
<td>.251</td>
</tr>
<tr>
<td></td>
<td>Dependence</td>
<td>.76</td>
<td>-.145</td>
<td>-.588</td>
</tr>
<tr>
<td></td>
<td>CloseXDependence</td>
<td>--</td>
<td>-.389</td>
<td>-.101</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>.86</td>
<td>.052</td>
<td>-.915</td>
</tr>
<tr>
<td>FES</td>
<td>Cohesion</td>
<td>.77</td>
<td>-.068</td>
<td>-1.007</td>
</tr>
<tr>
<td></td>
<td>Expressiveness</td>
<td>.58</td>
<td>.003</td>
<td>-.689</td>
</tr>
<tr>
<td></td>
<td>Conflict</td>
<td>.80</td>
<td>-.159</td>
<td>-1.098</td>
</tr>
<tr>
<td></td>
<td>Organization</td>
<td>.62</td>
<td>-.300</td>
<td>-.715</td>
</tr>
<tr>
<td>EAS</td>
<td>Individuation</td>
<td>.70</td>
<td>-.404</td>
<td>-.584</td>
</tr>
<tr>
<td></td>
<td>De-idealisation</td>
<td>.64</td>
<td>-.243</td>
<td>-.803</td>
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<tr>
<td></td>
<td>Non-dependence</td>
<td>.59</td>
<td>-.566</td>
<td>-.068</td>
</tr>
<tr>
<td></td>
<td>Parents as separate</td>
<td>.67</td>
<td>.307</td>
<td>-.185</td>
</tr>
<tr>
<td>PBI</td>
<td>Maternal Caring</td>
<td>.90</td>
<td>-.615</td>
<td>-.172</td>
</tr>
<tr>
<td></td>
<td>Paternal Caring</td>
<td>.91</td>
<td>-.204</td>
<td>-.668</td>
</tr>
<tr>
<td></td>
<td>Maternal Over-protect</td>
<td>.78</td>
<td>.278</td>
<td>.394</td>
</tr>
<tr>
<td></td>
<td>Paternal Over-protect</td>
<td>.80</td>
<td>.127</td>
<td>-.438</td>
</tr>
<tr>
<td>SIQ</td>
<td>Suicide Ideation</td>
<td>.98</td>
<td>1.794*</td>
<td>2.617*</td>
</tr>
<tr>
<td>BDI</td>
<td>Depression</td>
<td>--</td>
<td>1.030*</td>
<td>.344</td>
</tr>
<tr>
<td>BHS</td>
<td>Hopelessness</td>
<td>--</td>
<td>1.012*</td>
<td>.172</td>
</tr>
</tbody>
</table>

* Skewness or kurtosis positive at p < .001
Appendix E

Frequencies of parental death by suicide history.

<table>
<thead>
<tr>
<th>Death</th>
<th>Suicide History</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Contemplator</td>
</tr>
<tr>
<td>Father died</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>63</td>
</tr>
<tr>
<td>Yes</td>
<td>7</td>
</tr>
<tr>
<td>Mother died</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>69</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Parent died</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>62</td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
</tr>
</tbody>
</table>
VITA AUCTORIS

David Michael Ledgerwood was born in Toronto, Ontario, Canada on December 29, 1971. He completed his Bachelor of Arts Degree in Psychology at the University of Windsor in 1995. He went on to earn a Masters Degree in Applied Social Psychology at the University of Windsor in 1997, and then completed a Pre-Doctoral Fellowship in the Yale University School of Medicine in 2003. He earned his Ph.D. in Clinical Psychology from the University of Windsor in 2003.