

FACTORS ASSOCIATED WITH SUICIDAL IDEATION AMONG
AMERICAN COLLEGE STUDENTS: A RE-EXAMINATION
OF THE ESCAPE THEORY OF SUICIDE

By

CORY E. WALLACK

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To my parents, for all of their love and support.

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Abstract of Dissertation Presented to the Graduate School
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OF THE ESCAPE THEORY OF SUICIDE

By

Cory E. Wallack

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The purpose of the present study was to assess the effectiveness of the Escape Theory of Suicide in accounting for the development of suicidal ideation among a sample of undergraduate college students. One hundred eighty-one students completed a battery of assessments including measures of stress, perfectionism, attribution style, self-awareness, anxiety, depression, hopelessness, reasons for living, and suicidal ideation. While the proposed model of study was not supported, modifications resulted in a final model that provided a strong fit with the data. The results indicate that the Escape Theory of Suicide provides a promising structure for understanding the manner in which college students develop suicidal thinking. Furthermore, the results support the inclusion of both stress and maladaptive perfectionism in the Escape Theory. However, only partial support was provided for the inclusion of negative attribution in the Escape Theory, and support was not provided for the inclusion of heightened self-awareness. The findings of the present study provide direction for future research aimed at further identification of the factors associated with suicidal ideation among college students.

CHAPTER 1 INTRODUCTION

Although suicide rates among American college students have dropped in the past decade, suicide remains the second leading cause of death among this population. As a result of the continued high suicide prevalence rates and several recent high profile suicide deaths, increasing attention has been placed on the need for effective suicide prevention and intervention among American college students. However, to implement effective intervention and prevention programs with college students, it is first necessary to understand the process whereby they come to be suicidal. The Escape Theory of Suicide (Baumeister, 1990) provides a theoretical model to explain the development of suicidal ideation. The Escape Theory suggests that suicidal ideation (thinking about killing oneself) results from an interaction of perfectionism, life stress, negative self-attributions, heightened self-awareness, depression, anxiety, hopelessness and limited perceived reasons for living. Initial investigations of the Escape Theory have primarily supported the model. However, these investigations provided inconsistent findings concerning the contribution of perfectionism to the development of suicidal ideation. Additionally, these investigations did not incorporate negative self-attribution nor did they incorporate heightened self-awareness, as Baumeister's original model proposed. As a result, the roles of perfectionism, negative self-attribution, and self-awareness within the Escape Theory remain unclear. The purpose of the present study was to reinvestigate the Escape Theory of Suicide, incorporating attribution style, self-awareness, and a modified conceptualization of perfectionism.

Statement of the Problem

From the mid-1950s to the mid 1990s the rate of completed suicide among American young adults (ages 15 to 24) nearly tripled. During this period the suicide rate for young adults increased from 3.6 per 100,000 to 13.6 per 100,000 (Vastag, 2001). Following four decades of

steady increases, the suicide rate among young adults declined from 13.8 per 100,000 in 1994 to 9.9 per 100,000 in 2001. Despite the decreased suicide rate during this seven year period, suicide accounted for an alarming 12.8 percent of all deaths among American young adults in 2001, making suicide the third leading cause of death for individuals ages 15 to 24 (Vastag, 2001). The frequency of completed suicide among young adults is even more alarming given that the aforementioned suicide rates may be an underestimate, as it is likely that a significant number of deaths attributed to accidental injury (e.g., single car accidents) were in fact suicide (Connolly, Cullen & McTigue, 1995).

It is estimated that in the United States 25 percent of all people ages 18 to 24 are either full or part-time college students (National Center for Educational Statistics, 1996). Although the suicide rate among undergraduate college students is estimated to be half that of same-aged non college students (Silverman, Meyer, Sloane, Raffel, & Pratt, 1997), suicide remains a significant problem among this population. It is estimated that 1100 of the 3971 young adults who completed suicide in 2001 were enrolled in college, making suicide the second leading cause of death (behind accidental injury) for college students (Vastag, 2001).

Given that suicide is the second leading cause of death among American college students, suicide is a significant problem among this population that needs to be addressed. Furthermore, to fully understand the extent of the “suicide problem” among college students, it is necessary to conceptualize suicide as being one point on a more broadly defined suicide continuum, which includes suicidal thoughts, feelings and behaviors (Barrios, Everett, Simon & Brenner, 2000). This more broadly based conceptualization of suicide makes apparent the severity of the “suicide problem” among American college students. For example, among the participants in the 1995 National College Health Risk Behavior survey (Youth Risk Behavior Surveillance, 1997), 10

percent stated that they seriously considered attempting suicide during the 12 months preceding the survey, 7 percent reported having a suicide plan during the preceding 12 months, and 2 percent reported having made a suicide attempt that required medical attention. The findings from the College Health Risk Behavior Survey are consistent with the more recent findings obtained from a sample of 1455 college students (Furr, Westefeld, & McConnell, 2001). Among this sample of students selected from four different colleges and universities, 9 percent reported having thought about committing suicide during the previous year and 1 percent reported having attempted suicide during the previous year.

Thus, previous research has demonstrated that suicide is the second leading cause of death among college students, that the estimated number of suicide deaths may in fact be an underestimate, and that suicidal thoughts and feelings are widely prevalent among American college students. Given the prevalence of suicidal ideation, suicide attempts, and suicide completions among college students, it is important to create research based intervention and prevention programs geared specifically towards this population. Indeed, this is consistent with the goals of the National Strategy for Suicide Prevention (U. S. Department of Public Health and Human Services, 2001).

Although it is clearly necessary to implement suicide prevention and intervention programs on college campuses, it is first necessary to identify the process whereby college students become suicidal. Previous research has identified a considerable number of variables that may be associated with suicidal ideation among college students. For example, suicidal ideation among this population has been associated with a family history of suicidal ideation (Roy, Rylander & Sarchiapone, 1997), a low socioeconomic background (Andrews & Lewinshohn, 1992), a history of childhood physical and sexual abuse (Fergusson, Beautrais &

Horwood, 2003), high levels of neuroticism (Spirito & Overholser, 1991), and elevated levels of exposure to adverse life events (Adams, Overholser & Spirito, 1994). Among the variables investigated to date, depression and hopelessness appear to be the variables most consistently and strongly associated with suicidal ideation (Beautrais, 2003).

Given that there are numerous factors associated with suicidal ideation, it is important to utilize conceptual frameworks that are capable of explaining the process by which various variables interact with one another to produce suicidal thoughts and feelings (Ferguson, Woodward & Horwood, 2000). The Escape Theory of Suicide (Baumeister, 1990) is one such conceptual framework. The Escape Theory of Suicide provides a theoretical framework for explaining the process by which perfectionism, stress, negative self-attribution, heightened self-awareness, depression, anxiety, hopelessness, and limited reasons for living interact to produce suicidal ideation (Baumeister, 1990). The Escape Theory of Suicide is a six stage model, which views suicide as an attempt to escape from an extremely aversive self-awareness. The six stages of the Escape Theory of Suicide are: falling short of standards, negative self-attributions, high self awareness, negative affect, cognitive deconstruction, and consequences of deconstruction.

The first stage of the Escape Theory suggests that an individual's experiences fall short of her or his standards. The experience of falling short of standards may be the result of the individual setting unrealistically high standards, experiencing stressful life events, or experiencing a combination of both high standards and stressful life events. Baumeister suggested that the decisive factor of the first stage of the Escape Theory is the magnitude of the perceived shortfall, such that the development of suicidal thoughts and feelings may be the eventual result of an individual experiencing either a single highly significant failure or multiple, but somewhat less significant, failures. Furthermore, Baumeister contended that perceived

failure is frequently the result of an individual's tendency to set unrealistically high standards, and as such, he suggested that the first stage of the Escape Theory ultimately consists of perfectionism, life stress, and the interaction between perfectionism and life stress.

In the second stage of the Escape Theory, the individual blames the perceived failure (stage 1) on himself or herself. During this stage, the individual makes negative self-attributions and identifies himself or herself as being blameworthy and incompetent. These negative self-attributions are characterized by an internal, stable and generalized view of the self as being incompetent.

In the third stage of the theory an individual develops a heightened state of self-awareness. Consistent with self-regulation theory (Carver & Scheier, 1981), Baumeister contends that an individual becomes highly self-focused when he or she perceives his or her current state as being inconsistent with his or her desired state. Thus, an individual maintains a heightened state of self-focus until the discrepancy (i.e., high standards and perceived failure) is resolved. Thus, Baumeister's third stage is marked by a chronic state of self-focused attention.

In the fourth stage of the Escape Theory, the individual develops negative affect. Baumeister contends that seeing oneself as falling short of standards results in feelings of depression while perceiving the self as falling short of obligations produces feelings of agitation or anxiety. Thus, Baumeister suggests that the Escape Theory's fourth stage is characterized by persistent feelings of depression and anxiety.

In the fifth stage of the Escape Theory, an individual attempts to escape negative affect (stage four) by ceasing meaningful thought. Baumeister suggested that during this stage the individual realizes that he or she can end negative affect by ceasing to blame himself or herself, by ceasing to set high standards, and by ceasing to be aware of the self. Given that each of these

aforementioned factors involve higher level thinking, or meaning, Baumeister suggested that the refusal of meaningful thought would eliminate negative affect. The absence of meaningful thought is referred to as cognitive deconstruction. Cognitive deconstruction is characterized by a narrow time perspective, an over emphasis on the present, and an inability to believe in or set positive long-term goals. Maintaining a deconstructed cognitive state is difficult, due to the constant presence of thought provoking stimuli in the individual's environment. Due to the focus on the present, an inability to believe in long-term goals, and an inability to remain in a deconstructed cognitive state, Baumeister suggested that the fifth stage of the Escape Theory is ultimately characterized by feelings of hopelessness.

As a result of continued feelings of hopelessness, in the sixth stage of the model the individual experiences the consequences of cognitive deconstruction, or disinhibition. Most individuals have a strong inner desire to live, and likewise, a strong inner restraint against attempting suicide (Baumeister, 1990). However, as previously indicated, cognitive deconstruction involves the cessation of higher meaning. Given that the inner restraint against suicide is a meaningful thought, the cessation of higher meaning results in the elimination of inhibitions against suicide. Baumeister suggested that the removal of inhibitions against suicide is marked by the inability to perceive reasons to live, and as such, the sixth stage of the Escape Theory is ultimately marked by an absence of reasons for living.

According to Baumeister, the development of suicidal ideation (thinking about killing oneself) is the result of the six stages of the Escape Theory. Given the inability to escape aversive emotion, negative self-attributions, and heightened self-awareness, the individual seeks to eliminate higher meaning. The escape from higher meaning cannot be maintained, and as a result the individual develops feelings of hopelessness. However, the escape from higher

meaning simultaneously removes the inner restraint against suicide. The end result is that the individual comes to view suicide as the only viable option for escaping emotional suffering (Baumeister, 1990).

To date, there have been three investigations specifically designed to assess the validity of the Escape Theory (Dean & Range, 1996; Dean, Range & Goggin, 1996; Dean and Range, 1999). As previously indicated, Baumeister suggested that stage one of the Escape Theory consists of perfectionism and the interaction between perfectionism and stress. Each of the three previous investigations of the Escape Theory have employed Hewitt and Flett's (1991) multidimensional conceptualization of perfectionism. This conceptualization of perfectionism describes perfectionism as a multi-dimensional personality characteristic consisting of three components: self-oriented, socially prescribed, and other oriented perfectionism (Hewitt & Flett, 1991). Self-oriented perfectionism refers to setting unrealistic standards for one's self and stringently evaluating one's behavior. Socially prescribed perfectionism refers to an individual's belief that others hold extremely high standards that must be met in order to be accepted. Other-oriented perfectionism refers to placing extremely high and unrealistic standards on other people. Thus, the three previous investigations of the Escape Theory included measures of self-oriented perfectionism, other-oriented perfectionism, and socially-oriented perfectionism.

The three initial studies of the Escape Theory of Suicide have provided some evidence for the validity of the model (Dean & Range, 1996; Dean, Range & Goggin, 1996; Dean and Range, 1999) For example, among a sample of college students, Dean and Range (1996) found significant paths from stress to socially prescribed perfectionism, from socially prescribed perfectionism to depression, from depression to hopelessness and from few reasons for living to suicidal ideation. Contrary to predictions, Dean and Range (1996) failed to find significant paths

between self-oriented perfectionism and depression and between hopelessness and few reasons for living. These findings led Dean and Range (1996) to conclude that there was moderate support for the validity of the Escape Theory.

Additional support for the Escape Theory of Suicide was demonstrated by Dean, Range and Goggin (1996) among a sample of college students and Dean and Range (1999) among a clinical sample of adults. In each of these investigations, there were significant paths between socially prescribed perfectionism and depression, depression and hopelessness, hopelessness and reasons for living, and few reasons for living and suicidal ideation. As a result of the increased number of validated paths found within the model in the latter two studies, Dean and Range (1999) concluded that there was significant support for the Escape Theory of Suicide.

While there seems to be initial support for the Escape Theory of Suicide, there are several noteworthy factors concerning the aforementioned studies that remain in need of further investigation. First, although theoretically predicted to be associated with the development of suicidal ideation, the influence of perfectionism (as conceptualized in these studies) has been inconsistent in the aforementioned investigations. Specifically, self-oriented perfectionism did not contribute significant variance to the model in any of the three aforementioned studies (Dean & Range, 1996; Dean, Range & Goggin, 1996, Dean & Range, 1999). A second inconsistent finding concerning perfectionism in the aforementioned studies concerns the role of socially prescribed perfectionism. While Dean, Range, and Goggin (1996) found socially prescribed perfectionism to have a direct link to suicidal ideation, neither of the investigations conducted by Dean and Range (1996; 1999) found this link to be significant. Thus, given the fact that self-oriented perfectionism has not been demonstrated to contribute significant variance to the Escape Theory, nor has the contribution of socially prescribed perfectionism within the Escape Theory

been consistently demonstrated, the role of perfectionism within the Escape Theory remains unclear.

A third limitation of the aforementioned studies of the Escape Theory is the omission of attribution style. In Baumeister's original conceptualization of the Escape Theory, the second stage was marked by an individual's tendency to make negative self-attributions. However, the aforementioned studies of the Escape Theory did not include negative self-attribution in the investigation of the model. Rather, these investigations operationalized negative self-attribution as a component of perfectionism. Similarly, a fourth limitation of the initial investigations of the Escape Theory is the omission of self-awareness. According to Baumeister, the third stage of the Escape Theory is marked by a heightened state of self-awareness, with heightened self-awareness moderating the link between attribution style and negative affect. The omission of attribution style and self-awareness in previous studies utilizing the Escape Theory may have weakened the validity of the findings in these studies. Finally, while two of the aforementioned investigations of the Escape Theory consisted of samples of college students, the most decisive of the studies (Dean and Range, 1999) was limited to a clinical sample. As a result, there is limited ability to conclude the validity of the Escape model among this population.

Thus, while there has been some evidence provided as to the validity of the Escape Theory, there are several significant limitations to previous investigations. As a result of these limitations, it remains difficult to determine the extent of the model's validity among college students. Given that there is some indication that the model is valid among both college students and a clinical sample of adults, and given that there is need for greater understanding of how college students come to feel suicidal, further investigation and clarification of the Escape Theory is warranted.

Need for the Current Study

As mentioned above, previous investigations of the Escape Theory of Suicide have relied on Hewitt and Flett's (1991) three dimensional conceptualization of perfectionism. While this conceptualization of perfectionism distinguishes three components of perfectionist thinking (i.e., self-oriented, other-oriented and socially prescribed) an overriding assumption of each of the components is that they are negative, or maladaptive in nature. Thus, each of the previous investigations of the Escape Theory of Suicide have operationalized perfectionism as a strictly negative or maladaptive personality characteristic.

While investigations of the Escape Theory have relied on this strictly negative conceptualization of perfectionism, recent research has indicated that perfectionism consists of both adaptive and maladaptive components (LoCicero & Ashby, 2000; Suddarth & Slaney, 2001). For example, a factor analysis conducted on the commonly used Multidimensional Perfectionism Scale found that while the three traditional dimensions of perfectionism were accurate, two higher order factors of adaptive striving and maladaptive evaluation concerns also existed (Rice, Ashby & Slaney, 1998). Given the existence of these apparent higher order factors of maladaptive and adaptive perfectionism, it has been suggested that to clearly and accurately assess the association between perfectionism and other variables, perfectionism should be conceptualized and measured as both an adaptive and maladaptive construct (Slaney et al., 2001).

A second and perhaps greater limitation of Hewitt and Flett's conceptualization of perfectionism is that it appears to lack a clear definition of the maladaptive components of perfectionism. Perfectionists have been described as setting unrealistically high standards and being overly critical in their self-evaluation of their performance (Frost, Marten, Lahart, & Rosenblate, 1990). However, following their review of the perfectionist literature, Shafran and

Mansell (2001) concluded that the currently employed conceptualizations and measurements of perfectionism did not reflect the original construct of perfectionism. For example, these authors argued that subscales of perfectionism such as “socially prescribed perfectionism may be relevant to perfectionism, but not integral to its definition” (Shafran & Mansell, 2001; p887). Furthermore, Shafran and Mansell concluded that “as a result of confounding perfectionism with its associated variables, the existing assessment measures of perfectionism are flawed” (p901).

In response to the aforementioned criticisms of the traditional conceptualization of perfectionism and measures used to assess that conceptualization, recent attempts have been made to formulate a new conceptualization and measure of perfectionism that captures the adaptive aspects of perfectionism as well as clearly defining the maladaptive aspects. Research investigations have demonstrated significant support for the new measure (the Almost Perfect Scale-Revised) and have provided evidence for the validity of the more precise definition and operationalization of maladaptive perfectionism, (Sudarth & Slaney, 2001; Slaney et al, 2001).

As previously indicated, studies investigating the Escape Theory of Suicide have relied on Hewitt and Flett’s traditional conceptualization of perfectionism. It is possible that the reliance on this conceptualization of perfectionism contributed to the inconsistent and nonsignificant findings in previous investigations of the Escape Theory of Suicide. Incorporating the more recently revised conceptualization of maladaptive perfectionism and assessing perfectionism with a measure demonstrated to be more consistent with the maladaptive definition of perfectionism may result in a stronger support for the Escape Theory. Thus, one need for the present study is to reexamine the Escape Theory of Suicide using this new conceptualization and assessment of perfectionism.

In addition to more clearly conceptualizing and operationalizing perfectionism, it is necessary to investigate the contribution of attribution style to the Escape Theory of Suicide. As previously discussed, Baumeister (1990) suggested that the second stage of the Escape Theory consisted of negative self-attributions (i.e., internal, negative, and stable attributions for negative events). However, in previous investigations of the Escape Theory, attribution style was conceptualized as being a component of perfectionism, and as such, was not considered to be an independent variable and was not included as an independent variable. However, research on attributional style and perfectionism suggests that perfectionism is related to but not redundant with a negative attributional style (Chang & Sanna, 2001). Given that attributional style is not redundant with perfectionism, it is necessary to investigate the Escape Theory with the inclusion of a specific assessment of attribution style, as Baumeister originally suggested.

A third need for the current study is to investigate the influence of heightened self-awareness in the Escape Theory. As previously reviewed, Baumeister suggested that the third stage of the Escape Theory consisted of heightened self awareness. However, the initial investigations of the Escape Theory did not include heightened self-awareness as a separate variable. Rather, as with attribution style, self awareness was thought to be assessed by perfectionism. Given this, it is necessary to include heightened self-awareness as an independent variable in the Escape Theory.

Finally, given the “suicide problem” among American college students, it is necessary to assess the validity of the Escape Theory among this population. Of the three previously mentioned investigations of the Escape Theory, the most recent and most decisive study (Dean & Range, 1999), employed a clinical sample, and did not include a sample of college students. As a result, there remains uncertainty as to the applicability of the Escape Theory to college

students. Given this, the current study is needed to gain further understanding as the Escape Theory's validity among college students.

Purpose of the Study and Significance of the Study

There are several noteworthy observations concerning suicidal ideation, perfectionism, and investigations of the Escape Theory of Suicide. First, suicidal thoughts, feelings and behaviors are highly prevalent among American college students. Second, it is necessary to develop theoretical frameworks for understanding the process through which various variables interact to produce suicidal thoughts, feelings and behaviors. Third, the Escape Theory of Suicide provides a possible theoretical framework for understanding how college students come to feel suicidal. Fourth, investigations of the Escape Theory of Suicide have provided initial support for the model's validity. Fifth, although investigations of the Escape Theory have supported the model, further investigations are needed, as the validity of the model may be further increased by incorporating a conceptualization of perfectionism that is consistent with the conceptualization put forth by Slaney and his colleagues (2001). Finally, previous investigations of the Escape Theory have not incorporated negative attribution nor have they incorporated heightened self-awareness, both of which are stages in Baumeister's original Escape Theory.

Given the aforementioned observations, the purpose of the present study was to address limitations in previous studies of the Escape Theory and to re-examine the Escape Theory as a means of explaining suicidal ideation among American college students. Significant findings would provide further support for the Escape Theory of Suicide and strengthen the model's predictive value. Furthermore, significant findings may provide practioners with important information concerning what variables should be targeted when designing suicide prevention and intervention programs for college students

CHAPTER 2 REVIEW OF THE LITERATURE

Suicidal Ideation and College Students

During the past decade, the suicide prevalence rate among American college students has either remained steady or slightly declined. Additionally, the suicide rate among college students appears to be lower than that of a same-aged matched sample of non-college students. Some observers have attributed the decline in suicide rates to better identification and treatment of depression and increased reliance on antidepressant medications as being the primary contributors to the decreased suicide rate (Shaffer & Craft, 1999). Similarly, the lower suicide rate among college students has been attributed to readily available no or low cost mental health services on campus, a more supportive peer environment than is found in the general community, a greater sense of purpose among college students, and a relative freedom from daily hassles of living that occur in nonacademic settings (Haas, Hendin & Mann, 2003). Despite these encouraging factors, suicide remains the second leading cause of death among college students; furthermore, a large percentage of college students report having either contemplated or attempted suicide. This section reviews the prevalence of suicidal thoughts, feelings and behaviors among American college students.

From the mid-1950s to the mid 1990s the rate of completed suicide among American young adults nearly tripled. During this period the suicide rate for young adults (ages 15-24) increased from 3.6 per 100,000 to 13.6 per 100,000 (American Association of Suicidology, 2003). While the suicide rate has steadily increased for males and females of all ethnicities, the most dramatic increase has been among African American males, as the suicide rate among this population increased 214% between 1980 and 1995 (American Association of Suicidology, 2003).

As a result of the rapid increase in suicide prevalence rates between 1950 and 1990, interest in suicide research among young adults, particularly college students, increased considerably (Haas, Hendin & Mann, 2003). Various studies during this time period pointed to elevated suicide rates among college students. For example, Westefeld and Pattillo (1987) found that the suicide rate was 50 percent higher among college students than it was for a comparable sample of same aged non-college students. Consistent with the conclusions drawn by Westefeld and Pattillo, investigators that have demonstrated an elevated suicide rate among college students have commonly attributed the elevated rate to the intense academic pressure experienced by this population (see Haas et al., 2003).

While the aforementioned findings indicate a higher suicide rate among college students than non college students, comparisons of student suicide rates to nonstudent rates provided conflicting findings (Bishop, 1992). For example, Schwartz and Whitaker (1990) concluded that data on suicide suggested that the suicide rate for college students was half the suicide rate for a comparable group of nonstudents. Given these conflicting findings, it is not surprising that following a thorough review of the literature, Lipschitz (1995) concluded that previous research findings on college student suicide were inconsistent, with estimates ranging from 5 suicides per 100,000 to 50 per 100,000 (Lipschitz, 1995). Furthermore, the reviewed research appeared to be methodologically flawed as a result of researchers having employed small unrepresentative samples, inconsistent case definitions, and multiple methods of finding cases of suicide. As a result of the inconsistent reported rates of college student suicide and methodological flaws in the research on suicide rates, Lipschitz (1995) concluded that there had not been a previous study that accurately represented the national suicide rates among college students.

As a result of the limited ability to draw generalized conclusions from previous studies reporting suicide rates, Silverman and his colleagues (1997) conducted the most comprehensive study of suicide rates among college students to date. In what became known as the Big Ten Study, Silverman et al. studied all of the known completed suicides among both undergraduate students and graduate students from 1980 to 1990 on the main campuses of 12 schools affiliated with the Big Ten Athletic Association. The most significant finding obtained in the Big Ten Study was that the average suicide rate across all 12 campuses during this ten-year period was 7.5 suicides per 100,000 students. The rate of 7.5 suicides per 100,000 was half the rate (15 per 100,000) of a national sample matched on age, gender and race, leading Silverman and his colleagues to conclude that the suicide rate is lower among college students than same aged non-college students.

While the Big Ten Study provides evidence that the suicide rate among college students is lower than that of same aged non-college students, there are several significant limitations of the Big Ten Study. First, the suicide rate reported by Silverman and his colleagues is based on the average rate across 12 college campuses, among which the individual college rates widely varied (3.1 per 100,000 to 16.3 per 100,000). Given that there was such a wide variation in rates, it is possible that the reported suicide rates among the colleges are a function of specific characteristics of each college (i.e., accessibility of a counseling center and/or suicide prevention programs), and as such, may not be reflective of colleges nation wide. A second and perhaps greater limitation of the findings was the manner in which the investigators defined suicide. Suicide was defined as any self-inflicted death that occurred within six months of the individual having last been registered as an active student. In their discussion of the results, Silverman et al. acknowledged that this definition excluded a large number of former students who committed

suicide. Given that many college students drop out of school before committing suicide (Arnstein, 1986), the decision to not include individuals who kill themselves after dropping out of school is a significant limitation as it “artificially lowers the college rate relative to the rate for the age group as a whole” (Haas et al., 2003, p1227).

Given the aforementioned limitations of the Big Ten Study, uncertainty remains as to whether or not suicide is less common among college students than same aged non-college students. To address this remaining uncertainty, the Jed Foundation has begun developing a National College Suicide Registry, with the intent of providing information on the number of completed and attempted suicides on college campuses. While this effort may provide more definitive information concerning the suicide rate among college students, it may still be difficult to accurately gage the number of completed suicides, as college administrators are often reluctant to report student suicides.

Regardless of the manner in which prevalence rates are calculated and compared, there is little debate that suicide is a significant problem among American college students, as it is estimated that nearly 1100 of the 3971 young adults who completed suicide in 2001 were enrolled in college (Vastag, 2001). Alarmingly, this estimate of 1100 suicide deaths per year makes suicide the second leading cause of death among American college students (Vastag, 2001). Given that suicide is the second leading cause of death among college students, it seems warranted to conclude that suicide is a significant problem among this population.

While the fact that suicide is the second leading cause of death among college students provides clear indication of the severity of the suicide problem among this population, further evidence of the problem is demonstrated by the significant percentage of college students who report suicidal thoughts, feelings and behaviors. For example, a survey of 129 college students

found that 12 percent of the participants had seriously contemplated suicide “more than infrequently” (Adkins and Parker, 1996). Furthermore, among this sample over 10 percent of the students reported having made a specific plan as to how to carry out their suicide and 4 percent of the students acknowledged having attempted suicide during the previous 12 months.

The aforementioned findings reported by Adkins and Parker (1996) are consistent with results obtained in two large national surveys of college students. For example, findings from the 1995 National College Health Risk Behavior Survey (Youth Risk Behavior Surveillance, 1997) indicated that during the previous twelve months, 10 percent of the students surveyed had seriously contemplated suicide, 7 percent had developed a specific suicide plan and 2 percent had made a suicide attempt that required medical attention. Similar findings were obtained in a survey of 16,000 students conducted by the American College Health Association (National College Health Assessment, 2000). Among this large sample of students from 28 college campuses, 9.5 percent of the students reported having seriously contemplated suicide in the past year and 1.5 percent of the students reported having attempted suicide. In this sample, more females (6.8%) than males (5.4%) reported having considered suicide one or two times; however, more males (3.3%) than females (3.1%) reported having considered suicide three or four times. Likewise, while Hispanics were most likely to contemplate suicide, there were not statistically significant differences in reported suicide ideation among Hispanic, Black, and White students, as the rates among each of these populations was similar to the overall rate of 10 percent having seriously contemplated suicide. Finally, 50 percent of the students reported feeling very sad, 36 percent reported feeling hopeless, and 22 percent reported having felt so depressed at some point during the past year that they could not function.

In addition to student self-reports indicating widespread prevalence of suicidal thoughts, feelings of hopelessness, and feelings of depression, surveys of college counseling center directors and college administrators provide additional evidence of the widespread problems facing college students. For example, a national survey of counseling center directors found that 83 percent expressed concern about the number of students with severe psychological problems (Gallagher & Zhana, 2002). Additionally, the majority of these counseling center directors reported that they perceived an increase in the past ten years in the number of students committing self-injurious behaviors. Finally, college administrators have reported that undergraduate students are using counseling services in record numbers, with suicidal ideation being one of the primary areas of concern (Levine & Cureton, 1998).

Thus, in addition to being the second leading cause of death, the “suicide problem” is evidenced by the widely prevalent suicidal thoughts and feelings experienced by American college students. As indicated by the aforementioned statistics, the vast majority of college students who contemplate suicide neither attempt nor commit suicide. However, while the vast majority of students who experience suicidal thoughts and feelings do not attempt or commit suicide, these thoughts and feelings are problematic in themselves, as they impact quality of life (Beautrais, 2003), academic performance, retention rates, and graduation rates (Kitzrow, 2003). Furthermore, college students who report having been depressed or who have thought about suicide are more likely to report consuming alcoholic beverages and more likely to report drinking to get intoxicated (Weitzman, 2004). Given the evidence indicating that suicidal thoughts, feelings, and behaviors are wide spread among college students, as well as the evidence that suicidal thoughts, feelings, and behaviors impact both quality of life and academic

performance it seems imperative to address the “suicide problem” among American college students.

In addition to the aforementioned factors, national media attention has resulted in increased pressure on college and university administrators to address the problem of college student suicide. National awareness of the suicide problem among college students has dramatically increased as the result of several recent completed college student suicides. For example, the suicide death of a 19-year old New York University (NYU) student gained national media attention in the fall of 2003, as she was the third student at NYU to commit suicide in the span of one month (Healy, 2003). This national media attention continued following the suicide death of a 23-year old NYU student in September 2004, the sixth NYU student to commit suicide in one year (Collins, 2004). Similar to the multiple suicide deaths at NYU, the suicide deaths of four students during the 2002-2003 academic year at the University of North Carolina-Chapel Hill drew national media attention and again raised the question of whether or not colleges and universities are sufficiently engaging in suicide prevention efforts (Stancill, 2003). Thus, the increased awareness of the suicide problem has resulted in challenges to college and university administrators to demonstrate that they are implementing effective suicide intervention and prevention programs (Collins, 2004).

As with the national media attention, several high profile wrongful death lawsuits have resulted in increased pressure on college and university administrators to demonstrate that they are effectively implementing suicide prevention and intervention programs. One such high profile wrongful death lawsuit is the recently settled lawsuit filed by the parents of Elizabeth Shin against the Massachusetts Institute of Technology following the suicide death of their 19-year-old daughter (Bombardieri, 2006). In their suit, the Shins alleged that on the evening their

daughter killed herself, a therapist at the university's counseling center had been informed by one of Ms. Shin's friends that she intended on killing herself that evening or the following day (Pavela, 2002). The Shin's lawsuit went on to state that the therapist chose to not immediately contact Ms. Shin and allowed her to continue sleeping. Likewise, the suit stated that the therapist chose to not contact university administrators or Ms. Shin's parents. As a result of the aforementioned choices, the Shins contended that the therapist, and more broadly M.I.T., failed to render proper care and were negligent in the death of their daughter.

While the Shin case primarily focused on therapist-student interactions, the lawsuit has focused attention on the effectiveness of college suicide prevention programs and has raised concern among college and university administrators that their schools may be held liable for student suicides if they are unable to demonstrate that their school has implemented a strong suicide prevention program (Pavela, 2002). As with the Shin case, concern and awareness for the need to develop effective intervention and prevention programs has been heightened as a result of a wrongful death suit filed against Ferrum College (*Schieszler v. Ferrum College*, 2002). In what has become the first such acknowledgement by an American college, Ferrum University settled the lawsuit and admitted "shared responsibility for the student's suicide" (Hoover, 2003).

Thus, as indicated by the above review of the literature, the need to address the "suicide problem" among American college students is evident in several ways. First, suicide is the second lead cause of death among college students. Second, suicidal thoughts, feelings, and behaviors are widely prevalent among college students. Third, as a result of several high profile suicide deaths and wrongful death lawsuits, university administrators are increasingly being pressured to insure that their colleges and universities are implementing effective suicide

intervention programs. Given these factors, it appears that there is a strong need for colleges and universities to initiate and implement effective suicide intervention programs.

Indeed, the suicide problem among college students prompted a roundtable meeting of national suicide experts to address the impact of suicide on college and university campuses (National Mental Health Association, 2002). Co-sponsored by the National Mental Health Association and the Jed Foundation, the panel of suicide experts strongly recommended that colleges and universities initiate broad-based, campus wide public education on suicide, and provide targeted educational programs for faculty and student advisors (National Mental Health Association, 2002). However, to most effectively design and implement these prevention programs, it is first necessary to gain a greater understanding of how college students come to feel suicidal. Thus, according to the panel's members, the immediate need is to "gain a more thorough understanding about risk factors and conditions that contribute to suicidal ideation and behavior among college students and to establish a set of strategies that can enhance intervention and ultimately reduce the rate of suicide and suicide related behaviors." This goal is consistent with the National Strategy for Suicide Prevention (U.S. Department of Health and Human Services, 2001), which identifies preventing suicide and reducing suicidal behaviors as the primary goals of this national initiative. Among the ten objectives outlined in the National Strategy is an increased research effort focused on gaining a greater understanding of the manner in which multiple variables interact with one another to produce suicidal thoughts, feelings and behaviors.

The Escape Theory of Suicide

Consistent with one of the aforementioned stated objectives of the National Strategy for Suicide Prevention, the Escape Theory of Suicide (Baumeister, 1990) provides a theoretical model for explaining the process through which individuals develop suicidal ideation (i.e.,

thoughts about killing oneself). The Escape Theory is a comprehensive six-stage model that characterizes suicide as an attempt to escape from aversive self-awareness and intense negative emotions. Furthermore, the Escape Theory is a causal process model, meaning that suicidal thoughts and feelings will result only if each step produces a particular outcome. The six stages of the Escape Theory are: falling short of standards, negative self-attribution, heightened self-awareness, negative affect, cognitive deconstruction and reasons for living (see figure 2-1). This section provides a brief overview of the Escape Theory, followed by a more comprehensive review of each of the six stages.

According to the Escape Theory of Suicide, the first step in the process of developing suicidal ideation involves a belief that one's current circumstances fall short of his or her expected standard. According to Baumeister, the perception that circumstances fall below standards results from having set unrealistically high expectations, the experience of recent problems and stressors, or both. Given this, if an individual's expectations are low, setbacks and stressors may not lead to suicidal thoughts and feelings. However, high standards and expectations may produce an extreme experience of failure when reality is perceived as falling short of standards. Thus, Baumeister suggested that the decisive factor of the first stage of the Escape Theory is the magnitude of the perceived shortfall, such that suicide may be the eventual result of having set unrealistically high standards or experiencing unusually high stress.

In the second stage of the Escape Theory the individual blames the perceived failure (stage 1) on himself or herself. During the second stage, the individual makes negative self-attributions and identifies himself or herself as being incompetent, inadequate, and blameworthy. Not only does the individual view himself or herself as being incompetent and blameworthy for the current failure, but the individual also perceives these negative attributions as being

predictive of future failures. Thus, Baumeister contends that these negative self-attributions are broad interpretations of the self and are seen as being both global and stable characteristics.

While the aforementioned negative self-attributions will lead an individual into the third stage of the Escape Theory, if during the second stage the individual attributes his or her perceived failure to specific circumstances or perceives his or her failure as being able to be corrected in the future, suicidal ideation will not continue to develop.

As a result of falling short of standards and attributing blame for this failure to the self, the individual moves into the third stage of the Escape Theory and develops a heightened state of self-awareness. Citing self-regulation theory (Carver & Scheier, 1981), Baumeister contends that as a result of the discrepancy between current circumstances and the expected standard, a state of self-focused attention is maintained until the discrepancy is resolved. However, given that the discrepancy may be the result of the individual's self-imposed high standards, Baumeister suggests that the discrepancy is not easily resolved, and thus the individual experiences an extended period of heightened self-awareness. The heightened self-awareness causes the individual to continue focusing on the self as incompetent and blameworthy. Conversely, if the individual is able to reassess his or her standard or modify her/his current circumstances to achieve the standard, the discrepancy will be resolved, the heightened state of self-awareness will discontinue, and the individual will be less likely to move into the fourth stage of the Escape Theory.

As a result of continued heightened self-awareness and focus on self-blame, during the fourth stage of the Escape Theory an individual experiences aversive negative affect. Citing cognitive theories of perceived threat and loss and their association with depression and anxiety (Beck & Clark, 1988), Baumeister contends that seeing oneself as falling short of standards may

result in dejection related affect such as depression. Similarly, viewing the self as falling short of duties and obligations may produce agitation related affect such as guilt and anxiety. Thus, Baumeister proposed that the fourth stage of the Escape Theory is marked by depression and anxiety, which result from perceived self-discrepancies associated with threat and loss. Furthermore, the experience of this negative affect is acutely aversive, and as such, individuals attempt to end the experience of this affect as quickly as possible.

In the fifth step of the Escape Theory, the individual attempts to escape negative affect by ceasing meaningful thought. Baumeister proposed that during this step the individual realizes she/he can end negative affect, and thus feel better, if she/he ceases feeling emotion, ceases self-blame for her/his recent failures, or ceases being aware of self. Emotion, attribution, and self-awareness involve higher level thinking, or meaning, in that they require cognitive integration and interpretation of events and experiences. Baumeister argued that a refusal of meaningful thought, or ceasing cognitive interpretations, would eliminate emotion, attribution, and self-awareness, and allow the individual experiencing them to escape negative affect. This absence of meaningful thought is referred to as cognitive deconstruction. The central goal of cognitive deconstruction is the removal of cognitive interpretations and integration of events from awareness and it is marked by a refusal of insight and a denial of implications or contexts. Thus, the shift into cognitive deconstruction is marked by a shift into less meaningful and less integrative thought and awareness and a focus on short term, immediate tasks and goals. However, given the constant presence of thought provoking stimuli, sustaining a deconstructed state is often difficult; furthermore, when the individual is unable to maintain cognitive deconstruction, meaningful thought, negative attribution and self focus return. As a result of resumed meaningful thought, the individual may develop a belief that things will not get better

and is unable to perceive living a positive and happy life. As a result, cognitive deconstruction is ultimately marked by a sense of hopelessness.

In the sixth and final stage of the Escape Theory an individual experiences disinhibition. Most people have a strong inner restraint against attempting suicide. However, according to Baumeister, the morals, principles and inhibitions which prevent suicide are interpretive constructs based in higher thought and meaning. Given that cognitive deconstruction involves the elimination of higher meaning and interpretive constructs, deconstruction removes the inhibition against suicide. The removal of inhibitions is marked by the inability to perceive a reason to live. Thus, the sixth stage of the Escape Theory is marked by an absence of meaning or reason for living.

According to the Escape Theory, suicidal ideation is the end result of the aforementioned six stages. Cognitive deconstruction is unable to completely shut out the negative thoughts and feelings that result from the heightened self-awareness of perceived failure. Given that the individual is unable to escape from these aversive emotions, according to Baumeister, suicide is viewed as the only possible escape. Furthermore, cognitive deconstruction results in a focus on the immediate present and removes inhibition as a result of a disconnection from higher meaning. “Ultimately, death is seen as preferable in the short term to emotional suffering and painful awareness of self as deficient and the long range implications of death are not considered because of the extreme short term focus” (Baumeister, 1990, p.108).

Thus, the Escape Theory of Suicide is a six-stage model that explains one process whereby individuals may come to feel suicidal. Baumeister proposed that the process is triggered by a perceived failure to achieve standards. In turn, self-blame and heightened self-awareness result from an individual’s ongoing perception of failing to achieve standards. Ultimately, the

individual develops feeling of hopelessness, experiences disinhibition, and may engage in suicidal thoughts, feelings, and behaviors. A more thorough review of each of the six steps of the Escape Theory follows.

Baumeister suggested that the process of developing suicidal ideation (i.e., suicidal thoughts and feelings) is triggered when an individual perceives their current circumstances as falling short of their standards. According to Baumeister, an individual's standards may be either self-imposed or an individual may perceive them as being imposed by significant others. In turn, the belief that current circumstances fall short of the expected standard may be the result of having set unrealistically high expectations, the result of recent problems and setbacks, or both. Thus, the first stage of the Escape Theory is characterized by perceived failure, which results from perfectionist thinking, stressful life events or an interaction of the two (Baumeister, 1990).

Perfectionists have been described as individuals who set high personal standards, experience self-doubt in regards to their ability to achieve those standards, and are self-critical when their self-imposed standards are not met (Frost, Marten, Lahart & Rosenblate, 1990). Furthermore, perfectionists are believed to be prone to depression and other negative psychological functioning as a result of their all or none thinking in which success is equated with perfection and anything less is interpreted as failure (Flett, Hewitt, Blankstein & Mosher, 1995).

One popular conceptualization of perfectionism describes it as a multi-dimensional personality characteristic that consists of both interpersonal and intrapersonal expectations. The three components of this multidimensional conceptualization of perfectionism are self-oriented, socially prescribed, and other-oriented perfectionism (Hewitt & Flett, 1991). Self-oriented

perfectionism refers to the tendency to self-impose exceedingly high and unrealistic standards. Self-oriented perfectionism is characterized by stringent evaluation of one's performance and an inability to accept flaws and failure. Socially prescribed perfectionism refers to an individual's belief that others hold unrealistically high expectations that are difficult if not impossible to meet, but that must be met for the individual to receive approval and acceptance. Other oriented perfectionism refers to an individual's belief that other people must meet exceedingly high and unrealistic standards.

Hewitt and Flett (1991) constructed the Multidimensional Perfectionism Scale as a means of assessing the aforementioned conceptualization of perfectionism. A factor analysis of the 45-item scale confirmed the existence of the three components of perfectionism. Moreover, this initial investigation provided preliminary evidence of the potentially harmful effects of these three dimensions of perfectionism. For example, among a sample of college students self-oriented perfectionism was significantly correlated with guilt, disappointment and anger while socially prescribed perfectionism was correlated with anger, shame and guilt. Similarly, both self-oriented and socially prescribed perfectionism were significantly correlated with all of the symptom subscales of the Symptom Checklist-90.

Further evidence of the association between depression and perfectionism was obtained in a separate study conducted by Hewitt and Flett (1991b). Hewitt and Flett (1991b) administered the Multidimensional Perfectionism Scale, the Beck Depression Inventory and the Endler Multidimensional Anxiety Scales to 22 depressed patients, 12 anxious patients and 22 normal control subjects. A multivariate analysis of covariance revealed a significant effect of group status on Multidimensional Perfectionism Scale scores. Follow-up univariate tests indicated that the three groups differed on self-oriented perfectionism and on socially prescribed

perfectionism but not on other oriented perfectionism. Further comparisons revealed that depressed patients had higher levels of self oriented perfectionism than either anxiety patients or normal controls. Additionally, depressed and anxious patients had higher levels of socially prescribed perfectionism than did normal controls. Finally, regression analyses indicated that both self-oriented and socially prescribed perfectionism contributed a significant amount of variance in depression scores after controlling for anxiety.

The findings of the two aforementioned studies indicate the potential harmful effects of perfectionist thinking. For self-oriented perfectionists, the tendency to fall short of their standards on a consistent basis may promote low self-esteem and negative self-evaluations, which may in turn make them prone to depression (Hewitt and Flett, 1991b). Similarly, as a result of a perceived lack of gratification from significant others, socially prescribed perfectionists may be vulnerable to feelings of low self worth and in turn, may become prone to depression (Hewitt & Flett, 1991).

In addition to the link between perfectionism and feelings of low self-worth, low self-esteem, and depression, there appears to be evidence of an association between perfectionism and suicidal ideation. Hewitt, Flett and Turnbull-Donovan (1992) administered the Minnesota Multiphasic Personality Inventory-Threat Suicide Scale, the Beck Depression Inventory, and the Multidimensional Perfectionism Scale to a sample of 87 psychiatric patients. Although these researchers failed to find an association between either self-oriented or other oriented perfectionism and suicidal ideation, there was a significant correlation between socially prescribed perfectionism and suicidal ideation, as measured by both the MMPI and the Beck suicide intent items. Furthermore, hierarchical regression analyses found that socially prescribed

perfectionism accounted for a significant percentage of variance in suicidal ideation scores even after depression and hopelessness were accounted for.

Although Hewitt et al (1992) were only able to identify an association between socially prescribed perfectionism and suicidal ideation, a significant association between self-oriented perfectionism and suicidal ideation as well as between socially prescribed perfectionism and suicidal ideation among a sample of college students was demonstrated in a later study (Hewitt, Flett & Weber, 1994). Hewitt, Flett and Weber (1994) administered measures of stress, perfectionism, depression, hopelessness, and suicidal ideation to a sample of 160 college students. These researchers found that individuals who reported moderate levels of suicidal ideation had significantly higher scores on measures of self oriented perfectionism and socially prescribed perfectionism than did individuals who reported no suicidal ideation. Furthermore, a discriminant function analysis indicated that both socially prescribed and self-oriented perfectionism contributed unique variance in predicting level of suicidal ideation above and beyond the variance accounted for by depression and hopelessness. Finally, in hierarchical regression analyses, self-oriented perfectionism, socially oriented perfectionism, and the interaction between self-oriented and socially prescribed perfectionism and stressful life events contributed significant variance in predicting suicidal ideation. These findings led Hewitt et al (1994) to conclude that increased levels of self-oriented and socially prescribed perfectionism are associated with increased levels of suicidal ideation in college students.

While the aforementioned findings provide strong support for the association between perfectionism and suicidal ideation, one limitation of the previously mentioned study (Hewitt et al, 1994) is that the investigators employed a cross sectional design, thus limiting their ability to conclude causality. To address this limitation, Beevers and Miller (2004) conducted a

prospective study of suicidality with 121 psychiatric hospital patients. Beevers and Miller administered the Modified Scale for Suicidal Ideation, the Beck Hopelessness Scale, the Dysfunctional Attitudes Scale- Perfectionism, and the Beck Depression Inventory to patients at the time of their admission to the hospital and again six months following their release from the hospital. A LISREL path analysis indicated that higher perfectionism at the time of admission to the hospital was directly associated with higher levels of suicidal ideation six months after being released. Furthermore, Beevers and Miller (2004) found that neither hopelessness nor depression mediated the relationship between perfectionism at the time of hospitalization and suicidal ideation six months after being released. This finding is particularly noteworthy given that depression and hopelessness are the most consistent and strongest predictors of suicidal ideation (Beevers and Miller, 2004). These findings appear to provide strong support for including perfectionism in the Escape Theory of Suicide.

Given that research has demonstrated a link between perfectionism and negative psychological functioning and suicidal ideation, there seems to be strong support for including perfectionism in the Escape Theory. Furthermore, perfectionism may be an important variable to consider when studying suicidal ideation among college students given that this population may be particularly susceptible to perfectionist thinking. Compared to non-college students, college students display elevated levels of perfectionism and face increased expectations to perform at a high level (Delisle, 1990). The pressure and expectation to perform at a high level may be further enhanced by the fact that many college students were at the top of their class in high school (Arthur & Hayward, 1997). Finally, it seems necessary to further explore the role of perfectionism in suicidal ideation among college students given that as many as two-thirds of college students identify themselves as a perfectionist (Rice & Slaney, 2002).

Along with perfectionism, Baumeister (1990) proposed that the chain of events leading to suicide might be triggered by the experience of stressful life events. Previous research among young adults has indicated that the experience of stressful life events may be significantly associated with the development of suicidal thoughts, feelings and behaviors. For example, controlled studies have indicated that individuals who killed themselves had elevated rates of exposure to adverse life events (Adams, Overholser & Spirito, 1994) and reported experiencing more intense or severe exposure to stress than did a matched control sample (Gould et al, 1996).

Indeed, previous research has provided evidence of a direct link between stressful life events and suicide among college students (Dixon, Heppner, & Anderson, 1991). Dixon et al. administered measures of problem solving appraisal, negative life stress and suicidal ideation to a sample of 277 introductory psychology students. A hierarchical multiple regression indicated that after accounting for the variance of problem solving, negative life stress accounted for 10.7 percent of the variance in suicidal ideation. A second regression analysis indicated that negative life stress accounted for a significant percentage of the variance in hopelessness scores. These findings led the authors to conclude that individuals under high levels of stress reported significantly more hopelessness and suicidal thoughts than did individuals under lower levels of stress.

Along with the aforementioned findings indicating a relationship between stress and suicidal ideation, the high levels of self-reported stress experienced by college students indicate additional support for including stress in the Escape Theory. For example, a survey of 350,000 college freshman indicated that 30 percent of the respondents frequently felt overwhelmed by what they had to do (UCLA Higher Education Research Institute, 2000). Similarly, the American College Health Association's National College Health Assessment survey reported

that 76 percent of students felt overwhelmed during the course of the past year (Shea, 2002). Finally, 42 percent of the 129 college students surveyed by Adkins and Parker (1995) reported that it was either hard or very hard to deal with stress. Thus, there seems to be support for including stress in the Escape Theory.

In the second stage of the Escape Theory, individuals make negative self-attributions regarding their inability to achieve their standards (Baumeister, 1990). During this stage, the individual blames himself or herself for not achieving his or her standards, resulting in negative feelings about the self. In addition to perceiving themselves as responsible for the current failure, during this stage individuals believe that they will continue to be responsible for future failures. Thus, the negative self-attributions that occur during the second stage of the Escape Theory are both global and stable.

Consistent with Baumeister's predictions, previous research has demonstrated an association between perfectionism, attributional style and depression (Chang & Sanna, 2001). Chang and Sanna administered the Multidimensional Perfectionism Scale, the Expanded Attribution Style Questionnaire, and the Beck Depression Inventory to 234 college students (184 women, 90.5% White). A hierarchical regression analysis indicated that both self-oriented and socially prescribed perfectionism accounted for a significant amount of variance in depression scores. Additionally, regression analysis indicated that after accounting for the variance of each dimension of perfectionism, negative attributional style accounted for a large and significant amount of additional variance (21.3 %) in predicting depressive symptoms. Finally, the interaction of perfectionism and negative attributional style added significant incremental validity in predicting depressive symptoms (7-10%), even after controlling for the variance accounted for by each of the perfectionism dimensions and a negative attributional style. Given

that negative attributional style contributed both unique and additive variance in predicting depression, the authors concluded that while perfectionist tendencies may predispose individuals to disappointment and depression, a negative attributional style may determine the severity as well as the course of the depressive symptoms. Given this, there appears to be support for including negative attributional style in the Escape Theory.

Along with the aforementioned link between perfectionism and negative attributional style, previous research has additionally supported the link between stress, negative attributional style, and poor psychological coping. Employing a prospective methodology, Priester and Clum (1992) administered the Beck Depression Inventory, the Beck Hopelessness Scale, the Attributional Style Questionnaire, and the Modified Scale for Suicidal Ideation to a sample of 269 college freshmen enrolled in an introductory psychology course. The students completed the measures prior to taking their first course exam and then again after having received their exam grade. Priester and Clum operationalized a low exam score (D or F) as a stressful experience, and thus were able to assess the impact of both negative stress and attribution style on depression, hopelessness and suicidal ideation. Regression analysis indicated a significant association between stable and global attribution styles and each of the criterion measures of depression, hopelessness and suicidal ideation. Furthermore, there were significant interactions between stress (i.e., low exam grade) and stable attributions in predicting depression, hopelessness, and suicidal ideation. Thus, the findings indicated that the tendency for participants to attribute negative events to themselves had a direct and negative impact on their feelings of depression, hopelessness and suicidal ideation. Furthermore, the interaction of a stressful life event and negative attributional style contributed unique variance to depression, hopelessness and suicidal ideation. Finally, while the stress associated with low test scores by

itself was significantly related to both depression and hopelessness, this stress was not related to suicidal ideation. However, when considered in interaction with attributional style, the stress of a low test grade was significantly associated with suicidal ideation. Thus, as with the findings reported by Chang and Sanna (2001), these findings indicate strong support for the inclusion of negative attributional style in the Escape Theory.

During the third stage of the Escape Theory an individual develops a heightened sense of self-awareness. Furthermore, this state of high self-awareness is aversive given that the individual views himself or herself as being responsible for the perceived failure to achieve standards. Given that the individual focuses on himself or herself as being responsible for failure, the heightened self-focus results in the individual viewing himself or herself as incompetent, unlikable, inadequate and bad.

While heightened self-awareness theoretically fits in Baumeister's Escape Theory, it is difficult to measure states of self-awareness, and as such, there is limited evidence as to the whether or not suicidal people are highly self-focused (Baumeister, 1990; Dean & Range, 1996). Limited indirect evidence that suicidal individuals experience heightened self-awareness can be seen in the language of suicide notes. For example, in comparison to simulated suicide notes, Ogilvie, Stone, and Shneidman (1983) found that genuine suicide notes contained a higher frequency of self references. These findings were consistent with Henken's (1976) quantitative analysis of the language of suicide notes that indicated that true suicide notes included more first person pronouns than did simulated suicide notes written by adults matched demographically to the writers of the actual suicide notes. Assuming that self-awareness can be inferred from the frequency of first-person singular pronouns, this finding provides indirect support for the fact that suicidal people are more self-aware than non-suicidal people.

While these findings provide limited support for the inclusion of heightened self-awareness in the Escape Theory, stronger support is provided by research indicating that depressed individuals have a tendency to become highly self-aware following failure while non-depressed individuals do not experience prolonged periods of heightened self-awareness (Greenberg & Pyszczynski, 1986). In a laboratory setting, Greenberg and Pyszczynski created either a success or failure experience for 41 (25 female, 16 male; ethnicity not reported) depressed and nondepressed college students. Participants in the success condition completed 20 easy four letter anagrams, while participants in the failure condition were given 9 unsolvable and 11 difficult five letter anagrams. Following the success or failure experience, each of the participants completed the Self-Focus Sentence Completion task. Results indicated that participants were generally more self-focused after failure than success and that depressed participants tended to be more self-focused than non-depressed participants. A follow-up investigation indicated that depressed individuals were generally more self-focused after failure than success, while nondepressed individuals demonstrated more self-focus after success than failure. Furthermore, while the level of self-focus for depressed individuals declined over time following a failure experience, the reduction of self-focus was far less than the observed decline among nondepressed participants following failure experiences.

During the fourth step of the Escape Theory an individual experiences acute negative affect. Baumeister contended that as a result of seeing oneself as falling short of personal standards for achievement, an individual may develop depression, whereas seeing oneself as falling short of obligations and moral standards produces agitation-related emotions such as anxiety. Thus, according to Baumeister, the fourth stage of the Escape Theory consists of feelings of anxiety and depression.

Numerous studies have demonstrated the link between depression and suicide. For example, psychological autopsy studies have indicated that forty to fifty percent of adolescents who completed suicide suffered from major depression (Shaffer, Gould, Fisher, Trautman, Moreau, Kleinman, & Flory, 1996; Brent, Perper, Moritz, Allman, Friend, Roth, Schweers, Balach & Baugher, 1993). Similarly, studies that have used community samples and structured diagnostic interviews have indicated that there is a correlation between attempted suicide and depressive disorders. For example, among a sample of 1542 high school students, having a major depressive disorder was significantly associated with suicide attempts (odds ratio = 9.4) (Garrison, 1991). To date, there has been little support for an association between anxiety and suicidal behaviors (Dean & Range, 1996).

Although not specific to college students, a recent prospective investigation of suicide risk provides strong evidence for the association between depression and suicide (Skogman, Alsen, & Ojehagen, 2004). Between the years of 1987 and 1998, Skogman and her colleagues (2004) interviewed 1065 patients who were admitted to the target hospital following a suicide attempt. At the time of their hospitalization, each patient participated in a semi-structured interview and was given DSM-III-R diagnoses. Additionally, each patient participated in a non-diagnostic interview and was asked to indicate whether they had previously attempted suicide, what method they had used for their suicide attempt, and whether they had previously been treated for psychiatric illness. To determine the risk factors associated with increased suicide risk among suicide attempters, a follow-up was conducted two years later to identify patients who had completed suicide following their release from the hospital. At the two-year follow-up, 5 percent of the original sample had completed suicide. A Cox regression analysis indicated that among the sample of 1052 patients, depression was the only variable that was significantly

associated with increased risk for later completed suicide among both males and females. Among the male patients, major depression resulted in a 2.5 fold increase in suicide risk while suffering from major depression resulted in a 3.0 fold increased risk for completed suicide among women. Skogman and her colleagues (2004) concluded that these findings were consistent with previous research and demonstrate that depression is the single psychiatric diagnosis most strongly associated with suicide.

In addition to the aforementioned study, prospective studies have demonstrated the link between depression and suicidal ideation among college students (Abramson, Alloy, Hogan, Whitehouse, Cornette, Akhavan & Chiara, 1998). Abramson et al administered measures of cognitive style, depression, and suicidal ideation to college freshman on two separate occasions. Following the first assessment, university freshman who were non-depressed and had no other psychopathology were identified as either being high or low risk for depression based on their cognitive styles. Students who scored in the highest quartile (most negative) for both measures of negative attribution style and dysfunctional attitudes were considered high risk, whereas individuals scoring in the lowest quartiles on these measures were identified as low risk. These students were then followed for two and a half years, allowing the investigators to determine the impact of cognitive dysfunction on the development of suicidal ideation and depression over time. At the time of the two-year follow-up, participants who had been designated as high risk participants were more likely than low risk participants to exhibit suicidality (28% vs 12.6%). Additionally, at the follow-up, cognitive risk predicted suicidality even when prior history of suicidality, prior history of depression, and borderline personality dysfunction were controlled for. Thus, Abramson and his colleagues established strong support for the association between cognitive risk, depression, and suicidality. Furthermore, it is noteworthy that the relationship

between cognitive vulnerability and suicidality was completely mediated by hopelessness. This finding is consistent with Baumeister's Escape Theory and provides support for including negative affect in the Escape Theory. Additionally, given that the sample included a significant percentage of students of color (26% Black/African American; 10% Hispanic), the results from this study may provide support for the validity of the association between depression and suicidal ideation among non-majority college students.

As indicated above, depression has been consistently demonstrated to be associated with suicide ideation, suicide attempts, and completed suicide. In addition to this factor, it is important to include depression in a model of college student suicide ideation due to the large number of college students who report feeling depressed. For example, in a sample 1455 college students from four different colleges and universities, 53 percent of the respondents indicated that they had experienced what they would label as depression since beginning college (Furr, Westefeld, McConnell & Jenkins, 2001). Similarly, in a nationally representative survey of more than 27,000 college students (ages 18 to 24), 4.8 percent of the participants reported that during the past 30 days they had experienced symptoms consistent with the DSM-IV qualifications of major depression (Weitzman, 2004). Given these findings, there seems to be strong support for including depression in the Escape model.

Baumeister proposed that during the fifth stage of the Escape Theory the individual realizes she/he can end negative affect, and thus feel better, if she/he ceases feeling emotion, ceases self-blame for her/his recent failures, or cease being aware of herself/himself. Given that self-blame and self-awareness are products of meaningful thought, Baumeister suggested that during the fifth step the individual attempts to cease negative affect by escaping meaningful thought, or entering a state of cognitive deconstruction. Cognitive deconstruction is

characterized by a narrow time perspective (e.g., only focusing on the present), action guided by short-term goals, and focus on immediate movements and sensations, rather than on broader ideas or emotions (Baumeister, 1990). The primary purpose of each of these aspects of cognitive deconstruction is the avoidance of higher meaning, and is thus a refusal of insight and a denial of implications or contexts (Baumeister, 1990).

However, while the individual attempts to avoid meaningful thought, it is often difficult to maintain the deconstructed sense of self, and as a result, the individual may periodically return to meaningful thought. The return to meaningful thought brings with it a return to self-blame, heightened self-awareness, and negative affect. Given that the individual is again faced with feelings of depression, she/he may develop a sense that things will never get better, and as a result, cognitive deconstruction is ultimately marked by a pervasive sense of hopelessness (Baumeister, 1990). Indeed, the link between hopelessness and suicidal ideation has been consistently demonstrated (Beck, Steer, Beck & Newman, 1993; Beautrais, Joyce and Mulder, 1999; Kuo, Gallo & Eaton, 2004). For example, Beautrais et al (1999) reported that in a sample of 302 college students, those who were in the top quartile on hopelessness scores were 59 times more likely to attempt suicide than those in the lowest quartile.

While the aforementioned study indicates the significant association between hopelessness and suicidal thoughts, feelings and behaviors, several studies have indicated that hopelessness is a stronger predictor of suicide than depression (Beck, Steer, Beck & Newman, 1993). The first clear demonstration of this was provided by Beck and his colleagues, who administered measures of depression, hopelessness, and suicidal ideation to a sample of 1794 (57.1% women, 93.8% White, 3.9% African American) outpatients at a mental health clinic. A regression analysis indicated that a mood disorder diagnosis, severity of self-reported depression

and hopelessness were each positively and significantly associated with suicidal ideation. However, after controlling for the other variables in the regression model, hopelessness was found to be 1.3 times more important in predicting suicidal ideation than was depression. Furthermore, dysfunctional attitudes (i.e., depression) did not discriminate suicidal ideators from non-suicidal ideators when hopelessness was controlled for, leading Beck and his colleagues to conclude that hopelessness mediates the relationship between dysfunctional attitudes and suicidal ideation. This provides support for including hopelessness in the Escape Theory.

While the aforementioned studies on hopelessness and suicidal ideation were conducted using clinical populations, a more recent study among a non-clinical sample of college students provides further evidence of the association between hopelessness and suicidal ideation (Gibb, Alloy, Abramson, Rose, Whitehouse & Hogan, 2001). Gibb et al. administered the Cognitive Styles Questionnaire, the Lifetime Experiences Questionnaire, the Beck Depression Inventory, the Beck Hopelessness Scale and a measure of suicidal ideation to a sample of 297 undergraduate students. A regression analysis indicated that childhood emotional maltreatment was significantly related to both cognitive risk (negative, internal, and stable self-attributions) and suicidal ideation. Furthermore, cognitive risk partially mediated the relation between reported levels of childhood emotional maltreatment and hopelessness. However, cognitive risk was non-significant when hopelessness was entered into the equation. Thus, hopelessness fully mediated the relationship between cognitive risk and suicidal ideation. The authors concluded that this provided support for the primary importance of hopelessness in predicting suicidal ideation. This finding provides strong support for including hopelessness in the Escape Theory.

Finally, a recent longitudinal study employing a community sample provides strong indication of the importance of hopelessness in explaining suicidal ideation (Kuo, Gallo, &

Eaton, 2004). Kuo and his colleagues followed a community sample of more than 3000 participants over a thirteen year period with the intent of identifying whether hopelessness was a long-term predictor of subsequent suicidal behavior and if the association between hopelessness and suicidal behavior was stronger than the relationship between depression and suicidal behavior. At the initial assessment, 3481 participants completed the Diagnostic Interview Schedule (DIS), as well as questions assessing hopelessness and suicidal ideation. During the follow-up interview, participants (1920 of the original 3481) again completed the DIS. Additionally, participants were assessed for current suicidal ideation and whether they had contemplated suicide or made a suicide attempt between the initial interview and the follow-up interview. Finally, Kuo and his colleagues identified original participants who had completed suicide during the thirteen year period.

Bivariate analyses indicated that hopelessness at time one was significantly associated with suicidal ideation at time two, suicide attempts between interviews, and completed suicide. Furthermore, the association between hopelessness and each of the three suicide outcome measures (i.e., ideation, attempts, and completed suicide) was significantly stronger than the association between depression and any of the three suicide outcome measures. This finding led the authors to conclude that hopelessness is a stronger and more consistent predictor for suicidal thought and behavior than the presence of a diagnosis of depression (Kuo, 2004). Given this finding, there is strong support for including hopelessness in the Escape Theory. Furthermore, there is strong support for hopelessness being included at a later stage in the model than depression, as Baumeister suggested.

In the sixth stage of the Escape Theory individuals experience the consequences of cognitive deconstruction. Although these consequences include disinhibition, passivity, lack of

emotion, and irrational thought, Baumeister suggested that the sixth stage is most prominently characterized by disinhibition (Baumeister, 1990). As part of their higher order process of thinking, Baumeister suggested that human beings have a natural inhibition against taking their own lives. However, given that cognitive deconstruction consists of the removal of meaning, one consequence of cognitive deconstruction is disinhibition, or bypassing the inner restraint against killing oneself.

The association between risk behaviors and suicidal ideation provides indirect evidence as to the impact of cognitive deconstruction on disinhibition. As was previously discussed, suicide prevalence rates may in fact be underestimates, as many deaths attributed to accidental injury (i.e., single car accidents) may have in fact been either a suicide attempt or the result of self-destructive behavior. In his explanation of the Escape Theory, Baumeister contended that suicidal ideation should be associated with other risk behavior, as the results of cognitive deconstruction would reduce normal inhibitions and lead individuals to take more life threatening risks. Indeed, research has demonstrated an association between suicidal ideation and other injury risk behaviors (Barrios, Everett, Simon, and Brenner, 2000). Using data from the National College Health Risk Behavior Survey, Barrios et al. examined the relationship between suicidal ideation and risk behavior among a sample of 2857 (52% women; 70.9% White, 10.5% Black, 7.1% Hispanic) college participants. Among this sample, the odds of having rarely or never worn a seat belt, of having carried a weapon, and of having been in a physical fight were more than twice as high among students who had planned or considered suicide than those who had not. This is consistent with similar research that indicated that college students who consider suicide are more likely to use alcohol, tobacco and illegal drugs and engage in sexual risk behaviors (Brenner, Hassan & Barrios, 1999).

While the association between risk behavior and suicidal ideation provides indirect support for the consequences of cognitive deconstruction, the association between reasons for living and suicidal ideation provides more direct support. As suggested by Baumeister, individuals have a natural inhibition against suicide, and similarly, are able to identify reasons for living. If cognitive deconstruction results in reduced inhibition as suggested by Baumeister, there should also be an associated reduced ability to identify reasons for living. Indeed, research on the association between reasons for living and suicidal ideation has supported this link (Pinto, Whisman, & Conwell, 1998; Linehan, Goodstein, Nielsen & Chiles, 1983.) Pinto et al administered the Reasons for Living Inventory, the Suicidal Ideation Questionnaire, the Beck Depression Inventory and the Hopelessness Scale for Children to a sample of 253 inpatient adolescents. A series of planned comparison t-tests indicated that compared to non-suicidal adolescents, suicidal adolescents reported fewer Survival and Coping Beliefs, less Responsibility to Family, and fewer moral objections to suicide. As compared to ideators, suicide attempters reported less of a fear of suicide. Thus, increased levels of suicidal ideation were associated with decreased reasons for living. These findings led the authors to conclude that suicidal adolescents attach less importance to life-oriented beliefs and expectations than do non-suicidal adolescents. These findings are consistent with Baumeister's Escape Theory, and thus, there appears to be support for including disinhibition in the Escape Theory.

Research on the Escape Theory of Suicide

While several of the aforementioned studies provide support for various stages of Baumeister's Escape Theory of Suicide, to date, there have been only three investigations specifically designed to investigate the Escape Theory of Suicide (Dean & Range, 1996; Dean, Range & Goggin, 1996; Dean and Range, 1999). Although these investigations have provided initial evidence of the validity of the model, the role of perfectionism has not been consistently

demonstrated, nor have negative attributional style or level of self-awareness been incorporated into these investigations. Moreover, the strongest findings in support of the Escape Theory were obtained in a study employing a clinical sample, leaving uncertainty as to the validity of the Escape Theory among college students. This section reviews each of the three previous investigations of the Escape Theory.

A preliminary investigation of the Escape Theory provided partial support for the model's validity among college students (Dean & Range, 1996). Dean and Range administered the Multi-Dimensional Perfectionism Scale, the Life Experiences Survey, the Zung Self-Rating Scale, the Hopelessness Scale, the State-Trait Anxiety Inventory, the Reasons for Living Inventory and the Suicidal Behaviors Questionnaire to a sample of 168 (52 males; 72% White, 25% African American) undergraduate psychology students. Consistent with the Escape Theory, Dean and Range predicted that there would be significant paths from both socially prescribed and self-oriented perfectionism to anxiety and depression, from anxiety and depression to hopelessness, from hopelessness to reasons for living, and from reasons for living to suicidal ideation. A path analysis provided partial support for the Escape Theory. As predicted, there were significant paths from negative life stress to perfectionism, from perfectionism to depression, from depression to hopelessness, and from reasons for living to suicidal ideation. Thus, all of the paths were significant except for those from self-oriented perfectionism to anxiety and depression, and from hopelessness to reasons for living. Additionally, there was an unexpected significant path from negative life stress to suicidal ideation.

While this initial investigation of the Escape Theory provided partial support for the model, there are several important limitations and inconsistent findings that must be noted. First, despite numerous studies that had indicated a strong link between hopelessness and suicidal

ideation, in this investigation depression accounted for more variance in suicidal behaviors than hopelessness. A second finding that was inconsistent with both the theory and previous research was a lack of a significant path from self-oriented perfectionism to depression. Given that self-oriented perfectionism refers to the tendency to set unrealistic high personal standards, it was expected that this factor would contribute significantly to the model. A third limitation of this study was the failure to include a measure of negative self-attribution, which Baumeister proposed as the second stage of the Escape Theory. Similarly, a fourth limitation of this study was the failure to include a measure of self-awareness, which Baumeister proposed as the third stage of the Escape Theory.

Despite the aforementioned limitations, the initial investigation of the Escape Theory provided moderate support for the theory. Further support for the model was provided in a follow-up investigation that tested a slightly revised version of the Escape Theory (Dean, Range, & Goggin, 1996). Dean and his colleagues administered the Socially Prescribed Perfectionism subscale of the MPS, the Life Experience Survey, the Zung Self Rating Depression Scale, the Beck Hopelessness Scale, the Reasons for Living Inventory, and the Beck Scale for Suicide Ideation to a sample of 114 (96 women, 71.9% White, 22.8% African American) undergraduate psychology students. There are several noteworthy differences between this investigation and the initial investigation of the Escape Theory. As a result of their lack of contribution to the model in the previous investigation (i.e., Dean & Range, 1996), both self-oriented perfectionism and anxiety were excluded from the follow-up investigation. Additionally, a more valid and reliable measure of suicidal ideation was employed. A hierarchical multiple regression analysis indicated that both hopelessness (69%) and socially prescribed perfectionism (3%) accounted for a significant amount of the variance in suicidal ideation, whereas depression did not account for

any significant unique variance in suicidal ideation. As with the previous investigation, a path analysis provided partial support for the model. There were significant paths from negative life stress and socially prescribed perfectionism to depression, from depression to hopelessness, from hopelessness to reasons for living, and from reasons for living to suicidal ideation. Each of these paths is consistent with Baumeister's Escape Theory, and by themselves, provide support for the model. However, additional significant paths were indicated from hopelessness to suicidal ideation and from socially prescribed perfectionism to suicidal ideation. As a result of these unpredicted direct paths to suicidal ideation, the overall model demonstrated a poor goodness of fit index.

As with the initial investigation of the Escape Theory, there are several significant limitations and inconsistent findings in the follow-up study. As with the first investigation, measures of attribution style and level of self-awareness were not included in the tested model. In their discussion of the limitations of this study, the authors specifically acknowledge that the failure to include attribution style may limit the ability to draw significant conclusions from their findings. A second limitation of this study was the generally small sample size that was employed, as the small sample size may have in part contributed to the lack of a strong goodness of fit for the tested model. Finally, in this follow-up study, socially prescribed perfectionism contributed unique variance in predicting suicidal ideation. This finding is inconsistent with the original investigation (Dean & Range, 1996), which failed to demonstrate a direct link between either socially prescribed or self-oriented perfectionism or suicidal ideation.

In an attempt to address the inconsistent findings of the previous two investigations, Dean and Range (1999) investigated a modified, interactional model (1999). Baumeister originally conceptualized the Escape Theory as being a linear model, with individuals moving from one

step to the next. However, in the discussion of their findings, Dean, Range and Goggin (1996) suggested that a revised interactional model would have been more strongly supported by their data. Given this, Dean and Range (1999) sought to investigate a revised version of the Escape Theory in which the first three steps were reconstructed as an interaction between negative life events and perfectionism. In addition to direct paths from socially oriented and self-oriented perfectionism to depression, it was predicted that socially prescribed perfectionism would interact with stress to produce suicidal ideation, and that self-oriented perfectionism and socially oriented perfectionism would interact with stress to produce depression. Additionally, consistent with Baumeister's original model, it was predicted that depression would be related to hopelessness, hopelessness would be related to low reasons for living, and low reasons for living would be related with suicidal ideation.

Dean and Range (1999) administered the Life Event Questionnaire, the Multi-Dimensional Perfectionism Scale, the Zung Self-Rating Depression Scale, the Beck Hopelessness Scale, the Brief Reasons for Living Inventory and the Beck Scale for Suicidal Ideation to a sample of 132 clinical outpatients. A stepwise multiple regression with suicidal ideation as the criterion indicated that hopelessness, reasons for living and depression were the only variables that accounted for variance in suicidal ideation, with these variables accounting for 42 percent of the variance. Contrary to predictions, multiple regressions indicated that self-oriented and socially prescribed perfectionism as well as the interactions between these two dimensions of perfectionism and negative life events failed to predict variance in depression. Similarly, self-oriented perfectionism alone failed to account for significant variance in depression scores, with only socially prescribed perfectionism (22 percent) accounting for significant variance in depression scores. A structural equation model indicated that there were

significant paths from socially prescribed perfectionism to depression, depression to hopelessness, hopelessness to reasons for living and suicidal ideation, and reasons for living to suicidal ideation. Furthermore, a LISREL path analysis indicated a good overall goodness of fit for the model. Given the lack of significant contributions from stressful life events and self-oriented perfectionism to the Escape model, Dean and Range (1999) concluded that it was neither stressful events nor perfectionism that contributed to suicidal ideation, but rather it was how hopelessly an individual interpreted the events, an individual's reasons for living, and an individual's level of depression.

Thus, Dean and Range (1996) demonstrated moderate support for the latter steps of the Escape Theory, but failed to provide significant evidence concerning the early stages of the theory. The finding that neither stressful life events nor self-oriented perfectionism contributed to depression is inconsistent with previous research. Additionally, it is noteworthy that unlike Dean, Range and Goggin (1996), these authors failed to find a significant link between socially prescribed perfectionism and suicidal ideation. Finally, as with the previous two investigations of the Escape Theory, neither measures of attribution style nor level of self-awareness were included. In their discussion of the results, Dean and Range stated that future research should focus on cognitive variables that might mediate or moderate the relationship between life stress and depression.

Thus, there are several noteworthy observations concerning the three previous investigations of the Escape Theory. First, while the three aforementioned studies provide moderate support for the Escape Theory, there were several findings that were inconsistent with Baumeister's predictions. Second, the contribution of perfectionism to the Escape Theory remains unclear. In particular, in each of the three studies self-oriented perfectionism failed to

contribute significant variance to the model. This is surprising given that self-oriented perfectionism is associated with increased likelihood of experiencing failure as a result of setting unrealistically high goals. Theoretically, this conceptualization of perfectionism closely mirrors Baumeister's first stage, which is failure to achieve expected standards. Similarly, there were inconsistent findings concerning socially prescribed perfectionism, as it was demonstrated to be directly associated with suicidal ideation in one study, while no such link was found in the other two studies. Third, neither attribution style nor self-awareness were incorporated into any of the three previous investigations. Baumeister suggested that the second stage of the Escape Theory consisted of negative self-attribution and the third stage consisted of heightened self awareness, yet neither of these constructs were included in the aforementioned investigations. Fourth, of the three aforementioned investigations, two of the studies were conducted using a sample of college students, while the third (and most decisive study) relied on a clinical sample of non-college students. Finally, given the numerous associations that were investigated, each of the three aforementioned studies relied on relatively small sample sizes. Given these factors, further investigation of the Escape Theory is warranted.

Adaptive and Maladaptive Perfectionism

As noted above, previous investigations of the Escape Theory have provided inconsistent and non-significant findings concerning the contribution of perfectionism to the development of suicidal ideation. It is important to note that these previous investigations relied on Hewitt and Flett's (1991) three-dimensional conceptualization of perfectionism. While this conceptualization of perfectionism distinguishes three components of perfectionist thinking (i.e., self-oriented, other-oriented and socially prescribed), an overriding assumption of each of the components is that they are negative or maladaptive in nature. Thus, previous research on the Escape Theory of suicide has operationalized perfectionism as a strictly maladaptive personality

characteristic. However, recent research indicates that perfectionism may be both maladaptive and adaptive. Furthermore, and of greater relevance to the current study, this research has indicated that previously employed measures of perfectionism do not accurately assess the maladaptive components of perfectionism. This section reviews the constructs of adaptive and maladaptive perfectionism.

While traditional conceptualizations and assessment tools have defined perfectionism as a multi-dimensional construct (i.e., Hewitt and Flett), these conceptualizations have simultaneously been one-dimensional in that they have conceptualized perfectionism as problematic, if not pathological (Rice, Asby and Slaney, 1998). However, factor analytic studies of the commonly used measures of perfectionism have indicated the existence of two higher order factors of perfectionism. For example, Frost, Heimberg, Holt, Mattia and Neubauer (1993) factor analyzed both their own Multidimensional Perfectionism Scale and Hewitt and Flett's (1991) Multidimensional Perfectionism Scale. This factor analysis resulted in the identification of two higher order factors that they labeled as Maladaptive Evaluation Concerns and Positive Striving. Maladaptive Evaluation Concerns consisted of excessive concerns about making mistakes, doubts about one's behavior and excessively critical relationships with others. This maladaptive factor was significantly related to depression and negative affect. Conversely, Positive Strivings consisted of high personal standards and organization. This factor was not related to depression, but rather, was significantly related to positive affect. Rice, Slaney and Ashby (1998) obtained similar findings among a sample of 464 college students. Their confirmatory factor analysis of the Almost Perfect Scale and the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) revealed two higher order factors, which they labeled adaptive and maladaptive perfectionism. Rice and his colleagues described adaptive perfectionists as people

who have high personal standards, a need for order and organization, and an unwillingness to procrastinate. Maladaptive perfectionism was marked by excessive concern over making mistakes, doubt about actions, a tendency to procrastinate, and feelings of anxiety.

In addition to the aforementioned findings, a review of the three most prominently used measures of perfectionism concluded that perfectionism has not been clearly defined or assessed (Slaney, Rice, Mobley, Trippi & Ashby, 2001). In particular Slaney and his colleagues concluded that previous measures of perfectionism include an overabundance of negative items and an insufficient numbers of items assessing the more positive aspects of perfectionism. While these authors cited the need for additional items measuring the adaptive components of perfectionism, it is important to note that Slaney and his colleagues cited the lack of a clear definition of maladaptive perfectionism as being more problematic. They argued that scales measuring the negative components of perfectionism focused on the causes and effects of perfectionism, rather than clearly defining the maladaptive component of perfectionism. As an example, Slaney et al cite Hewitt and Flett's (1991) socially prescribed subscale which as previously reviewed suggests that perfectionists perceive others as having unrealistically high standards, evaluate them stringently and expect them to be perfect. However, Slaney et al contend that this is a cause of perfectionism and not a conceptualization of perfectionism in and of itself.

As with the aforementioned critique, Shafran and her colleagues (2001) have provided a critical review of the commonly used perfectionist assessments. Following their review of the early perfectionist literature, Shafran et. al (2001) concluded that early descriptions of perfectionism consistently described perfectionists as individuals that self-imposed personally demanding standards, focus their attention on perceived failures rather than successes, and are

highly self-critical as a result of their perceived failures. Central to Shafran et al's criticism of existing perfectionism measures is the belief that the widely employed measures assess "a broader range of features than those described by clinicians and early theorists of perfectionism" (Shafran et al, 2001, p776).

For example, Shafran and her colleagues argue that dimensions such as other oriented perfectionism and socially oriented perfectionism do not directly assess perfectionism as perfectionism has been previously described in the literature. Rather, they argue that socially prescribed and other oriented perfectionism measure constructs that may be related to perfectionism, in that perfectionists may be likely to hold others to high standards or perceive that others hold them to high standards. However, they argue that these dimensions of perfectionism are not consistent with the conceptualization of perfectionism as consisting of "self-motivated, self-imposed, personally demanding standards". Of Hewitt and Flett's (1991) three dimensions of perfectionism, Shafran and her colleagues cite self-oriented perfectionism as the only dimension that "comes close to assessing the construct of perfectionism as it is described, and even then there are few items that refer to self-evaluation" (Shafran et al, 2001, p776).

In response to the aforementioned criticisms of existing measures of perfectionism, attempts have been made to formulate a new measure of perfectionism that captures the adaptive aspect of perfectionism as well as clearly defining the maladaptive aspects. Building on two qualitative studies of perfectionism (Slaney and Ashby, 1996; Slaney, Chadha, Mobley & Kennedy, 2000), Slaney et al (2001) attempted to develop a more consistent theoretical conceptualization and assessment for distinguishing between adaptive and maladaptive perfectionism. Following their review of the existing literature, Slaney et al (2001) concluded

that high standards and orderliness are the defining aspects of adaptive perfectionism whereas the defining aspect of negative perfectionism is the perceived discrepancy between the standards one has and their perceived performance. In their initial revision of the Almost Perfect Scale, Slaney et al (2001) created 39 items to assess their modified conceptualization of perfectionism. Both exploratory and confirmatory factor analysis revealed three higher order factors, which were labeled high standards, order, and discrepancy, with high standards and order representing the adaptive aspects of perfectionism and discrepancy representing the maladaptive aspect of perfectionism. Comparisons between the APS-R subscales and other scales of perfectionism demonstrated that the APS-R subscales were more strongly associated with measures of achievement, self-esteem, depression and worry. These findings provided strong evidence for the newly revised Almost Perfect Scale.

Additional support for the validity of the Revised Almost Perfect Scale was obtained by Suddarth and Slaney (2001). Suddarth and Slaney (2001) studied a sample of 196 undergraduate students in an attempt to more clearly identify both the adaptive and maladaptive components of perfectionism. In their assessment of the Revised Almost Perfect Scale, Suddarth and Slaney found that the Discrepancy subscale provided a clear measure of the negative aspect of perfectionism. The negative aspect of perfectionism was not the high standards themselves, but rather, the difference the individuals saw in the standards they set for themselves and their performance. The second factor was a measure of standards, which is basic to the conceptualization of perfectionism and is labeled as adaptive. The third factor identified was order/organization. The low and nonsignificant correlations between the APS-R's Discrepancy subscale and both Order and High Standards are consistent with the goal of constructing the Discrepancy subscale to represent the negative aspect of perfectionism. Furthermore, the authors

concluded that this result suggests that discrepancy is not confounded with either of the other variables on the APS-R, while “the substantive intercorrelations between the three Hewitt and Flett (1991) scales suggest that their overall conceptual clarity might be improved”.

As further evidence that the Discrepancy scale represents the maladaptive component of perfectionism, Suddarth and Slaney found that the negative or maladaptive factor accounted for the most variance in predicting all three of the dependent variables chosen (depression, anxiety, locus of control). Furthermore, the adaptive factor had a negative relationship with the external dimension of the Rotter Locus of Control Scale, while the maladaptive factor was positively related to externality.

Finally, a recent cluster analysis of perfectionists indicates that there is indeed a clear distinction between adaptive and maladaptive perfectionism, as measured by the APS-R (Grzegorek, Slaney, Franze, & Rice, 2004). Grzegorek and her colleagues administered the APS-R, the Depressive Experiences Questionnaire (DEQ), and the Rosenberg Self-Esteem Scale (RSES) to a sample of 273 undergraduate students. A cluster analysis was used to empirically identify groupings of perfectionists based on their scores on the APS-R. This cluster analysis indicated that the participants could be grouped into three distinct clusters, labeled as non-perfectionists, adaptive perfectionists, and maladaptive perfectionists. As with previous investigations, the participants’ scores on the Discrepancy Scale of the APS-R discriminated between adaptive and maladaptive perfectionists, with the highest discrepancy scores identifying the maladaptive perfectionists and the lowest discrepancy scores identifying the adaptive perfectionists. Of the 273 participants, 27 percent were identified as maladaptive perfectionists, 32 percent were identified as non-perfectionist, and the remaining 41 percent were identified as adaptive perfectionists. As opposed to adaptive perfectionists, maladaptive perfectionists had

higher scores on the Self-Criticism subscale of the DEQ, with the nonperfectionist group having scores that fell between the scores of the two perfectionism groups. Additionally, adaptive perfectionists had significantly higher scores on the RSE than either the maladaptive perfectionists or non-perfectionists (there was not a significant difference between the latter two groups). Finally, while their reported grade point averages did not differ, maladaptive perfectionists rated themselves as significantly less satisfied with their grade point averages than did adaptive perfectionists. The aforementioned findings led Grzegorek and her colleagues (2004) to conclude that there appears to be evidence for the existence of three clusters of perfectionists and that the APS-R, and more specifically, scores on the Discrepancy subscale of the APS-R, may be useful for discriminating the different types of perfectionists

Given the findings of the research investigations previously reviewed, there appears to be significant indication that theoretical models of suicide that incorporate perfectionism need to distinguish between maladaptive and adaptive perfectionism. Indeed, one previous investigation of the association between perfectionism and suicidal ideation indicates the importance of distinguishing between the two aspects of perfectionism and their association with suicidal ideation. Adkins and Parker (1996) had 129 participants (65% women, 89% White, 6% African American, and 1% Hispanic) complete the Multidimensional Perfectionism Scale, The TAT, and a suicide scale compiled from items included on the National Adolescent Student Health Survey. While there was a significant relationship between perfectionism and suicide, the majority of the variance in the predicted model was accounted for by Concern over Mistakes and the Doubts about Action subscales of the MPS. The authors concluded that the results suggest that the elements of perfectionism such as having high personal standards and high parental expectations are not particularly related to suicide. Rather, they concluded that those perfectionists who were

afraid of making mistakes, frequently second guessed decisions, and procrastinated were at risk for developing suicidal ideation.

The aforementioned findings concerning perfectionism are consistent with the role of perfectionism within the Escape Theory as originally proposed by Baumeister. In his conceptualization of the Escape Theory, Baumeister suggested that the suicidal process was triggered by perceived failure. Thus, it was not high standards per se that triggered suicidal thought, but rather, the perception that the standards were not being met. This conceptualization is consistent with the more recent view of perfectionism. Conversely, the more traditional perspective of perfectionism (i.e., Hewitt & Flett, 1991), may not conceptualize perfectionism in a manner consistent with Baumeister's theory, as the more traditional conceptualizations fail to clearly define the maladaptive component of perfectionism (i.e., perceiving oneself as falling short of standards).

Proposed Study of the Escape Theory of Suicide

The above review of the literature reveals several significant factors concerning suicidal thoughts, feelings and behaviors among college students. First, suicide is the second leading cause of death among college students, and suicidal thoughts, feelings, and behaviors are widely prevalent among this population. Second, the Escape Theory of Suicide provides a theoretical model for explaining the process by which college students may come to contemplate suicide. Third, previous investigations of the Escape Theory have provided moderate support for the model's validity. Fourth, the contribution of perfectionism to the Escape Theory remains unclear. Fifth, previous investigations of the Escape Theory have failed to incorporate measures of attribution style and levels of self-awareness. Finally, of the previous investigations of the Escape Theory, the most decisive study employed a clinical sample, and as such, there remains a question as to the validity of this model among college students.

The present study was designed to incorporate omissions from previous investigations of the Escape Theory, as well as to investigate a modified version of the initial stages of the Escape Theory. To address previous inconsistent findings concerning the role of perfectionism within the model, the present study incorporated the recently redefined conceptualization of maladaptive perfectionism. Furthermore, to address their omission from initial investigations of the Escape Theory, attributional style and self-awareness were incorporated into the present study. The present study tested the following hypotheses:

1. The Escape Theory of Suicide will account for a significant amount of the variance of suicidal ideation scores and will demonstrate a strong goodness of fit with the data.
2. There will be significant paths between maladaptive perfectionism and negative attribution, between stressful life events and negative attributions, between negative attributions and self awareness, between self-awareness and depression, between self-awareness and anxiety, between depression and hopelessness, between anxiety and hopelessness, between hopelessness and reasons for living, and between reasons for living and suicidal ideation (see figure 2-2).

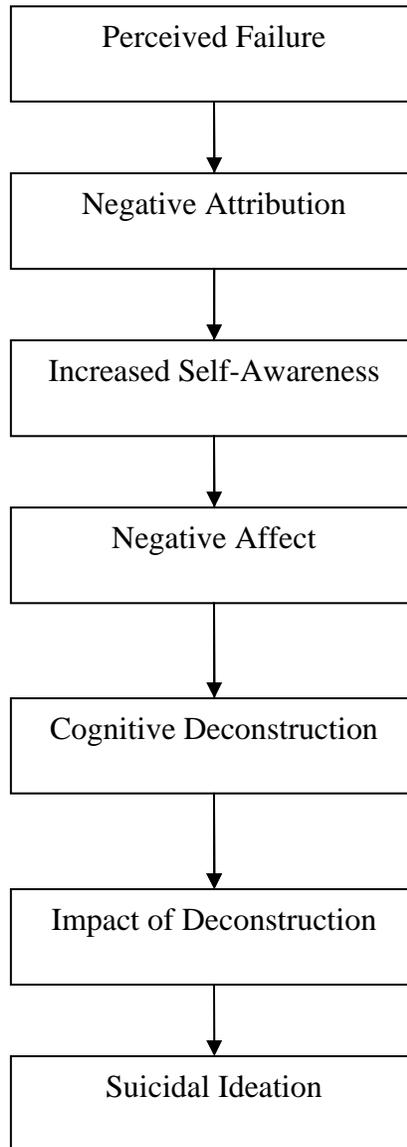


Figure 2-1. Baumeister's Escape Theory of Suicide.

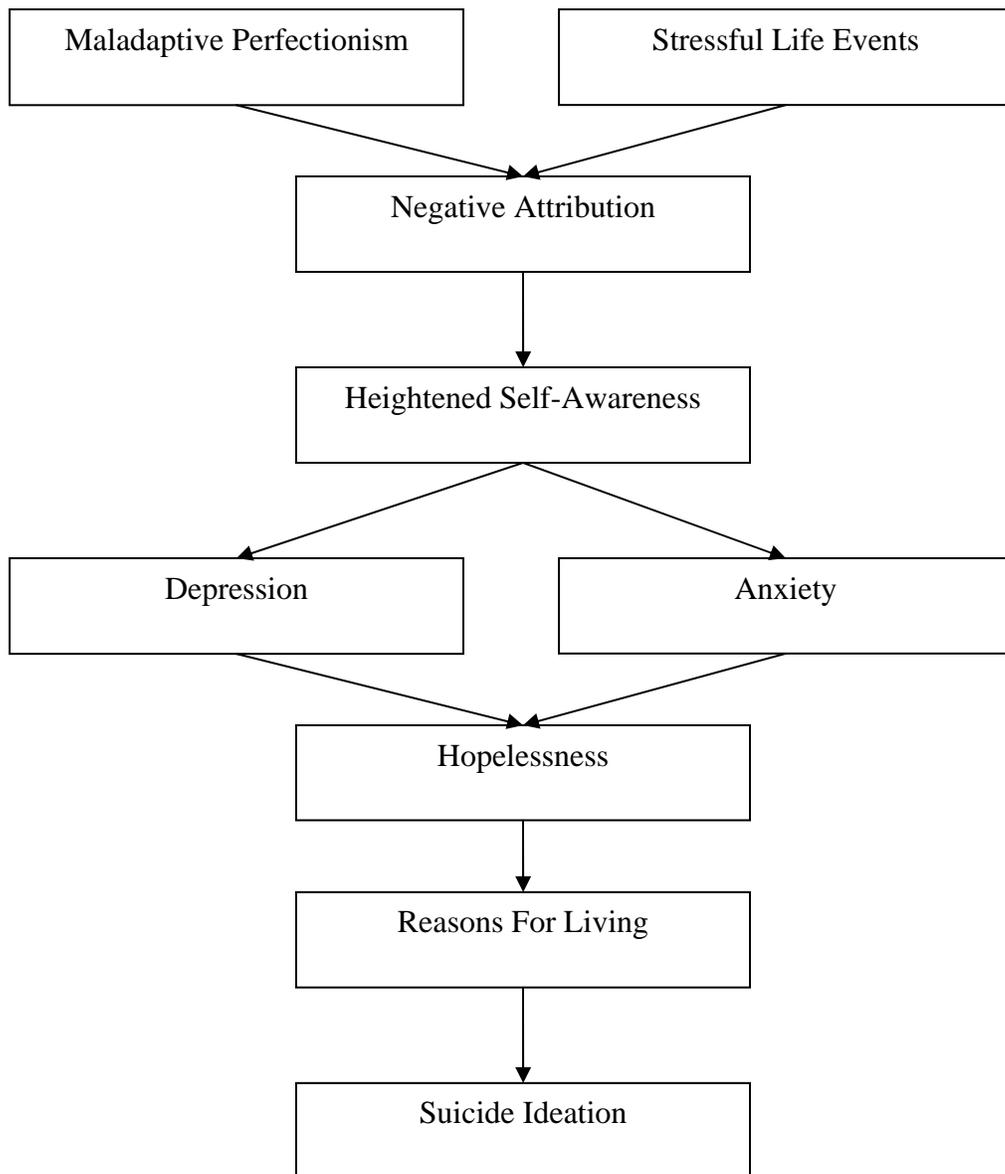


Figure 2-2. Proposed model of study.

CHAPTER 3 METHODOLOGY

Participants

One hundred eighty-one students participated in this study. The participants were recruited from undergraduate courses in psychology, children and family studies, and social work at Syracuse University, a large private university in the Northeastern United States. One hundred forty-four (79.6 %) of the participants were female, 34 (18.8 %) were male, and 3 participants did not report their gender. The racial-ethnic backgrounds of the participants were 74 % White/Caucasian, 11.6 % Asian, 6.6 % Black/African American, 3.3 % Hispanic/Latino, 1.1 % Native American, .6 % Pacific Islander, and 2.8 % did not provide a response. These percentages are similar to the university's racial-ethnic background percentages, as 33 % of the university's students are students of color. The participants' ages ranged from 18 to 24 years old ($M = 19.82$, $SD = 1.34$). Fifty eight (32 %) of the participants were first-year students; 55 (30.4 %) were second-year students; 24 (13.3 %) were third-year students; 40 (22 %) were fourth-year students, and 4 (2 %) did not report their year in school. All participants received extra course credit towards their respective grade for participating in this study.

Instruments

Almost Perfect Scale-Revised

The Almost Perfect Scale-Revised (APS-R; Slaney, R. B., Mobley, Trippi, Ashby & Johnson, 1996) is a twenty-three item self-report measure used to assess perfectionism. Using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), participants rate the extent to which they perceive each of the 23 items on the APS-R as being true of themselves. The APS-R consists of three subscales: High Standards (7 items), Order (4 items) and Discrepancy (12 items). The High Standards subscale measures an individual's perspective on

high personal standards for achievement (“I expect the best from myself”). The Order subscale measures an individual’s preference for order and neatness (“I think things should be put away in their place”). The Discrepancy subscale assesses the degree to which individuals view themselves as falling short of their personal standards for performance (“I am hardly ever satisfied with my performance”). Previous studies have indicated that the High Standards and Order subscales are associated with the positive aspects of perfectionism while the Discrepancy subscale captures the negative aspects of perfectionism (Slaney, Rice & Ashby, 2002). In the present study, maladaptive perfectionism was operationalized as the Discrepancy score on the APS-R.

There is evidence of both the validity and reliability of the APS-R. For example, a principal components factor analysis provided evidence in support of the three APS-R subscales, by showing that the three subscales accounted for a total of 68% of the variance in the APS-R scores (Suddarth & Slaney, 2001). Internal consistency of the APS-R has been demonstrated to be .92 for Discrepancy, .85 for High Standards, and .86 for Order (Slaney et al., 2001). Finally, the APS-R has been shown to be positively correlated with other measures of perfectionism and has been demonstrated to correlate as expected with theoretically related constructs. The reliability alphas for internal consistency in the present sample were .93 for Discrepancy, .83 for High Standards, and .87 for Order.

Perceived Stress Scale

The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) is a 14-item measure that assesses the extent to which an individual perceives his or her life as having been stressful over the course of the past month. Using a five-point Likert scale (0=never, 4=very often), respondents rate how often they have experienced themselves as having experienced stressful events in the past month. Of the 14 items, 7 are keyed in a high stress direction (“In the

last month, how often have you been upset because of something that happened unexpectedly”), and seven are keyed in a low stress direction (“In the last month, how often have you been able to control irritations in your life”). The seven items keyed in the low stress direction are reverse scored. Higher scores reflect greater levels of perceived stress, with a scale range of 0 to 56. Given that the PSS was designed for use with community samples (Cohen et al, 1983), it was deemed appropriate for the present study. Additionally, the PSS was used to assess stress rather than life events or hassles surveys because the PSS does not constrain respondents to a specific list or number of stressors as do life events and hassles surveys (Chang, Watkins & Banks, 2004).

Previous research has demonstrated both the reliability and validity of the PSS. Among a sample of 332 college students and a second sample of 114 college students, the coefficient alpha reliability for the PSS was .84 and .85 respectively. Similarly, test-retest reliability analysis provided further evidence for the reliability of the PSS, with a two-day test-retest correlation of .85 and a six-week correlation of .55. (Cohen et al, 1983). Finally, the PSS has been shown to correlate in the expected direction with life events assessments, physical reports of stress, and utilization of health services among college students. The reliability alpha for internal consistency in the present sample was .83.

Attributional Style Questionnaire

The Attributional Style Questionnaire (ASQ; Peterson, Semmel, Baeyer, Abramson, Metalsky & Seligman, 1982) is a self-report assessment that measures individual differences in the tendency to attribute causes of negative and positive life events to internal (versus external), stable (versus unstable), and global (versus specific) factors. The ASQ consists of 6 hypothetical positive life events (e.g., “You do a project that is highly praised”) and 6 negative life events (e.g., “You can’t get all the work done that others expect of you”). Participants write one major

cause of each given event in open-ended format and then rate the cause of the event on a Likert Scale (1 to 7) for the degree of internality, stability and globality. Higher scores indicate a tendency to attribute events to more internal, stable, and global factors.

Composite scores for internality, stability, and globality are created by summing the appropriate items and dividing the sum by the number of items in the composite. The scale can be interpreted separately by each domain (i.e., internality, stability, globality) or the scores can be combined into a single attributional style score, one for positive events and one for negative events. For the present study, and consistent with Peterson et al.'s (1982) recommendation for studies examining the relationship between attributional style and depression, a single composite score for negative events was calculated. To insure consistency with validity and reliability, all items (positive and negative) were administered. However, given the purpose of the current study, only attributional style for negative life was included in the data analysis.

The internal reliability for internality, stability, and globality following negative life events are .46, .59, and .69, respectively (Peterson et al., 1982). The internal reliability for the composite negative attributional style is .72. The ASQ demonstrates high test-retest reliability, with a five-week test-retest of .64, .69, .57, and .64, respectively for internality, stability, globality, and composite. As evidence of its validity, scores on the ASQ have been demonstrated to predict which college students develop depression one month later (Golin, Sweeney, & Shaffer 1981). Likewise, ASQ scores are associated with the development of depressive symptoms following poor performance by college students on mid-term examinations (Peterson et al, 1982). The reliability alpha for the composite negative attributional scale in the present study was .77.

Linguistic Implications Form

The Linguistic Implications Form (LIF; Wegner & Giuliano, 1980) is a 20-item self-report instrument used to measure level of self-awareness. Participants are presented with 20 sentences and asked to complete each sentence by choosing which of the three pronouns that appears in parentheses best completes the sentence. Participants are informed that while more than one alternative may complete each sentence, they should select the word they feel best completes the sentence. In each sentence, one of the three pronouns is a first-person singular pronoun (e.g. “All of (our, my, his) answers matched the ones in the back of the book”). Scores on the LIF are calculated by the number of first-person singular pronouns selected, with a greater number of first-person pronouns reflecting greater levels of self-awareness.

Internal consistency of the LIF is somewhat low, .51 (McDonald, Harris & Maher, 1983). Scores on the LIF distinguished between participants who verbally reported feeling self-aware and those who did not report being self-aware (McDonald, Harris & Maher, 1983). In a pilot study, participants who completed the measure while seated in front of a mirror chose significantly more first person singular pronouns than those not seated in front of a mirror. The reliability alpha for internal consistency on the LIF in the present sample was .58.

Center for Epidemiological Studies-Depression Scale

The Center for Epidemiologic Studies-Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report instrument used to measure depression. Using a four point Likert scale (0 = rarely or none of the time; 3 = most or all of the time) participants respond to each of 20 statements indicating the frequency with which they experienced the item during the course of the previous week. Of the 20 items, 16 are keyed in a negative direction (“I felt that everything I did was an effort”) and 4 are keyed in a positive direction (“I enjoyed life”). Items worded in a positive direction are reverse scored. Total scores on the CES-D represent a summation of the

20 items, with scores ranging from 0 to 60. Higher scores on the CES-D indicate more frequent or severe depressive symptoms. Although factor analysis has indicated the existence of four separate factors, for the purposes of the present study, a single score, representative of depression, was employed for all data analyses.

Internal consistency scores for the CES-D among a general population sample and a clinical sample have been reported as .85 and .90, respectively (Radloff, 1977). Test-retest reliability of the CES-D indicates moderate consistency over time, with correlations of .51, .67, and .59 reported over 2, 4, and 6 week intervals. While this is only indicative of moderate test-retest reliability, it is important to acknowledge that the instructions specifically request that participants report their mood during the past week, thus likely reducing the test-retest correlation (Radloff, 1977). As evidence of its validity, CES-D scores has been shown to strongly discriminate between psychiatric inpatients and general population participants, as well as moderately discriminate among levels of depression severity within psychiatric patient groups. Finally, the CES-D correlates in the expected direction with related measures (Radloff, 1977). In the present sample, the reliability alpha for internal consistency of the CES-D was .92.

Penn State Worry Questionnaire

The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is 16-item self-report scale that assesses an individual's level of "excessive or uncontrollable worry". Using a 5-point Likert scale, participants respond to each of the 16 items indicating the extent to which each of the items is typical of them, with 1 representing "not at all typical of me" and 5 representing "very typical of me". Eleven items are worded in the direction of pathological worry ("Once I start worrying, I cannot stop") and five items are worded in a reversed fashion ("I never worry about anything). The five positively stated items are reverse

scored, and the measure yields a single total score created by the sum of each of the 16 items. Higher scores on the PSWQ indicate higher levels of pathological worry.

Support has been provided for both the reliability and validity of the PSWQ. For example, in the initial study of the PSWQ, the measure was shown to have high internal consistency (.93), and favorable test-retest reliability coefficients (.74 over intervals of 2 and 10 weeks (Meyer, Miller, Metzger & Borkovec, 1990). The PSWQ has been shown to have strong concurrent validity. Furthermore, among a clinical sample it can differentiate patients with generalized anxiety disorders from patients with other mood disorders (Brown, Antony & Barlow, 1992). Finally, as evidence of the concurrent validity of the PSWQ, among a sample of 405 college students, the PSWQ correlations with the trait and state subscales of the State-Trait Anxiety Inventory were found to be .64 and .49, respectively. In the present sample, the reliability alpha for internal consistency on the PSWQ was .94.

Revised Life Orientation Test

The Revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994) is a 10-item self-report measure that assesses an individual's level of optimism and pessimism. Using a 5 point Likert scale (0= strongly disagree; 4 = strongly agree) respondents are asked to indicate the extent to which they agree with each of the 10 items. The LOT-R consists of 3 statements keyed in a positive direction ("I'm always optimistic about my future"), 3 statements keyed in the negative direction ("I hardly ever expect things to go my way") and 4 filler items ("I don't get upset too easily"). Negatively worded items are reverse coded and the responses to these three items are summed with responses to the three positive items, yielding an overall optimism score, ranging from 0 to 24. In the present study, the LOT-R was used to assess hopelessness in accord with the suggestions offered by Steed (2001) who suggests that the LOT-R has better applicability to non-clinical populations than the Beck Hopelessness Scale.

Initial factor analyses of the LOT-R indicated a strong goodness of fit for a single factor solution, representing optimism on one end of a unipolar continuum and pessimism on the opposite end of a unipolar continuum. Item scale correlations range from .43 to .63, with an overall Cronbach's alpha of .78 for the entire six items, thus demonstrating an acceptable level of internal consistency. Test-Retest intervals of 4, 12, 24, and 28 months yielded good test-retest reliability, with test-retest correlations of .68, .60, .56, and .79 respectively. In the present study, the reliability alpha for internal consistency on the LOT-R was .82.

Reasons for Living Inventory for Young Adults

The Reasons for Living Inventory for Young Adults (RFL-YA; Guitierrez, Osman, Barrios, Kopper, Baker, Monty & Haraburda, 2002) is a 32-item self-report measure that assesses an individual's reasons for not committing suicide. Using a six-point Likert scale (1 = not an important reason; 6 = extremely important reason), respondents indicate the extent to which each of the 32 items would be a reason for living if they were to contemplate suicide (e.g., "I have close friends who really care about me a lot"). Although factor analysis has indicated the presence of 5 factors on the RFL-YA, the scale may be used with the five factors or may be used as a single scale, with higher sum totals representing a higher degree of adaptive beliefs and expectations for living (Gutierrez et al., 2002).

Support for both the reliability and validity of the RFL-YA has been provided. For example, initial evaluations of internal consistency yielded item-total correlations ranging from .49 to .71, with an overall alpha of .96 (Gutierrez et al, 2002). The RFL-YA has demonstrated concurrent validity, as it was demonstrated to have significant positive correlations with scores on related measures of suicide risk, depression, and hopelessness. Finally, total RFL-YA scores have been demonstrated to predict self reported history of suicidal behavior, suicide ideation, and the likelihood of future suicidality, as RFL-YA scores respectively accounted for 22, 42, and 28

percent of the variance (Gutierrez et al., 2002). In the present study, the reliability alpha for internal consistency on the RFL-YA was .97.

Suicidal Ideation Scale

The Suicidal Ideation Scale (SIS; Rudd, 1989) is a 10 item self-report measure designed to assess the severity or intensity of suicidal ideation among university students. Using a 5-point Likert scale (1 = never or none of the time; 5 = always or great many times) participants report the extent to which each statement is true of the way they have felt or behaved in the past year. The SIS was designed to represent a continuum of suicidal ideation ranging from covert suicidal thoughts (“Life is so bad I feel like giving up”) to more overt or intense suicidal ideation (“I have been thinking of ways to kill myself”). All items are scored in a positive direction and the SIS yields a single score, with higher scores representing greater levels of suicidal ideation.

Among a sample of 215 university students, the SIS demonstrated high levels of internal consistency reliability (coefficient alpha = .90), with item-total correlations ranging from .45 to .74. As evidence of concurrent validity, the SIS correlated in the anticipated direction with the Center for Epidemiologic Studies Depression Scale (Radloff, 1977) and the Beck Hopelessness Scale (Beck, Weisman, Lester & Trexler, 1974). In the present sample, the reliability alpha for internal consistency on the SIS was .90.

Demographic Data Sheet

A brief series of demographic questions were presented to collect the following information: age, gender, ethnic/racial background, education level, and major or field of study.

Procedure

For the purposes of data collection in the present study, a web page was created on the Syracuse University web server that contained each of the aforementioned research assessments. This web page was created by the Division of Student Affairs Research Analyst and was only

accessible to Syracuse University students who were invited to participate in the present study. The web page was made accessible to students for a 30-day period during the spring 2006 academic semester.

After receiving Institutional Review Board (IRB) approval for conducting this study, the primary investigator sent e-mail announcements to randomly selected psychology, social work, and health and human performance instructors requesting their cooperation in recruiting participants for a study on college student mental health (see Appendix A). This e-mail message informed course instructors that the purpose of the investigation was to identify factors that are associated with the development of suicidal ideation among college students. Furthermore, the message assessed instructor's willingness to offer students in their sections extra credit for participating in the study. Of the 15 instructors contacted, 8 agreed to participate in the study.

All course instructors who agreed to assist in participant recruitment were provided a recruitment script (see Appendix B). Using the provided script, course instructors invited the students to participate in the study and informed the students of the internet address at which they could access the on-line assessment packet. Additionally, this script informed students that they would be eligible to receive course credit if they chose to participate in the study. To insure consistency across courses, all instructors were asked to read the recruitment script to their students on the same calendar day. Similarly, all students were informed that the web site would only be accessible for thirty days.

Students who chose to participate in the study accessed the assessment packet on-line via the internet address their course instructors had provided. Upon accessing the internet site, potential participants were asked to read an informed consent form (see Appendix C). The informed consent form provided a brief explanation of the purpose of the study, explained to

potential participants their rights regarding completion of the assessment packet, and informed potential participants that they would receive extra credit for completing the assessment packet. Given that this research was completed on-line, it was not possible to obtain signed informed consent forms. Therefore, participants provided consent by clicking on a link that stated “I agree to these conditions, and chose to participate in this study”. Students who selected this link were then taken to the first page of the assessment packet. In conjunction with IRB requirements, students who did not wish to provide consent were able to select an alternate link that stated “I do not agree to these conditions and do not wish to participate in this study”. Students who selected this link were returned to the Syracuse University home page. While there were not any students who chose not to participate in the study by selecting the alternate link, actual participation rate data is not available, as students that opted not to participate in the study may have chosen to close their web browser.

All of the students who consented to participate in the study completed the assessments in the following order: Almost Perfect Scale-Revised, Linguistic Implications Form, Perceived Stress Scale, Center for Epidemiological Studies-Depression Scale, Attributional Style Questionnaire, Penn State Worry Questionnaire, Revised Life Orientation Test, Reasons for Living Scale, Suicidal Ideation Scale, and the demographic questionnaire (see Appendix D). Completion of the assessments took approximately 45 to 60 minutes.

All participant responses were automatically entered into a database created by the Division of Student Affairs Research Analyst. Upon completing the assessment packet, students were asked to provide their nine digit student identification number and to select from a pull down menu the course for which they were seeking extra credit. To insure that all of the participants’ research responses remained anonymous, this information was stored in a separate

database from the research data. At the conclusion of the data collection period all course instructors who had agreed to provide their students extra credit for participating in the study were provided with a list of students from their section who had participated in the study.

CHAPTER 4 RESULTS

Data Screening

Prior to analysis, the data were examined for accuracy of data entry, missing values, and normality. An evaluation of the means and standard deviations appeared plausible, and thus did not indicate any potential concerns with the data set. An examination of the correlation matrix did not reveal any perfect correlation ($r > .9$) between variables, indicating that singularity (a near-perfect linear relationship between two measures) was not present. However, many of the correlations were significant, which indicated the possibility of multicollinearity. In a separate analysis, suicidal ideation was regressed on hopelessness, reasons for living, anxiety, depression, heightened self awareness, negative attribution, maladaptive perfectionism, and stressful life events. The variance inflation factors (VIF) ranged from 1.022 to 2.895. Myers (1990) suggested that any VIF greater than 10.0 is cause for concern. In comparison, Bowerman and O'Connell (1990) suggested that an average VIF greater than 1.0 is an indication that multicollinearity may impact the regression model. The average VIF for the regression in the present sample was 1.894, suggesting that some multicollinearity may be present.

Analysis of the raw data revealed a number of missing values and extreme values. An examination of the univariate statistics revealed 6.5 percent missing data for negative attribution, 2.2 percent for anxiety, hopelessness, and reasons for living, 1.7 percent for heightened self awareness and suicidal ideation, and .6 percent for stressful life events and depression. There were no missing values for maladaptive perfectionism. Missing values can impact statistical analyses and patterns of missing data may indicate potential threats to internal validity. Given this, Little's MCAR test (Little & Rubin, 2002) was used to determine if there were patterns to the missing data. The results of Little's MCAR test resulted in a chi-square = 49.06, $df=47$,

$p=0.39$. This lack of significance suggested that the missing data was missing completely at random and that the data loss pattern was not systematic. The missing values were replaced using mean substitution.

There were a number of extremely high values for suicidal ideation (19) and for self-awareness (9). SPSS was utilized to test for skewness and kurtosis. Yuan & Bentler (1999) and West, Finch & Curran (1995) suggested that univariate values approaching 2.0 for skewness and 7.0 for kurtosis may lack normality. Suicidal ideation had a skewness of 2.628 and kurtosis of 7.315, while self-awareness has a skewness of 1.17 and kurtosis of 2.50. These statistics indicate a lack of normality for suicidal ideation but not for self-awareness. Suicidal ideation scores were transformed using an inverse operation ($1/\text{SIS score}$), resulting in a skewness of 0.402 and kurtosis of 1.249. The transformed variable was used in the subsequent analyses.

Descriptive Data

The variables of interest in the present study include: maladaptive perfectionism, stressful life events, negative attribution style, heightened self-awareness, depression, anxiety, hopelessness, reasons for living and suicidal ideation (see Table 4-1 for descriptive statistics).

There are several noteworthy findings concerning the prevalence of depression and suicidal ideation among the present sample. As indicated in Table 4-1, scores on the CES-D ranged from a low of 0 to a high of 51, with a mean of 20.48. Although the CES-D was not developed for the purposes of providing a clinical diagnosis, among adult samples, scores of 16 and higher have been used to define cases of depression (Radloff, 1977). Among samples of young adults and adolescents, the cut off score of 16 has been criticized for lacking sensitivity and specificity (Costello & Angold, 1988; Rushton, Forcier, & Schectman, 2002). To address this concern, Rushton and his colleagues (2002) have suggested employing a more conservative categorization method, in which scores between 0 and 15 reflect minimal depressive symptoms,

scores between 16 and 23 indicate mild depressive symptoms, and scores greater than 23 indicate moderate or severe depressive symptoms. Among the present sample, 62 percent of the participants scored at or above the less stringent cut-off score of 16. As indicated in Table 4-2, approximately 37 percent of the participants in the present sample scored at or above the more stringent cut-off score of 23 (reflective of moderate or severe depressive symptoms). The percentage of participants reporting moderate or severe depressive symptoms in the present study is consistent with the work of Arthur and Hayward (1997), who reported that 32 percent of their sample of undergraduate students fell within this category.

As with depression, there are several noteworthy findings concerning the prevalence of suicidal ideation among the participants in the present sample. As indicated in Table 4-1, scores on the Suicidal Ideation Scale ranged from a low of 10 (no suicidal thoughts experienced during the previous year) to a high of 38 (indicative of significant suicidal ideation). While the mean score on the SIS was 12.45, it is noteworthy that approximately 40 percent of the participants in the present sample scored greater than 10 on the SIS, indicating some level of suicidal ideation during the course of the past year.

While the aforementioned statistics indicate the high prevalence of suicidal ideation among the participants in the present sample, two specific SIS items indicate the severity of the suicidal ideation experienced by participants during the course of the past year. As indicated by item 3 on the SIS, 8.3 percent of the participants believe their life will end in suicide. Additionally, as indicated by item 4 on the SIS, 6.2 percent of the participants reported that they had attempted to kill themselves during the course of the past year. Response frequencies for each of these items are presented in Table 4-3 and 4-4.

Correlations among all of the variables of interest were computed and are presented in Table 4-5. Most noteworthy, is that, with few exceptions, all of the variables were significantly related to one another at the .01 level. As can be seen in Table 4-5, heightened self-awareness was not significantly correlated with any other variable. The variables most strongly associated with suicidal ideation were reasons for living ($r = -.52$), depression ($r = .50$), and stressful life events ($r = .41$). Maladaptive perfectionism, as represented by scores on the discrepancy scale of the APS-R, demonstrated highly significant positive relationships with stressful life events ($r = .65$) and depression ($r = .67$), and a highly significant negative relationship with LOT scores ($r = -.58$).

Test of the Escape Theory of Suicide

As previously indicated, the Escape Theory of Suicide consists of the following variables: perfectionism, stressful life events, negative self-attribution, heightened self-awareness, anxiety, depression, hopelessness, reasons for living, and suicidal ideation. The present study tested two hypothesis regarding the Escape Theory. Hypothesis one stated that the Escape Theory of Suicide will account for a significant amount of the variance in suicidal ideation scores and will demonstrate a strong goodness of fit with the data. Hypothesis two of the present study stated that there will be significant paths between maladaptive perfectionism and negative attribution, between stressful life events and negative attributions, between negative attributions and self awareness, between self-awareness and depression, between self-awareness and anxiety, between depression and hopelessness, between anxiety and hopelessness, between hopelessness and reasons for living, and between reasons for living and suicidal ideation.

Estimates of the parameters for the Escape Theory of Suicide were obtained using AMOS 6.0 (Arbuckle, 2005). The first step in the analysis was to establish a baseline model consistent with the model presented in Figure 3-2. The chi-square statistic for this model was 315.09 with

degrees of freedom=26, $p=0.000$; RMSEA=0.25, CI for RMSEA = (0.22; 0.27), and GFI = 0.75. Chi-square is a measure of the compatibility of the data with the predicted model. A chi-square value this large relative to the degrees of freedom indicates a poor fit between the estimated and actual covariance matrices. The root mean square error of approximation (RMSEA) is a measure of the closeness of fit, with values less than 0.05 indicating good model fit, and values up to 0.08 indicating reasonable model fit (Browne & Cudeck 1993; Hu & Bentler 1999). Steiger (1990), Browne and Cudeck (1993), and MacCallum, Browne, and Sugawara (1996) suggested that a confidence interval (CI) should fall between 0 and 0.05 to indicate the possibility of good fit. The goodness-of-fit index (GFI) was developed by Jöreskog and Sörbom (1984) and deals with error in reproducing the variance-covariance matrix. Values for the GFI range from 0 to 1 with 1 being a perfect fit. Values greater than .90 are considered excellent (Bentler & Chou, 1987). Given the aforementioned measures, the proposed model did not provide a good fit for the data; hypothesis one was not supported.

The modification indices in AMOS provide a powerful tool for detecting model parameters, which if set free will improve the fit of a model. An examination of the modification indices indicated that several significant relationships existed, which, if set free, would improve model fit. For instance, the modification indices for the paths between stressful life events and depression and between maladaptive perfectionism and depression were 91.84 and 80.09, respectively. Setting each of these free should result in parameter changes of 1.12 and 0.50, respectively, which would result in an improvement in model fit. Substantively, it makes sense that there are direct as well as indirect relationships between maladaptive perfectionism and anxiety and depression, and between stressful life events and anxiety and depression. The model was re-estimated with these additional four paths. The chi-square was 90.72 with 22 df,

$p=0.000$, RMSEA=0.13, CI for RMSEA (0.10; 0.16), and GFI 0.91. The chi-square for the initial model was 315.09 with 26 df, while the chi-square for the revised model was 90.72 with 22 df. The difference chi-square is therefore equal to 224.36 with 4 df and is clearly significant at the $p<0.001$ level, thus indicating a model improvement.

Again, following the modification indices, the model was re-estimated with the path between depression and suicidal ideation set free. While not theoretically consistent with Baumeister's conceptualization of the Escape Theory, theoretically, it is plausible that there would be a direct and significant path between depression and suicidal ideation. With this path set free, the chi-square was 62.40 with 21 df, $p = .000$, RMSEA = .11, CI (.075; .135), GFI = .93. The chi-square of the second model was 90.72 with 22 df, while the chi-square for the revised model was 62.39 with 21 df. The difference chi-square is therefore equal to 28.34 with 1 df and is significant at the $p<.001$ level. While this demonstrated improvement in the model, the RMSEA remained below the standard for reasonable or good fitness for the model.

A third and final model was run, with the paths between maladaptive perfectionism and hopelessness, depression and reasons for living, and stressful life events and suicidal ideation set free. The final model with standardized estimates is shown in Figure 3. The chi-square for this model was 23.43 with 17 df, $p=0.14$, RMSEA=0.04, CI for RMSEA (0.000; 0.087), and GFI = 0.974. The low RMSEA (0.046) and high GFI (.974) indicate that this model fits the data very well and accounts for 40 percent of the variance in suicide ideation scores. The path coefficients are shown in Table 4-6.

As was previously indicated, hypothesis two of the present study stated that there will be significant paths between maladaptive perfectionism and negative attribution, between stressful life events and negative attributions, between negative attributions and self awareness, between

self-awareness and depression, between self-awareness and anxiety, between depression and hopelessness, between anxiety and hopelessness, between hopelessness and reasons for living, and between reasons for living and suicidal ideation.

As can be seen in Figure 4-1 and Table 4-6, there was mixed support for hypothesis 2. As predicted, there were significant paths between maladaptive perfectionism and negative attribution (Beta = .29; $p < .01$), between anxiety and hopelessness (Beta = -.15; $p = .02$), between depression and hopelessness (Beta = -.43 $p < .01$), between hopelessness and reasons for living (Beta = .18; $p = .03$) and between reasons for living and suicidal ideation (Beta = -.34; $p < .01$). Contrary to predictions, the paths between stressful life events and negative attribution, between heightened self-awareness and anxiety, and between heightened self-awareness and depression were not significant. Taken together, these findings provide support for five of the 9 paths predicted by the Escape Theory of Suicide. While the path between maladaptive perfectionism and negative attributions was significant, the path between stressful life events and negative attributions only neared significance ($p = .11$). These findings do not provide support for the inclusion of heightened self-awareness and provide for mixed support of the inclusion of negative attribution in the Escape Theory of Suicide. Hence, there is mixed support for hypothesis 2.

In addition to the aforementioned paths, several significant paths emerged in the final model that were not originally predicted. Direct paths emerged between maladaptive perfectionism and anxiety (Beta = .18; $p = .03$), between maladaptive perfectionism and depression (Beta = .35; $p < .01$), between stressful life events and anxiety (Beta = .43; $p = .01$) and between stressful life events and depression (Beta .35; $p < .01$). Additional direct paths emerged between maladaptive perfectionism and hopelessness (Beta = -.22; $p < .01$), between depression

and reasons for living (Beta = -.38; $p < .01$), between depression and suicidal ideation (Beta .25; $p < .01$) and stressful life events and suicidal ideation (Beta = .17; $p = .04$).

Table 4-1. Descriptive statistics for variables of interest

Variable	Min	Max	M	SD	Norm Mean
Maladaptive Perfectionism	12	84	43.61	15.11	40.67*
Perceived Stress	10	49	27.87	7.25	24.19
Attribution Style	2.33	6.11	4.33	0.73	4.12
Self Awareness	2	20	8.68	3.19	N/A
Depression	0	51	20.48	11.36	N/A
Anxiety	21	80	54.11	14.53	60.74
Hopelessness	0	24	17.63	6.04	14.33
Reasons for Living	32	192	159.50	30.58	N/A
Suicidal Ideation	10	38	12.45	4.81	12.04

Note: Norm mean based on comparisons to findings from the following research:

* Rice, Vergara, Aldea (2005)

Table 4-2. Distribution statistics for CES-D scores.

Classification of Symptoms	Frequency	Percent	Cumulative Percent
Minimal Symptoms	69	38.3	38.3
Mild Symptoms	44	24.4	62.7
Moderate/Severe Symptoms	67	37.3	100

Note: Classification of symptoms is based on CES-D scores of 0-15 representing Minimal Symptoms, 16-23 representing Mild Symptoms, and scores 24 and greater representing Moderate/Severe Symptoms.

Table 4-3. Distribution statistics for SIS item 3

Response	Frequency	Percent
1	163	90.1
2	9	5.0
3	4	2.2
4	2	1.1
5	0	0.0

Note: Response represents extent to which participant felt or behaved during the past year on a scale ranging from 1(never) to 5 (always).

Table 4-4. Distribution statistics for SIS item 4.

Response	Frequency	Percent
1	167	92.3
2	9	5.0
3	1	0.6
4	1	0.6
5	0	0.0

Note: Response represents extent to which participant felt or behaved during the past year on a scale ranging from 1(never) to 5 (always)

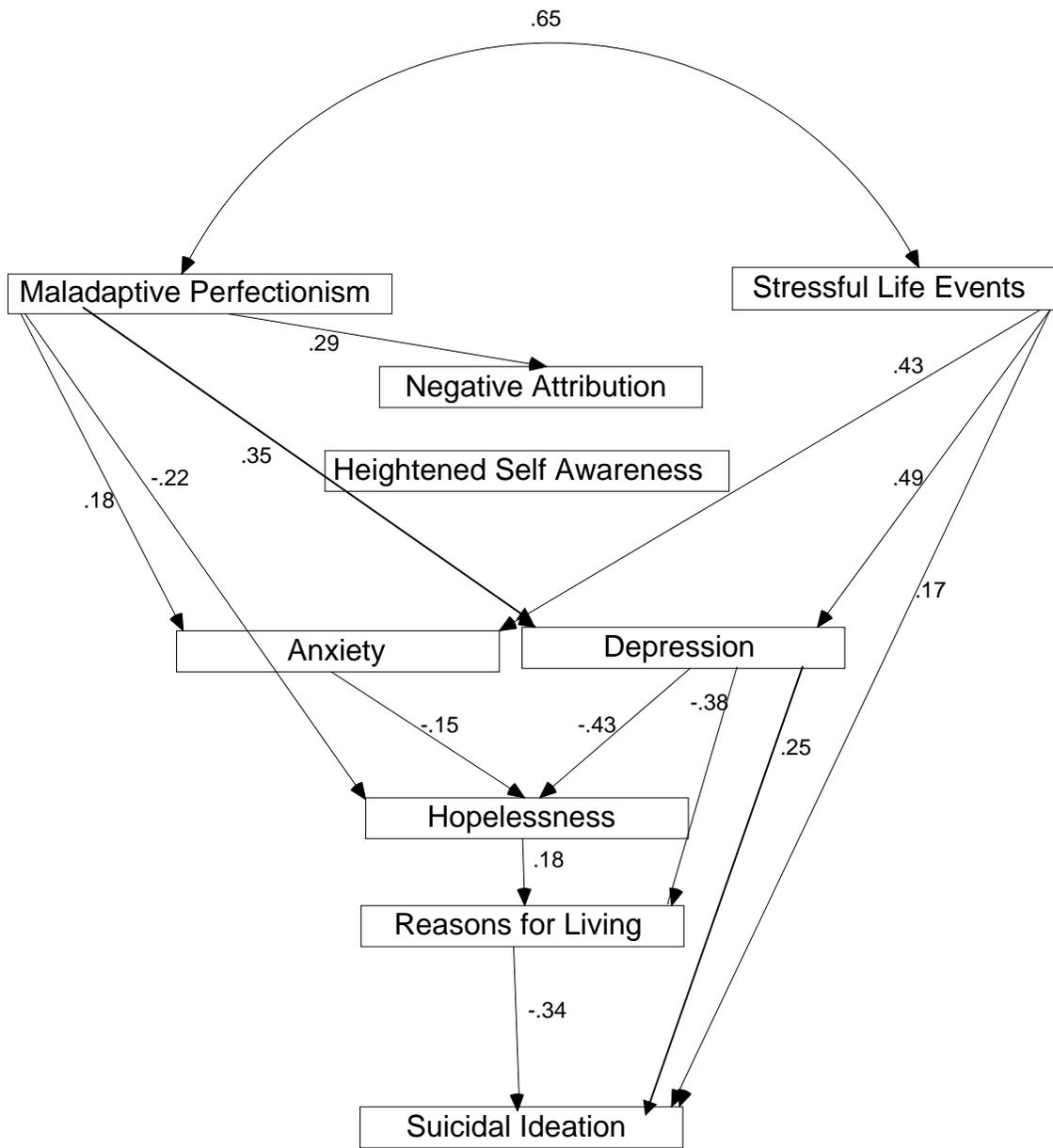
Table 4-5. Correlations among research variables of interest

VARIABLE	APS-R	PSS	ASQ	LIF	CES-D	PSWQ	LOT-R	RFL-YA	SIS
APS-R	1.00								
PSS	0.65**	1.00							
ASQ	0.38**	0.33**	1.00						
LIF	0.02	0.06	0.03	1.00					
CES-D	0.67**	0.72**	0.36**	0.54	1.00				
PSWQ	0.46**	0.54**	0.32**	-0.02	0.37**	1.00			
LOT-R	-0.58**	-0.61*	-0.38**	-0.05	-0.64**	-0.41**	1.00		
RFL-YA	-0.35**	-0.37*	-0.16*	0.06	-0.50**	-0.10	0.41**	1.00	
SIS	0.37**	0.41**	0.14	0.11	0.49**	0.22**	-0.37**	-0.52**	1.00

Note: *p<.05, **p<

Table 4-6. Maximum likelihood estimates for model of suicidal ideation.

Parameter	Standardized Estimate	Standard Error	Critical Ration	P
APS-R > ASQ	0.29	0.07	3.20	0.001
APS-R > PSWQ	0.18	0.08	2.21	0.030
APS-R > CES-D	0.35	0.05	5.47	0.001
APS-R > LOT-R	-0.22	0.03	-2.99	0.003
PSS > CES-D	0.49	0.10	7.68	0.001
PSS > PSWQ	0.43	0.16	5.29	0.001
PSS > SIS	0.17	0.00	2.06	0.040
PSWQ > LOT-R	-0.15	0.26	-2.43	0.015
CES-D > LOT-R	-0.43	0.04	-5.88	0.001
CES-D > RFL-YA	-0.38	0.22	-4.53	0.001
CES-D > SIS	0.25	0.00	2.86	0.004
LOT-R > RFL-YA	0.18	0.42	2.15	0.032
RFL-YA > SIS	-0.34	0.00	-5.13	0.001



Chi-square=23.43 (17 df)
 p=.136

Figure 4-1. Final Model of Suicidal Ideation with Standardized Parameter Estimates

CHAPTER 5 DISCUSSION

In recent years, increased attention has been placed on the need for effective suicide prevention and intervention strategies among American college students. While college and university administrators are under increasing pressure to demonstrate the presence of effective suicide prevention and intervention strategies on their campuses, there remains limited knowledge of the factors that are associated with, or contribute to the development of suicidal ideation among college students. Baumeister's Escape Theory of Suicide provides one possible model for explaining the development of suicidal ideation among college students. Previous studies of the Escape Theory have demonstrated moderate support for this model. However, previous studies have not included the variables of negative attribution or heightened self-awareness. Likewise, previous studies of the Escape Theory have obtained inconsistent findings regarding the contribution of perfectionism to the development of suicidal ideation. The purpose of the present study was to re-examine the Escape Theory of Suicide, incorporating all of the components of the model as originally conceptualized by Baumeister. Additionally, the present study attempted to clarify the contribution of perfectionism to the development of suicidal ideation within the Escape Theory.

Summary and Discussion of the Research Findings

The primary objective of the present study was to assess the ability of the Escape Theory of Suicide to account for the development of suicidal ideation among a sample of college students. This study explored two hypotheses. Hypothesis one stated that the Escape Theory of Suicide would account for a significant amount of the variance in suicidal ideation scores and that the Escape Theory would demonstrate a strong goodness of fit with the data. Initial tests of

the model failed to provide for a good fit of the data, and a non-significant percentage of the variance was accounted for. Thus, hypothesis one was not supported.

Hypothesis two stated that there would be significant paths between maladaptive perfectionism and negative attribution, between stressful life events and negative attributions, between negative attributions and self awareness, between self-awareness and depression, between self-awareness and anxiety, between depression and hopelessness, between anxiety and hopelessness, between hopelessness and reasons for living, and between reasons for living and suicidal ideation. Consistent with predictions, there were significant paths between maladaptive perfectionism and negative attribution, anxiety and hopelessness, depression and hopelessness, hopelessness and reasons for living, and reasons for living and suicidal ideation. Inconsistent with predictions, the paths between stressful life events and negative attribution, negative attribution and heightened self-awareness, heightened self-awareness and anxiety, and heightened self-awareness and depression were not significant. Thus, there was mixed support for hypothesis two.

Although hypothesis one was not supported, modifications to the initially tested model resulted in a final model that offered an excellent fit to the data and accounted for a highly significant percentage of the variance in suicidal ideation scores. As previously indicated, significant paths that emerged in the final model were between anxiety and hopelessness, depression and hopelessness, hopelessness and reasons for living, and between reasons for living and suicidal ideation. The modifications that led to the final model included the addition of significant paths between maladaptive perfectionism and anxiety, depression, and hopelessness; between stressful life events and anxiety, depression, and suicidal ideation; and between depression and reasons for living and depression and suicidal ideation.

While the results did not support the proposed model of study, Baumeister's conceptualization of the Escape Theory of Suicide did indeed provide a strong foundation for the final model that emerged from the data. For example, consistent with Baumeister's conceptualization, significant paths emerged between anxiety and hopelessness, between depression and hopelessness, between hopelessness and reasons for living, and between reasons for living and suicidal ideation. These findings are consistent with previously obtained findings (Dean & Range, 1999; Dean, Range, & Goggin, 1996), and taken together, provide strong support for the latter stages of the Escape Theory.

Although the contributions to the final model did not occur precisely through the anticipated paths, maladaptive perfectionism did significantly contribute to the final model. It was expected that maladaptive perfectionism would contribute to the Escape model via its relationship with negative attribution. While maladaptive perfectionism did significantly predict negative attribution, maladaptive perfectionism additionally contributed directly to anxiety, depression, and hopelessness. Although Baumeister's original conceptualization of the Escape Theory suggested that perfectionism would only contribute to suicidal ideation via negative attributions, given that previous research has demonstrated a strong link between maladaptive perfectionism and both anxiety and depression (Rice, Vergara, Aldea, 2006; Rice & Dellwo, 2002), it is not necessarily surprising that these additional paths were obtained in the present study. Thus, while not completely theoretically consistent, the present findings do appear to provide support for the inclusion of maladaptive perfectionism in the Escape Theory, albeit in a modified manner.

The findings regarding perfectionism in the present study are of particular significance given that previous studies of the Escape Theory (Dean & Range, 1996; Dean, Range, & Goggin,

1996; Dean & Range, 1999) have obtained theoretically inconsistent results regarding the contribution of perfectionism. As was reviewed in Chapter 2, the three previous investigations of the Escape Theory relied on Hewitt and Flett's (1991) multidimensional conceptualization of perfectionism. In these investigations, self-oriented perfectionism did not significantly contribute to the Escape model, and the findings regarding socially oriented perfectionism were not consistent across studies.

In his initial conceptualization of the Escape Theory, Baumeister suggested that it was not perfectionist standards per se that triggered the process of developing suicidal ideation, but rather, the perception that an individual's current circumstances fall short of their standards. In the present study, perfectionism was conceptualized and operationalized in a manner consistent with the work of Slaney et al (2001). This conceptualization of perfectionism considers the negative or maladaptive aspect of perfectionism to be the individual's perception of being unable to achieve her/his high standards, and not the high standards per se. Conversely, Hewitt and Flett's conceptualization of perfectionism appears to be more directly related to the perfectionist standards. The strength and theoretically consistent findings regarding maladaptive perfectionism in the present study provide promising support for incorporating Slaney et al's conceptualization of perfectionism into the Escape model. Furthermore, the present findings suggest that the failure to find significant relationships concerning perfectionism in previously conducted studies of the Escape Theory may have been a reflection of the manner in which perfectionism was conceptualized.

As with perfectionism, life stress contributed significantly to the final model, although again, not precisely through the anticipated paths. Like perfectionism, it was expected that stress would contribute to the Escape model via its relationship with negative attribution. Although it

neared significance, the relationship between stress and negative attribution was not significant. However, stress was directly related to anxiety, depression, and suicidal ideation. As with maladaptive perfectionism, previous research has demonstrated a strong link between stress and anxiety, depression, and suicidal ideation (Heisel, Flett, & Hewitt, 2003; Wilburn & Doelores, 2005). As such, while the findings are not consistent with Baumeister's initial conceptualization, it is not necessarily surprising that these additional paths were obtained in the present study.

As with life stress and maladaptive perfectionism, the association between depression and suicidal ideation in the present sample was only partially consistent with predictions. According to Baumeister's Escape Theory, depression is thought to contribute to suicidal ideation indirectly through hopelessness. While the anticipated relationship between depression and hopelessness was observed in the present study, depression additionally contributed directly to reasons for living and suicidal ideation. While research on non-college populations supports Baumeister's assertion that the depression impacts suicidal ideation via hopelessness (i.e., Beck et al, 1993), studies specific to college students indicate otherwise. For example, recent studies conducted by Konick and Gutierrez (2005), as well as Kisch, Leino, and Silverman (2005) both indicated a strong and direct relationship between depression and suicidal ideation, even when hopelessness was accounted for. These findings, along with the present findings, indicate that the association between depression and suicidal ideation among college students may be a direct one, and as such, modifications to the Escape Theory of Suicide may need to reflect this.

While the present findings provide support for the inclusion of perfectionism, stress, and depression in the Escape model, only partial support was provided for the inclusion of negative self-attributions. As was reviewed in Chapter II, Baumeister suggested that in the second stage of the Escape Theory an individual blames her or himself for having failed to achieve their

standards or for having experienced stressful life events. As previously indicated the findings of the present study were consistent with the predicted relationship between maladaptive perfectionism and negative attribution, but were non-significant between stressful life events and negative attribution. However, it is necessary to note that the relationship between stressful life events and negative attribution neared significance. Thus, it is possible that the results regarding the relationship between stressful life events and negative attribution are a function of the students in the present sample or the measures used in the present study.

While partial support was provided for the inclusion of negative attribution, the results from the present study do not provide support for the inclusion of heightened self-awareness. As was discussed in Chapter II, previous studies of the Escape Theory of Suicide have not examined the contribution of self-awareness to the model. However, a recent application of the Escape Theory to the development of binge eating did incorporate a measure of heightened self-awareness and found the anticipated relationship between perfectionism and negative self-awareness as well as the anticipated relationship between negative self-awareness and negative affect (Blackburn, Johnston, Blampied, Popp, & Kallen, 2006). Thus, while there are not previous studies conducted with the Escape Theory of Suicide to compare the present findings with, the findings of the present study are not consistent with those obtained in an application of the Escape Theory to binge eating.

As will be reviewed in greater detail in the limitations section, it may be that the lack of significance for self-awareness in the present study is a reflection of the assessment measure that was employed. The LIF had a low reliability and thus, interpretations regarding this variable need to be made with caution. Moreover, the failure to find significant results for this variable in the present study may be the result of the manner in which self-awareness was operationalized.

As discussed by Blackburn and her colleagues (2006) there is a noteworthy difference between self-awareness and aversive self-awareness. The LIF assessed for self-awareness, yet, as initially conceptualized by Baumeister, the importance of self-awareness was such that it was aversive in nature. Thus, the lack of significance regarding self-awareness in the present study may be a reflection of the manner in which self-awareness was operationalized and measured.

Finally, it is important to note the number of students who reported suicidal ideation or a suicide attempt in the present study. Among the present sample, nearly forty percent of the participants reported some form of suicidal ideation during the course of the past year. Furthermore, among the present sample, eight percent of the participants reported believing that their life will end in suicide, and six percent reported having attempted suicide in the past year. These findings are consistent with those obtained by Rudd (1989) in a study of college student suicide that employed the same suicide assessment measure as the one employed in the present study.

Upon first glance, the findings concerning the large percentage of participants reporting suicidal ideation and suicide attempts in both the present sample and Rudd's sample appear to be inconsistent with data obtained in the most recently conducted national studies of college students. For example, the National College Health Assessment (American College Health Association, 2001) found that 9.5 percent of the respondents had seriously contemplated suicide in the past year and 1.5 percent of the respondents had attempted suicide during the previous year. A close examination of the responses in the present study indicate that the response rates are similar to those obtained in large scale national samples and that apparent differences are the reflection of item wording on the suicide assessment employed in the present study. For example, eight percent of the participants in the present study indicated that they believe their

lives will end in suicide; this is similar to the 9.5 percent who reported “seriously contemplating suicide” in the National College Health Assessment. Similarly, although six percent of the participants in the present sample reported having “made attempts to kill themselves”, only 1.2 percent responded to this Likert response item with a response that was at the mid-range or higher. This percentage is nearly identical to the 1.5 percent who reported having made a suicide attempt in the National College Health Assessment. Given this, the findings in the present sample appear to be consistent with those obtained in national studies. Taken together, the findings regarding the prevalence rates of suicidal ideation and suicide attempts indicate a high level of suicidal ideation and suicide attempts among American college students.

Study Limitations

Before reviewing the implications of the present study, it is first necessary to review the study’s limitations. The present study’s limitations have been grouped into the following three areas: sampling limitations, measurement problems, and two administration concerns.

There are three sampling limitations in the present study that limit the external validity of the findings. First, the participants were not randomly selected to participate in this study. Participants were self-selected and thus it is possible that the results are a reflection of a personality characteristic of those who chose to participate in this study. A second, and related concern is that all of the participant recruitment announcements were made in psychology or other mental health related courses (i.e., social work, health and human performance). While recent research suggests that psychology students adequately represent the attributes and qualities of students within the broader college community (King, Bailly, & Moe, 2004), it is possible that the findings in the present study will not generalize to the broader student population as the findings may be unique to students who are self-selected to mental health related courses.

A third potential sampling limitation regarding the external validity of this study is the racial and gender composition of the sample. Although the present sample reflects the racial composition of the student population of the university at which this study was conducted, the vast majority of the present sample consists of White students. Recent research has demonstrated that various non-majority ethnic groups may not perceive the causes of suicide as being the same causes as those perceived by White Americans (Walker, Lester & Joe, 2006). Due to the relatively small number of racial/ethnic minority students in the present sample, it was not possible to conduct specific tests of the Escape Theory for various racial/ethnic minority groups. Thus, it is possible that the results of the present study are a reflection of the predominantly White sample and that they would not be replicated in a sample that consisted entirely of a specific non-majority racial or ethnic group. Likewise, the present sample consisted predominantly of females, and it is possible that the present findings are the reflection of this sampling bias, and would not be replicated in a sample that consisted predominantly or entirely of men.

Other limitations of the present study include two measurement problems. One of these problems concerns the reliability of the measures used to assess negative attribution and self-awareness. The reliability alpha's for negative attribution and self-awareness were .77 and .58 respectively. Given that each of the other variables incorporated in the present study were found to make significant contributions to the final model, it is possible that the failure to find significant findings with both negative attribution and heightened self awareness is a reflection of the low reliability for the measures used to operationalized each of these variables. A second measurement related limitation is related to the lack of inclusion of a measure of social desirability. Given that participants in the present study were enrolled in mental health related

classes and were receiving extra credit for participating in the present study, it is possible that they completed the measures in a socially desirable manner.

It is additionally possible that the ability to draw conclusions from the present study may be limited by factors related to the manner in which the study was administered. Given that all participants completed the research questionnaires in the same order, there may have been an order effect. Of particular note is that participants completed the research assessments in an order that is consistent with the ordering of the Escape Theory. For example, participants completed the perfectionism measure first, followed by the stress and attribution measures, etc. It is possible that as participants completed the research questionnaires they became aware of the purpose of the study and responded in such a way as to be consistent with their perception of the research goals. Likewise, a second concern regarding the research administration is the length of time it took participants to complete the assessment packet. Given the number of measures included and the length of each measure, it is estimated that it took participants between forty-five and sixty minutes to complete the entire study. As such, it is possible that a fatigue factor may have impacted participant responses.

Finally, it is important to note that the present study employed a cross-sectional research design. As such, it is not possible to draw conclusions regarding causation from the present sample. Future investigators should consider employing longitudinal designs so that causality can be determined.

Study Implications

Despite the aforementioned limitations, the present study has several important implications. These implications have been grouped into three areas: implications for researchers employing the Escape Theory of Suicide, implications for therapists working with

college student clients, and implications for college staff responsible for creating campus suicide prevention and intervention programs.

Given that there are numerous factors associated with suicidal ideation among college students, it is clearly important to utilize conceptual frameworks that are capable of explaining the process by which various variables interact with one another to produce suicidal thoughts and feelings (Ferguson, Woodward & Horwood, 2000). The results of this study provide promising support for the application of the Escape Theory to the understanding of the development of college student suicide. However, the findings of the present study also indicate that the relationships between the variables that contribute to the development of suicidal ideation among college students are complex. Thus, while researchers may prefer simple linear models as they tend to be more parsimonious, the present findings imply that researchers may need to consider more complex theoretical models that incorporate multiple paths between variables.

The findings of this study additionally indicate the importance researchers must place on conceptualizing and operationalizing variables in a manner that is consistent with Baumeister's original conceptualization of the Escape Theory. As discussed above, previous studies of the Escape Theory failed to obtain theoretically consistent findings regarding the contribution of perfectionism to the final model. In the present study, emphasis was placed on employing Slaney et al.'s (2001) conceptualization of perfectionism, as it appeared to be more consistent with Baumeister's conceptualization of perfectionism than Hewitt and Flett's multidimensional conceptualization of perfectionism. While the findings in the present study regarding perfectionism were consistent with the predictions that can be drawn from Baumeister's original conceptualization, the present findings do not necessarily imply that one conceptualization of perfectionism is better than the other. Rather, the present findings may simply reflect that the

conceptualization of perfectionism employed in the present study was more consistent with Baumeister's conceptualization of perfectionism than those conceptualizations used in previous studies of the Escape Theory. Indeed, as previously discussed, it is plausible that the failure to obtain significant findings regarding heightened self-awareness in the present study is a reflection of not having operationalized the variable in a manner that closely reflects Baumeister's conceptualization. Thus, the present findings indicate that future researchers investigating the Escape Theory must place considerable emphasis on conceptualizing and operationalizing variables in a theoretically consistent manner.

The present findings have several implications for therapists working with suicidal clients. First, the underlying conceptualization of the Escape Theory suggests that suicidal ideation and suicidal behaviors ultimately develop as a means of escaping distressing thoughts and emotions that are triggered as a result of negative self-evaluation. Given that the findings of the present study support the general process of the Escape Theory, the present findings imply that one goal for therapists to work towards with suicidal clients is the development of alternative strategies for managing negative affect, such that clients may be better able to tolerate and manage negative emotions, rather than seeking to escape them through suicidal thoughts and behaviors. One promising therapeutic model that is consistent with this goal is Mindfulness Based Therapy, which emphasizes the development of the ability of clients to be able to focus on and tolerate emotions (Baer, 2006).

A second, and equally important implication of the present findings is that therapists must be able to treat the underlying causes of suicidal thinking and behavior. For example, if a client presents with suicidal thinking and feelings of depression and anxiety, the therapist may opt to focus treatment on the symptoms of depression and anxiety with the hopes of reducing suicidal

ideation. However, given the significant contribution of maladaptive perfectionism and stress to the Escape Theory identified in the present study, it may be necessary for the therapist to assess for and treat potential underlying factors such as maladaptive perfectionism.

In addition to the aforementioned implications for researchers and clinicians, the present findings have several important implications for those responsible for the development of campus wide suicide prevention and intervention programs. As previously indicated, both previous studies and the present study demonstrated high rates of suicidal ideation among college students. Yet, recent research also demonstrates that fewer than twenty percent of college students who report suicidal ideation also report having received some form of mental health treatment (Kisch, Leino, & Silverman, 2005). Given the large numbers of students reporting suicidal ideation, and the fact that so few of them are receiving the necessary mental health services, it is imperative that those responsible for providing mental health services on college campuses continue to identify new and creative means for identifying and assisting those students in need.

One promising method for broadening the scope of those having access to mental health services is increased reliance on the internet. For example, more than 200 universities currently employ U-Lifeline, an on-line suicide-screening instrument created by the Jed Foundation (Hoover, 2003). Internet screening programs such as U-Lifeline allow for students to access a self-report depression and suicidal ideation screening measure. In turn, students receive feedback tailored specifically to them, including contact information regarding available mental health resources. Such internet resources may prove particularly useful for those students who continue to attach a negative stigma with attending on-campus counseling centers.

In addition to the need for increased screening programs, the present results indicate the importance of incorporating broad level skills training as a component of a thorough campus suicide prevention protocol. Specifically, the significant contribution of both maladaptive perfectionism and stress to the development of suicidal ideation indicate the importance of designing programming and preventative education directed towards these topics. For example, there is a growing trend among colleges and universities towards employing programs such as the Mindfulness Based Stress Reduction (Kabat-Zinn, 2005) program . Given the significant direct and indirect relationships between stressful life events and the development of suicidal ideation in the present study, programs such as Mindfulness Based Stress Reduction, which emphasize the development of positive stress management coping skills, may provide important pathways towards reducing the prevalence of suicidal ideation among college students.

Future Research Considerations

In addition to the aforementioned implications, the findings and limitations of the present study suggest several important considerations for future research on the Escape Theory of Suicide.

While the findings of the present study provide promising support for the Escape Theory, as previously noted, the present study consisted primarily of White, female undergraduate students. Research demonstrates that in recent years there has been an increase in suicide rates among racial and ethnic minorities (Walker, 2006), that the factors that contribute to suicidal ideation may be different between males and females (Stephenson, Pena-Shaff & Quirk, 2006), and that graduate students are at particular risk for developing suicidal thinking. Given these factors, future investigations of the Escape Theory need to incorporate large samples of individuals from various racial and ethnic minority groups, males, and graduate students.

In addition to the aforementioned sampling considerations, there are several methodological concerns in the present study that future research should seek to address. First, it is necessary that future research counterbalances the order of the measures in the assessment battery to avoid potential order effects as such effects may have influenced the results in the present study. A second and related suggestion for future research is that a social desirability measure be included in the assessment battery to determine any impact of social desirability on research participants' responses to the assessments. A third methodological issue for future researchers to consider is the study design. The present study was cross-sectional, and thus, the present findings are not able to demonstrate causality. Given this, longitudinal studies may prove useful in determining causality of the relationships identified in the present study.

Finally, future research on the Escape Theory should incorporate potential protective variables that may impact the paths that lead to the development of suicidal ideation. For example, recent research suggests the importance of believing that one belongs to a larger social group or network in reducing suicidal ideation among college students (Joiner, 2005). Likewise, work by Chang (2002) suggests the importance of problem solving, social support, and spirituality as moderating variables in the development of suicidal ideation. Incorporating such factors into the Escape Theory would potentially strengthen the models' predictive validity.

Conclusions

The purpose of the present study was to assess the effectiveness of the Escape Theory of Suicide in accounting for the development of suicidal ideation among a sample of undergraduate college students. While the initial model tested was not found to be significant, the results of the present study do indicate that the Escape Theory of Suicide provides a promising structure for understanding the manner in which college students develop suicidal thinking. The present findings support the inclusion of, and the importance of, both stressful life events and

maladaptive perfectionism in the development of mental health problems such as depression, anxiety, and suicidal thinking among American college students. The present study however only provided partial support for the inclusion of negative attribution in the Escape Theory. Support was not provided for the inclusion of heightened self-awareness in the Escape Theory. The findings of the present study provide direction for future research aimed at further identification of the factors associated with suicidal ideation among college students. Additionally, the present findings may provide practitioners with important information concerning factors to consider when designing suicide prevention and intervention programs for college students

APPENDIX A
REQUEST FOR FACULTY PARTICIPATION

Dear Dr _____,

I am a Staff Therapist at the SU Counseling Center and am currently conducting a research study on the factors that contribute to suicidal ideation among college students. I am contacting you to see if you may be willing/able to assist me in participant recruitment. I am looking for undergraduates to complete an on-line survey that assesses various factors thought to be associated with suicidal ideation among this age group. Essentially, participation in the study consists of completing an on-line survey, and this takes approximately 40 to 50 minutes. Given the time commitment involved, I am hoping that you might be willing to offer extra credit to the students for completing the survey.

If you are able to offer extra credit to your students and are willing to make an announcement to your class regarding this study, I would greatly appreciate it. If you are willing to do so, please let me know, and I will provide you with a brief script (per IRB requirements) to read to your class that includes the internet address for the survey. Additionally, if you are willing to offer extra credit, at the end of the semester you will receive a list of the students from your course that participated in the study (their names will not be linked to the data). Please respond to me via this email address or by phone at the Counseling Center, 443-4715. Thank you so much for your consideration.

Cory Wallack
Staff Therapist
Syracuse University Counseling Center

APPENDIX B
PARTICIPANT RECRUITMENT SCRIPT

I would like to inform you of an opportunity to participate in a research study that is being conducted by a staff therapist from the SU Counseling Center. The purpose of the study is to identify the factors that are associated with depression and suicidal ideation among college students. If you agree to participate in this study, your participation would consist of completing a web-based survey that will take approximately 50 minutes to complete. If you chose to complete the survey, you will be eligible to receive 5 extra credit points towards your next exam grade. You are not required to participate in this study. If you would like to participate, you may access the survey at the following web address:
<http://assessment.syr.edu/x060102/CWsurvey.php>

APPENDIX C
INFORMED CONSENT

Informed Consent Agreement

Project Title: The Factors Associated with Depression and Suicidal Ideation Among American College Students

Please read this consent agreement carefully before you decide to participate in this study.

Purpose of the research study:

The purpose of this study is to gain a greater understanding of the factors associated with depression and suicidal ideation among American college students.

What you will do in the study:

You will complete nine brief questionnaires and be asked to provide some demographic information.

Time required:

Approximately fifty (50) minutes.

Risks:

There are no anticipated risks of participating in this study. However, as a result of participating in this study, you may become more aware of feelings of depression, anxiety, or suicidal thinking. If this is true for you, you will be provided referral information as to what professional resources may be available to you.

Benefits:

While there may be no direct benefit to you for participating in this study, if you identify unpleasant thoughts or feelings as a result of participating in this study, you will be provided referral information for professional resources. This may benefit you as it might provide you the opportunity to address these unwanted thoughts and feelings.

Confidentiality:

The information you provide in this study is confidential and anonymous. Your information will be assigned a code number. Your name will not be used in any report.

Voluntary Participation:

Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study:

You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:

Cory Wallack, M.S., Staff Therapist, Syracuse University Counseling Center, (315) 443-4715.

Whom to contact about your rights as a research participant in this study:

UFIRB Office, Box 112250, University of Florida, Gainesville, FL, 32611-2250; (352) 392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant Signature: _____ Date : _____

APPENDIX D
ASSESSMENT BATTERY

APS-R

The following items are designed to measure certain attitudes people have toward themselves, their performance, and toward others. It is important that your answers be true and accurate for you. In the space next to the statement, please enter a number from "1" (strongly disagree) to "7" (strongly agree) to describe your degree of agreement with each item.

STRONGY DISAGREE	DISAGREE	SLIGHY DISAGRE	NEUTRAL	SLIGHTLY AGREE	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

- _____ 1. I have high standards for my performance at work or at school.
- _____ 2. I am an orderly person.
- _____ 3. I often feel frustrated because I can't meet my goals.
- _____ 4. Neatness is important to me.
- _____ 5. If you don't expect much out of yourself you will never succeed.
- _____ 6. My best just never seems to be good enough for me.
- _____ 7. I think things should be put away in their place.
- _____ 8. I have high expectations for myself.
- _____ 9. I rarely live up to my high standards.
- _____ 10. I like to always be organized and disciplined.
- _____ 11. Doing my best never seems to be enough.
- _____ 12. I set very high standards for myself.
- _____ 13. I am never satisfied with my accomplishments.
- _____ 14. I expect the best from myself.
- _____ 15. I often worry about not measuring up to my own expectations.
- _____ 16. My performance rarely measures up to my standards.
- _____ 17. I am not satisfied even when I know I have done my best.
- _____ 18. I am seldom able to meet my own high standards for performance.
- _____ 19. I try to do my best at everything I do.

- _____ 20. I am hardly ever satisfied with my performance.
- _____ 21. I hardly ever feel that what I've done is good enough.
- _____ 22. I have a strong need to strive for excellence.
- _____ 23. I often feel disappointment after completing a task because I know I could have done better.

Perceived Stress Scale

Please respond to each of the following statements using the following choices:

- 1 = Never
- 2 = Almost Never
- 3 = Sometimes
- 4 = Fairly Often
- 5 = Very Often

- ___ 1. In the last month, how often have you been upset because something that happened unexpectedly?
- ___ 2. In the last month, how often have you felt that you were unable to control the important things in your life?
- ___ 3. In the last month, how often have you felt nervous and “stressed”?
- ___ 4. In the last month, how often have you dealt successfully with irritating life hassles?
- ___ 5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
- ___ 6. In the last month, how often have you felt confident about your ability to handle your personal problems?
- ___ 7. In the last month, how often have you felt that things were going your way?
- ___ 8. In the last month, how often have you found that you could not cope with all the things that you had to do?
- ___ 9. In the last month, how often have you been able to control irritations in your life?
- ___ 10. In the last month, how often have you felt that you were on top of things?
- ___ 11. In the last month, how often have you been angered because of things that happened that were outside of your control?
- ___ 12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
- ___ 13. In the last month, how often have you been able to control the way you spend your time?
- ___ 14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Attributional Style Questionnaire

Please try to vividly imagine yourself in each of the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, please pick only one – the major cause if this event happened to you. Please enter this cause in the blank space provided after each event. Next, please answer the questions about the cause and a final question about the situation.

1. You meet a friend who compliments you on your appearance.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6		7

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6		7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6		7

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6		7

2. You have been looking for a job unsuccessfully for some time.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other	Totally Due
----------------------	-------------

People or Circumstance							To Me
1	2	3	4	5	6		7

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6		7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6		7

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6		7

3. You become very rich.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6		7

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6		7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6		7

E. How important would this situation be if it happened to you?

Not At All							Extremely
------------	--	--	--	--	--	--	-----------

Important
 1 2 3 4 5 6 7 Important

4. A friend comes to you with a a problem and you don't try to help.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance 1 2 3 4 5 6	Totally Due To Me 7
--	---------------------------

C. In the future, will this cause again be present?

Will Never Again Be Present 1 2 3 4 5 6	Will Always Be Present 7
--	--------------------------------

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation 1 2 3 4 5 6	Influences All Situations in My Life 7
--	--

E. How important would this situation be if it happened to you?

Not At All Important 1 2 3 4 5 6	Extremely Important 7
---	-----------------------------

5. You give an important talk in front of a group and the audience reacts negatively.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance 1 2 3 4 5 6	Totally Due To Me 7
--	---------------------------

C. In the future, will this cause again be present?

Will Never Again Be Present 1 2 3 4 5 6	Will Always Be Present 7
--	--------------------------------

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6	7	

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6	7	

6. You do a project that is highly praised.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6	7	

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6	7	

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6	7	

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6	7	

7. You meet a friend who acts hostilely toward you.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6	7	

C. In the future, will this cause again be present?

Will Never Again Be Present						Will Always Be Present
1	2	3	4	5	6	7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation						Influences All Situations in My Life
1	2	3	4	5	6	7

E. How important would this situation be if it happened to you?

Not At All Important						Extremely Important
1	2	3	4	5	6	7

8. You can't get all the work done that others expect of you.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6	7	

C. In the future, will this cause again be present?

Will Never Again Be Present						Will Always Be Present
1	2	3	4	5	6	7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation						Influences All Situations in My Life
--	--	--	--	--	--	---

1 2 3 4 5 6 7

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6	7	

9. Your boyfriend/girlfriend has been treating you lovingly.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6	7	

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6	7	

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6	7	

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6	7	

10. You apply for a position that you want very badly (e.g., important job) and you get it.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
--	--	--	--	--	--	--	----------------------

1 2 3 4 5 6 7

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6	7	

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6	7	

E. important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6	7	

11. You go out on a date and it goes badly.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6	7	

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6	7	

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6	7	

E. How important would this situation be if it happened to you?

Not At All							Extremely
------------	--	--	--	--	--	--	-----------

Important							Important
1	2	3	4	5	6		7

12. You get a raise.

A. Write down the one major cause: _____

B. Is the cause due to something about you or to something about other people or circumstances?

Totally Due to Other People or Circumstance							Totally Due To Me
1	2	3	4	5	6		7

C. In the future, will this cause again be present?

Will Never Again Be Present							Will Always Be Present
1	2	3	4	5	6		7

D. Is the cause something that influences other areas of your life?

Influences Just This Particular Situation							Influences All Situations in My Life
1	2	3	4	5	6		7

E. How important would this situation be if it happened to you?

Not At All Important							Extremely Important
1	2	3	4	5	6		7

Linguistics Implication Form

In each of the items below, there are several possible words that may be used to complete the sentence. For each item, please circle the word in parentheses that you think best completes the sentence.

1. All of (our, my, his) answers matched the ones in the back of the book.
2. At first it didn't seem to make any difference, but by later that night the noise from the party was entirely too loud to all (her, me, us) to sleep.
3. The salesman tried to persuade (me, him, us) to buy a set of encyclopedias.
4. The noise got to (us, them, me) before long.
5. (Our, His, My) idea of fun is sitting at home and listening to records.
6. The sun went in just when (we, she, I) decided to lay outside.
7. Please don't do this to (her, us, me); it is just not fair.
8. It was (her, our, my) understanding that the deadline for the paper had been delayed one week.
9. Except for (me, us, her), everyone failed the test.
10. As a result of (our, my, his) suggestions, a minor revision in the policy has occurred.
11. (He, We, I) spent so much time on the initial planning that it seemed impossible to finish before the deadline.
12. It rained so hard that all of (our, my, her) clothes got soaked.
13. For the past two or three months, (I, we, they) have had reports of squabbling and dissatisfaction among the workers in the office.
14. According to (our, my, her) notes, only five of the original seven laws are still in existence.
15. Someone stopped (them, me, us) to get directions to the stadium.
16. (We, I, He) waited by the phone for the doctor to return the call.
17. The cashier charged (her, us, me) too little for the groceries.
18. The mosquitoes didn't even bother (him, us, me).

19. Dinner was waiting on the table when (he, I, we) came back from the store.

20. It isn't easy to get lost in this town, but somehow (I, they, we) managed it.

Center for Epidemiological Studies-Depression Scale

Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the past week. Please respond using the following choices:

0 = Rarely or None of the time.

1 = Some or a Little of the time.

2 = Occasionally or a Moderate Amount of time

3 = Most or All of the Time.

- ___ 1. I was bothered by things that usually don't bother me.
- ___ 2. I did not feel like eating; my appetite was poor.
- ___ 3. I felt that I could not shake off the blues even with help from my family or friends.
- ___ 4. I felt that I was just as good as other people.
- ___ 5. I had trouble keeping my mind on what I was doing.
- ___ 6. I felt depressed.
- ___ 7. I felt that everything I did was an effort.
- ___ 8. I felt hopeful about the future.
- ___ 9. I thought my life had been a failure.
- ___ 10. I felt fearful.
- ___ 11. My sleep was restless.
- ___ 12. I was happy.
- ___ 13. I talked less than usual.
- ___ 14. I felt lonely.
- ___ 15. People were unfriendly.
- ___ 16. I enjoyed life.
- ___ 17. I had crying spells

____ 18. I felt sad.

____ 19. I felt that people dislike me.

____ 20. I could not get going.

Penn State Worry Questionnaire

Please rate the extent to which each of the following statements is typical of you.

	Not at all Typical			Very Typical	
1. If I don't have enough time to do everything, I don't worry about it.	1	2	3	4	5
2. My worries overwhelm me.	1	2	3	4	5
3. I do not tend to worry about things.	1	2	3	4	5
4. Many situations make me worry.	1	2	3	4	5
5. I know I shouldn't worry about Things, but I just cannot help it.	1	2	3	4	5
6. When I am under pressure, I worry a lot.	1	2	3	4	5
7. I am always worrying about something.	1	2	3	4	5
8. I find it easy to dismiss worrisome thoughts.	1	2	3	4	5
9. As soon as I finish one task, I start to worry about everything else I have to do.	1	2	3	4	5
10. I never worry about anything.	1	2	3	4	5
11. When there is nothing more I can do about a concern, I don't worry about it anymore.	1	2	3	4	5
12. I've been a worrier all my life.	1	2	3	4	5
13. I notice that I have been worrying about things.	1	2	3	4	5
14. Once I start worrying, I can't stop.	1	2	3	4	5
15. I worry all the time.	1	2	3	4	5
16. I worry about projects until they are done.	1	2	3	4	5

Revised Life Orientation Test

Please rate the extent to which you agree or disagree with each of the following items.

	Strongly Disagree				Strongly Agree	
	0	1	2	3	4	5
1. In uncertain times, I usually expect the best.	0	1	2	3	4	5
2. It's easy for me to relax.	0	1	2	3	4	5
3. If something can go wrong for me, it will.	0	1	2	3	4	5
4. I'm always optimistic about my future.	0	1	2	3	4	5
5. I enjoy my friends a lot.	0	1	2	3	4	5
6. It's important for me to keep busy.	0	1	2	3	4	5
7. I hardly ever expect things to go my way.	0	1	2	3	4	5
8. I don't get upset too easily.	0	1	2	3	4	5
9. I rarely count on good things happening to me.	0	1	2	3	4	5
10. Overall, I expect more good things to happen to me than bad.	0	1	2	3	4	5

Reasons for Living Inventory for Young Adults

The following are specific **reasons** that help people decide **not to commit suicide**. Please read each statement carefully, and then choose a number the best describes how important each reason would be to you for **not** committing suicide. Please use the scale and indicate the appropriate number for each statement. Please use the whole range of choices so as not to rate only at the middle (2, 3, 4) or only at the extremes (1, 6).

How important would these reasons be to you for not committing suicide?

	Not an Important Reason			Extremely Important Reason		
	1	2	3	4	5	6
1. I have many good things to look forward to as I grow older.	1	2	3	4	5	6
2. I believe that suicide is not the way to deal with any of my problems.	1	2	3	4	5	6
3. When I think about my future, I feel good inside.	1	2	3	4	5	6
4. Most of the time I feel good about myself.	1	2	3	4	5	6
5. My friends stand by me whenever I have a problem.	1	2	3	4	5	6
6. I believe that I can make many good good decisions without considering suicide.	1	2	3	4	5	6
7. I have a close relationship with my family.	1	2	3	4	5	6
8. I have many plans I am looking forward to carrying out in the future.	1	2	3	4	5	6
9. I enjoy being with my family.	1	2	3	4	5	6
10. I have close friends who really care About me a lot.	1	2	3	4	5	6
11. I believe I can deal with most of the losses (e.g., divorce or separation of parents, death of a loved one) in life	1	2	3	4	5	6

without attempting suicide.

12. My family takes the time to listen to my experiences at school, work, or home.	1	2	3	4	5	6
13. My family gives me the love I need.	1	2	3	4	5	6
14. I believe that my friends treat me fairly.	1	2	3	4	5	6
15. I am hopeful about my plans or goals for the future.	1	2	3	4	5	6
16. I believe that my friends appreciate me when I am with them.	1	2	3	4	5	6
17. I am satisfied with most of my relationships with my close friends.	1	2	3	4	5	6
18. I am happy to be the person I am.	1	2	3	4	5	6
19. Overall, I am satisfied that things are going well for me.	1	2	3	4	5	6
20. I have a great deal of respect for myself.	1	2	3	4	5	6
21. When I have a problem, I can turn to my family for support or advice.	1	2	3	4	5	6
22. After an argument, I prefer to focus on dealing with the situation rather than attempt to kill myself.	1	2	3	4	5	6
23. I am happy with myself.	1	2	3	4	5	6
24. My family understands the way I feel.	1	2	3	4	5	6
25. My future looks quite hopeful and promising.	1	2	3	4	5	6
26. I am satisfied with my relationships with members of my family.	1	2	3	4	5	6
27. When faced with a problem, I work hard to understand and avoid similar problem situations.	1	2	3	4	5	6

- | | | | | | | |
|--|---|---|---|---|---|---|
| 28. I would rather take responsibility for solving my problem than attempt suicide. | 1 | 2 | 3 | 4 | 5 | 6 |
| 29. I would like to see my plans (have a job, career, or family) for the future come true. | 1 | 2 | 3 | 4 | 5 | 6 |
| 30. I have close friends who are willing to help in times of need. | 1 | 2 | 3 | 4 | 5 | 6 |
| 31. I look forward to many fun things in the future. | 1 | 2 | 3 | 4 | 5 | 6 |
| 32. I believe that every problem has a potential positive solution. | 1 | 2 | 3 | 4 | 5 | 6 |

Suicidal Ideation Scale

For each of the following items, please rate the frequency with which you have felt or behaved that way during the past year.

	Never			Always	
1. I have been thinking of ways to kill myself.	1	2	3	4	5
2. I have told someone I want to kill myself.	1	2	3	4	5
3. I believe my life will end in suicide.	1	2	3	4	5
4. I have made attempts to kill myself.	1	2	3	4	5
5. I feel life just isn't worth living.	1	2	3	4	5
6. Life is so bad I feel like giving up.	1	2	3	4	5
7. I just wish my life would end.	1	2	3	4	5
8. It would be better for everyone involved I were to die.	1	2	3	4	5
9. I feel there is no solution to my problems other than taking my own life.	1	2	3	4	5
10. I have come close to taking my own life.	1	2	3	4	5

Demographics

1. What is your current your age? _____
2. What is your gender?
 Male
 Female
 Transgender
3. What year of school are you in?
 First Year
 Second Year
 Third Year
 Fourth Year
 Graduate School/Law School
4. What is your current major? _____
5. With the understanding that these categories may be limiting, which ethnicity best describes you?
 African American/Black
 Native American
 Hispanic/Latino
 Asian
 Pacific Islander
 Caucasian/White

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BIOGRAPHICAL SKETCH

Cory Wallack earned his bachelor's degrees in psychology and United States Government from the University of Virginia and his master's degree in counseling psychology from the University of Florida. After completing his pre-doctoral internship at the University of South Florida Counseling Center, he was hired as a Staff Therapist at the Syracuse University Counseling Center, where he continues to work today. Cory will earn his doctoral degree in counseling psychology from the University of Florida in May 2007.

Cory has interests in therapy, teaching, supervision, and research. He has taught numerous graduate level counseling courses including crisis intervention, cultural foundations of counseling, and practicum. His clinical interests include grief counseling, crisis intervention, trauma, eating disorders, and suicide prevention. As part of a SAMHSA suicide prevention grant, Cory is currently the project coordinator for gatekeeper training at Syracuse University, where he is responsible for implementing and assessing Campus Connect, a suicide prevention training for gatekeepers that he developed. Cory has conducted numerous suicide prevention trainings at Syracuse University and has recently begun working as a consultant to multiple colleges and universities to assist them in implementing Campus Connect. Cory has additionally presented workshops on suicide prevention and intervention at several national conferences and he is an active member in the American Association of Suicidology.