

**THE ROLE OF PERFECTIONISM AND STRESS IN  
THE SUICIDAL BEHAVIOUR OF DEPRESSED ADOLESCENTS**

by

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF**

**DOCTOR OF PHILOSOPHY**

in

**THE FACULTY OF GRADUATE STUDIES**

**(Psychology)**

**THE UNIVERSITY OF BRITISH COLUMBIA**

**April 2005**

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## Abstract

The present study aimed to investigate the role of self-oriented and socially prescribed perfectionism in conjunction with stressful life experiences in suicidal ideation, potential, and prior attempts among depressed adolescents. Self-oriented perfectionism involves striving to meet one's own unrealistically high standards and evaluating one's performance stringently. Socially prescribed perfectionism involves the perception that significant others have very high expectations for oneself, which the perfectionist strives to meet. This study examined correlations between these perfectionism dimensions and suicidal ideation, potential or risk, and prior attempts in addition to investigating whether either perfectionism dimension accounted for additional variance in suicide outcomes beyond the established risk factors depression and hopelessness. Also examined was a moderational model whereby dimensions of perfectionism were hypothesized to interact with stress to predict suicide outcomes. A sample of 55 adolescents (41 females, 14 males) who met the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV; APA, 1994) criteria for Major Depression (65.5%), Dysthymia (16.4%), or Depressive Disorder NOS (18.2%) completed self-report measures of perfectionism, daily hassles, depression, hopelessness, suicidal ideation, suicide potential, and prior suicidal attempts. Additionally, adolescents and one of their parents completed a diagnostic interview and a stress interview measuring major stressful experiences. Results revealed that self-oriented perfectionism was not correlated with any aspect of suicide; however, socially prescribed perfectionism was associated with suicide potential. Hierarchical regression analyses indicated that self-oriented perfectionism did not account for unique variance in suicide outcomes, whereas, socially prescribed perfectionism predicted additional variance in suicide potential once depression and hopelessness were controlled. Regarding the moderational model, both self-oriented and socially prescribed perfectionism were found to interact with aspects of

stress to predict suicidality. More specifically, self-oriented perfectionism interacted with daily hassles to predict suicide potential/risk. Socially prescribed perfectionism interacted with subjective and objective ratings of major stressful experiences and with daily hassles to predict suicide potential/risk. Neither perfectionism dimension interacted with stress to predict suicidal ideation or prior suicide attempts. Taken together, these findings suggest that among depressed adolescents, socially prescribed perfectionism is correlated with suicide risk and predicts unique variance in this suicide outcome beyond other established risk factors. Additionally, both self-oriented and socially prescribed perfectionism act as vulnerability factors that are predictive of suicide potential when adolescents experience elevated levels of stress. As these relationships were apparent even after controlling for the contributions of depression and hopelessness to suicide, the results of this study highlight the importance of considering perfectionistic tendencies when evaluating suicide risk among youth.

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## Acknowledgements

I begin by thanking my supervisor, Dr. Paul Hewitt, for the opportunity to achieve my goal of a graduate degree and for the many years of support and guidance along the way. I have enjoyed working with you and have learned a great deal from your experience. I also wish to thank Dr. Charlotte Johnston for her support over the years. I have no doubt that your guidance and many reference letters played a role in my successes throughout graduate school. I thank Dr. Jane Garland for several years of research collaboration. Without your interest in our research topics and the access you provided to our precious participants, this dissertation would not have happened. I also thank the psychiatrists and psychologists at BC's Children's Hospital that participated in this research project. I really appreciate the interest and assistance you provided with data collection despite your very busy schedules. To Nickie Beckett, thank you for the countless hours you spent working with me and for your incredible patience during the data collection phase. You undoubtedly sped up the process and for that I am truly grateful.

To my labmates, Brandy and Mike, thank you for your unwavering support as I completed this degree. Both of you selflessly gave up your time to help me out on several occasions and I am very appreciative for all of it. You are wonderful people and I am fortunate to have had you as labmates and friends. I also wish to thank my volunteers Sandra and Annie for the many hours they dedicated to this project.

One of the highlights of graduate school was making several lifelong friends and I wish to thank Martine, Becca, Tina, Candice, and Judith for years of support and encouragement. As we all know, graduate school brought many highs but also some lows and I could not have made it through the rough spots without fabulous friends like you. My internship year also afforded me another close friend in Julie and I thank her for mountains of support and encouragement in the home stretch of my degree. To my close friends outside of graduate school, thank you for



your understanding when my school commitments kept me from seeing you as often as I wished. Thank you also for providing me with a breath of fresh air and a social life separate from school.

Now to those who have always provided me with unconditional support and encouragement. To my parents, Daryl and Fran Stowe, thank you for instilling in me the belief that I could achieve anything and for encouraging me to dream big. Thank you also for always being interested in my pursuits and for providing me with the support I needed to reach my goals. I hope along the way, I have made you proud. To my sisters, Bonnie, Katie, and Gabe, thank you for many years of support and for being the three greatest sisters any girl could have. It was hard to watch my three younger sisters finish their programs before me so I am very happy to finally be joining you as graduates. I also wish to thank my grandparents – my grandmothers for their support here on the ground and my grandfathers for their guidance from above. By far the person who has played the greatest role in my successful completion of graduate school is my husband and closest friend, Noel. Thank you for patiently standing by me through many hard years of school and for supporting us both while I studied. The incredible dedication and hard work you invest in your own career has inspired me. Thank you also for your fresh perspective on life, for your constant encouragement, and for always believing I would succeed. There have been many highs during graduate school and all of them have been more enjoyable because they were shared with you. To my faithful companion Sam, thank you for the many mind-clearing walks and for the unconditional love you have always provided. No matter how tough my day was, it was always great to come home to your happy face. My final thank you is for the person that has been my biggest dream throughout graduate school: my son Jackson. Words cannot express how thankful I am to finally have you in my life. Before you were even here, you motivated me immensely to finish my degree and it means the world to me to know that you are here to see me graduate. What a fabulous year this has been as two of my greatest dreams were fulfilled!

## Introduction

As is true of many areas of research, investigation into the role of personality factors in child and adolescent psychopathology has lagged behind such research with adults. To illustrate, speculation about and investigation of the link between perfectionism and adult suicidal behaviour dates back to at least the 1950s (e.g., Hiltner, 1953). In contrast, similar theory and research with youth did not appear until approximately 20 years later in the 1970s (e.g., Jacobs, 1971). Since that time, many aspects of youth suicidal behaviour have been well researched and the knowledge that followed has enhanced our understanding of a number of factors that place youth at increased risk for suicide. For instance, links have been established between youth suicidality and depression (De Man, 1999; Dori & Overholser, 1999; Goldston, Sargent Daniel, Reboussin, Rebousin, Frazier, & Harris, 2001), hopelessness (Levy, Jurkovic, & Spirito, 1995; Steer, Kumar, & Beck, 1993), stress (Brent, 1995; Shaffer & Pfeffer, 2001), substance use (Reifman & Windle, 1995; Shafii, Steltz-Lenarsky, McCue Derrick, Bechner, & Whittinghill, 1988), loneliness (e.g., Stravynksi & Boyer, 2001; Valeri, 2003), impulsivity (e.g., Hoberman & Garfinkel, 1988; Pfeffer, Hurt, Peskin, Siefker, 1995), and aggression (Esposito, Spirito, & Overholser, 2003; Pfeffer, Plutchik, & Mizruchi, 1983), among others. Although there are numerous references in the suicide literature to perfectionism as a personality risk factor for suicidality (Baumeister, 1990; Beck, Steer, & Brown, 1993; Berman & Jobes, 1991; Callahan, 1993; Ranieri, Steer, Lavrence, Rissmiller, Piper, & Beck, 1987), its relationship to youth suicide has not yet been extensively studied.

According to Hewitt and Flett (1991), trait perfectionism is a multidimensional construct characterized by a need for perfection that is either intra- or interpersonally focused. To illustrate, self-oriented perfectionists require perfection of themselves, constantly strive to achieve unrealistically high standards, and critically evaluate their own performance. In contrast,

other-oriented perfectionists expect perfection from significant others in their lives and stringently evaluate the performance of those individuals. Third, socially prescribed perfectionists perceive that the perfectionistic standards are held by important persons in their lives, that is, others expect them to be perfect and evaluate their performance critically<sup>1</sup>.

The past few decades have witnessed an upsurge in research on trait perfectionism and its implications for a wide range of psychological difficulties. For instance, important associations have been demonstrated between trait perfectionism and depression, suicidal behaviour, anxiety, eating difficulties, personality disorders, and relationship difficulties among adults (e.g., Goldner, Cockell, & Srikaneswaran, 2002; Haring, Hewitt, & Flett, 2003; Hewitt, Caelian, Flett, Sherry, Collins, & Flynn, 2002; Hewitt & Flett, 1993; Hewitt, Flett, & Turnbull, 1994; Hewitt, Newton, Flett, & Callander, 1997). Such research has also highlighted the ability of perfectionism to account for additional variance in maladjustment beyond that contributed by other variables and to interact with other risk factors (e.g., stress) to predict negative outcomes (see Flett & Hewitt, 2002, for a review). This body of research has been instrumental in establishing perfectionism as an important vulnerability factor, both alone and in combination with other variables, for maladjustment in adult populations.

Although still in its infancy, perfectionism research recently extended into the lives of children and adolescents (e.g., Boergers, Spirito, & Donaldson, 1998; Hewitt et al., 1997, 2002). Thus far, investigations have focused on difficulties such as depression, anxiety, anger, suicidal behaviour, and eating disorders in this age group (e.g., Boergers et al., 1998; Hewitt et al., 1997, 2002; Ricciardelli & McCabe, 2004). As is the case with adults, initial studies suggest that perfectionism is related to various forms of maladjustment in youth and that these relationships

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<sup>1</sup> The present study will examine self-oriented and socially prescribed perfectionism among youth as other-oriented perfectionism is not typically associated with maladjustment for the perfectionist (e.g., Hewitt et al., 2002; Hewitt & Flett, 1993) and because the Child-Adolescent Perfectionism Scale (CAPS) does not measure other-oriented perfectionism.

represent an important area for further investigation (e.g., Boergers et al., 1998; Einstein, Lovibond, & Gaston, 2000; Hewitt et al., 2002; Hewitt et al., 1997; Tyrka, Waldron, Graber, & Brooks-Gunn, 2002). One area that shows particular promise, and is the focus of the present investigation, is the role that perfectionism plays in suicidality among adolescents.

### ***Adolescent Suicidal Behaviour***

Before examining what is currently known about suicide among North American youth, it is necessary to define what is meant here by suicidal behaviour. Although not an exhaustive account of the many aspects of suicidal behaviour, the present paper shall describe literature pertaining to suicide ideation, suicide potential, suicide attempts, and completed suicide. Suicide ideation involves thinking about ending one's life. Suicide potential refers to one's risk for suicide based on a collection of risk factors for the same. A suicide attempt involves taking action toward ending one's life; however, such action does not result in death. Lastly, completed suicide refers to a suicide attempt that results in death.

In North America, deaths due to suicide have only been recorded for Canada and the United States since the 1950s. In comparison, countries such as Sweden and Switzerland began collecting suicide data as early as 1749 and 1876, respectively (Leenaars, Wenckstern, Sakinofsky, Dyck, Kral, & Bland, 1998). Thus, relatively less is known about the history of rates of suicidal behaviour among Canadian and American youth compared to that in other countries. What is clear is that adolescent suicide completion rates for North America have generally increased over the past three to four decades, particularly among males. In fact, suicide completion rates for North American youth aged 15-19 years have more than tripled over the past 40 years (Goldsmith, Pellmar, Kleinman, & Bunney, 2002; National Task Force, 1994). Additionally, since the 1950s, rates of completed suicides for adolescent males have consistently exceeded those of females (Goldsmith et al., 2002; Health Canada, 1999; Leenaars et al., 1998;

National Institute of Mental Health, 2002). In large part, this reflects more lethal means of attempting suicide typically chosen by males vs. females such that males more often succeed in their attempts (Goldsmith et al., 2002; White & Rouse, 1997). This is particularly evident when one considers that females attempt suicide at a rate approximately three times that of males (National Task Force, 1994; NIMH, 2002; Suicide Prevention Information and Resource Centre, 2001).

Recent efforts to determine the pervasiveness of adolescent suicidal behaviour in North America have revealed an alarming reality: at present, suicide is the second leading cause of death among Canadian adolescents, second only to traffic fatalities (National Task Force, 1994). Recent statistics indicate that the suicide rate among Canadian adolescents ages 15-19 years is approximately 13 per 100,000 population (Health Canada, 1999). Although Canadian suicide rates have surpassed those in the United States since the 1970s (Leenaars & Lester, 1994), suicide still ranks third in the leading causes of death for American adolescents (NIMH, 2002). Current statistics place the suicide rate among American youth ages 15-19 years at approximately 11 per 100,000 population (NIMH, 2002). As these findings are based only on the number of suicide *deaths*, the number of adolescents who engage in suicidal ideation and non-fatal suicide attempts is much greater. In fact, estimates of the ratio of suicide attempts to suicide completions ranges from 50:1 to 100:1 (National Task Force, 1994), indicating that suicide death rates do not come close to reflecting the numbers of individuals affected by other forms of suicidal behaviour. This is even more disturbing when one considers that known rates of adolescent suicide are likely underestimates due to underreporting from a number of sources (e.g. victims' families, coroners) and difficulty determining the cause of death in some cases (National Task Force, 1994). It has been suggested that official suicide rates underestimate the true rates by approximately 30% (Goldsmith et al., 2002). Clearly, suicidal behaviour represents

a serious mental health concern in North America and an area in which ongoing research is essential.

Although Canadian youth exhibit higher rates of suicide than their American counterparts, the majority of existing research on adolescent suicidal behaviour has been conducted in the United States. In general, the goals of such research have been to better understand the nature of suicidal behaviour in youth and to identify variables predictive of such behaviour in order to enable recognition of adolescents at the greatest risk of harming themselves. This body of research has identified and greatly enhanced our understanding of a number of psychosocial risk factors for suicide, such as depression, hopelessness, stress, substance use, and prior suicide attempts in this population (see Diekstra, Kienhorst, & de Wilde, 1995; Maltzberger & Goldblatt, 1996; Pfeffer, 2000; Shaffer & Piacentini, 1994; and Shaffer & Pfeffer, 2001 for reviews). Additionally, models explaining links between suicide and behavioural risk factors (e.g., Brent, Baugher, Bridge, Chen, & Chiappetta, 1999; Esposito et al., 2003; Plutchik & Van Praag, 1997), societal risk factors (e.g., Chan, Hung, & Yip, 2001; Durkheim, 2001; Stack, 2000a; Stack, 2000b), cognitive risk factors (e.g., Abramson, Alloy, Hogan, Whitehouse, Gibb, Hankin, et al., 2000; Esposito, Johnson, Wolfsdorf, & Spirito, 2003; Rudd, 2000; Weishaar & Beck, 1990), and combinations of various risk factors (e.g., Harter & Marold, 1994; Levy et al., 1995; Lewinsohn, Rohde, & Seeley, 1996; Prinstein, Boergers, Spirito, Little, & Grapentine, 2000), among others, have been articulated and researched.

The role of depression in youth suicide behaviour has been one of the most well researched links. This body of research has highlighted depression as an important risk factor for suicidal ideation, suicide attempts, and completed suicide among children and adolescents (see Brent, 1995 and Shaffer & Pfeffer, 2001 for reviews). In fact, studies have estimated that as many as 90% of youth who commit suicide have a preexisting psychiatric disorder (Shaffer, Gould, Fisher, Trautman, Moreau, Kleinman, et al., 1996; Shafii et al., 1988) and depression is

one of the most common disorders experienced by this group (Beautrais, 2001; Hoberman & Garfinkel, 1988; Marttunen, Henriksson, Aro, Heikkinen, Isometsa, & Lonnqvist, 1995).

Research has also identified depression as one of the best predictors of suicidal behaviour among youth (Dori & Overholser, 1999; Hollis, 1996), demonstrating that it often renders other risk factors non-significant when controlled in analyses (De Man, 1999; Goldston et al., 2001; Spirito, Valeri, Boergers, & Donaldson, 2003). In contrast to risk factors like depression, other important variables with links to suicide have received less attention thus far. Perfectionism is one such variable.

### ***Perfectionism and Suicidal Behaviour: Theory***

Reflecting back on several decades of literature on suicide, one can find numerous early references and anecdotes identifying perfectionism as a potential risk factor for suicidal behaviour (e.g., Berman & Jobes, 1991; Braaten & Darling, 1962; Burns, 1980; Hollender, 1965; Jacobs, 1971; Orbach, 1988; Shaffer, 1974). For instance, Hollender (1965) described how the perfectionist can become "...overburdened by the oppressive load he has heaped upon himself..." and the realization that "...no matter how well he does, he seldom performs to his complete satisfaction." He goes on to note that depressive symptoms are a likely outcome for the perfectionist and that occasionally, the depression becomes "...profound and persistent and may even end in suicide." Orbach, Gross, and Glaubman (1981), in their sample of suicidal youth, found that the majority had perceived parental demands and expectations beyond their capabilities. In their review of risk factors for adolescent suicide, Berman and Jobes (1991) discuss "rigid perfectionism" among high-achieving "star" students whose suicides are often very shocking to those left behind. Further illustration of the role of perfectionism in suicidal behaviour can be found in the following excerpts from a suicide note left behind by an adolescent boy. He attempted to explain the reasons for his death to family and friends by

stating, "...I have set unattainable goals for myself...life is full of so many disappointments and troubles...everything I have done hasn't satisfied me...it is a very funny feeling I get inside when I sit down to do something...like what I write or do won't be accepted by society" (Jacobs, 1971).

When one considers the developmental stage of adolescence and the issues that adolescents have to successfully navigate during this time, it makes sense that teenagers would be particularly vulnerable to suicidal behaviour and that perfectionism may be a particularly relevant variable. For instance, the achievement of autonomy is one normative developmental hurdle for adolescents. According to Harter (1999), as teens move from early to mid-adolescence, they become increasingly preoccupied with the opinions and expectations of significant others and are sensitive to feedback from others about who they are as people. It has been suggested that adolescents who do not internalize their own standards and continue to internalize the standards and feedback of others are at risk for maladjustment because they do not develop a stable sense of self (Zimmer-Gembeck & Collins, 2003). In terms of cognitive development, as teenagers progress through adolescence, they are better able to anticipate the consequences of their actions and learn from past decision making successes or failures (Byrnes, 2003). Until formal operational thought is acquired, teenagers can have difficulty seeing past a present problem to a better future. They may still engage in magical thinking that can make them feel invulnerable to real consequences of suicidal behaviour such as death (Group for Advancement of Psychiatry, 1996).

Regarding emotional development, teenagers experience greater extremes of emotion, particularly negative emotion, than adults and younger children. Their mood states also tend to shift more quickly so that they experience more high highs and low lows than adults (Rosenblum & Lewis, 2003). As they mature, teenagers are also more able to internalize emotional states and experience self-blame, which can increase risk for suicide (Group for Advancement of



Psychiatry, 1996). Lastly, in terms of social development, a basic issue for teenagers is fitting in with a valued peer group who provide a source of support during difficult times. As peer group affiliations tend to change often during adolescence, periods of loss of social support and possible temporary social isolation can occur, which can further increase the risk for suicidal behaviour (Group for Advancement of Psychiatry, 1996).

Although he did not refer to the construct of perfectionism specifically in his escape theory of suicide, Baumeister (1990) described in detail the central role that high standards and expectations for one's performance, in conjunction with failure to attain those standards, play in attempted suicide. Proposed as a common causal process leading to suicide, the desire to escape from painful self-awareness is said to start with a failure event that makes salient to an individual the large discrepancy between the high standards held by oneself or others and one's actual performance. The blame for this discrepancy is then attributed to the self and an aversive state of high self-awareness ensues. Now, acutely aware of oneself as incompetent and inadequate, the individual is thought to experience considerable negative affect that he/she attempts to escape by entering a state of cognitive deconstruction. In this state, the individual ceases to engage in meaningful thought and is aware of the self only in a concrete, short-term manner. Additionally, cognitive deconstruction minimizes the experience of negative affect as the individual ceases to feel strong emotions. Further consequences of this cognitive state include reduction of inhibitions, failure to consider long-term consequences of actions, and passivity, all of which are posited to make the individual vulnerable to suicide as the ultimate means of escape.

As Baumeister (1990) outlines in his review, much research has demonstrated support for the various stages of escape theory; however, further evidence is needed before firm conclusions can be drawn. Perhaps the most well supported stage in his theory is that involving failure experiences in the context of high standards or expectations. Since Baumeister (1990)

articulated his escape theory over a decade ago, other researchers have focused more specifically on the role of high standards and expectations within the construct of perfectionism.

As noted at the outset of this paper, one of the hallmarks of perfectionism is the perception that one must perform at a level capable of satisfying very unrealistic expectations. As if that order was not tall enough, perfectionists are highly self-critical and stringent when evaluating their performance, considering only complete success or total failure as possible outcomes. Even when they objectively achieve some measure of success, perfectionists are not rewarded with a sense of satisfaction or accomplishment and instead focus on the aspects of their performance that could have been better (Hewitt & Flett, 1991). Considering this manner of approaching the world, it is not hard to imagine a relationship between perfectionism and stressful experiences. In fact, stress is a key component in Hewitt and Flett's (2002) conceptualization of how perfectionism engenders vulnerability to maladjustment of many varieties, including suicidal behaviour.

### *Perfectionism and Stress*

As outlined in their model, Hewitt and Flett (2002) propose that perfectionism is associated with psychopathology via its relationship with stress. More specifically, they suggest that this relationship is complex in that perfectionism may play a role in the generation, perpetuation, anticipation, and enhancement of stress for the perfectionist. In terms of generating stress, Hewitt and Flett (2002) explain that perfectionism sets perfectionists up to encounter failure experiences because their expectations are so high that they are unable to meet them and because they tend to focus on the negative aspects of their performance, seeing failure where it does not objectively exist. Not only are perfectionists likely to encounter stress, they are also likely to perpetually face it. That is, self-oriented perfectionists do not seem to alter their standards when they receive feedback that they are too high. For socially prescribed

perfectionists, the standards they strive to meet are not their own; the unrealistic expectations are perceived to be held by important others and are not under the direct control of the perfectionist so cannot be lowered when the perfectionist fails to meet them. Furthermore, Hewitt and Flett (2002) propose that perfectionists tend to anticipate the occurrence of important stressful events in the future but do not take measures to prevent the stressful experiences from occurring. A fourth way in which perfectionism plays a role in stress is by enhancing the impact of stressful experiences. This final mechanism will be focused on in the present study and is discussed in greater detail below.

### *Perfectionism and Stress Enhancement*

As Bolger and Zuckerman (1995) outline in their model of the personality-maladjustment relationship, personality characteristics can affect one's exposure to stressful experiences and one's reaction to them, both of which can help explain the link between personality and negative outcomes. Although Bolger and Zuckerman (1995) propose that a comprehensive model of personality effects on adjustment should consider both stress exposure and stress reactivity, they also suggest that reactivity may be the more important process. This proposition stems from the findings of their research comparing levels of stress exposure and reactivity among those high and low in neuroticism. The results of this research indicated that the high levels of stress reactivity characteristic of those high in neuroticism had a more substantial negative impact on their emotional well being than did high levels of stress exposure.

As Hewitt and Flett (2002) illustrate, perfectionists are likely to be compromised in their reactions to stress in several ways such that the negative impact of stress is magnified. First, they are likely to perceive stress as more aversive than non-perfectionists, particularly stressors that are in an area important to the self. Second, as their sense of self-worth is inextricably tied to their accomplishments, perfectionists are inclined to view failures as indications that they are

worthless or incompetent. Then, given their tendency to overgeneralize, perfectionists are likely to take an error in one domain of their lives and view it as reflective of their functioning in multiple areas. Socially prescribed perfectionists may also respond to failure to meet the perceived high standards of others by experiencing a social form of hopelessness. As they are unable to control others' expectations and are repeatedly unable to attain these perceived perfectionistic standards, socially prescribed perfectionists may come to feel hopeless about their chances of ever achieving at a satisfactory level. It has been suggested that the realization that one can never measure up to the expectations of significant others can lead to a sense of alienation and lack of connection from others that can leave one vulnerable to negative outcomes such as depression and suicide (Hewitt & Flett, 1991, 2002; Hewitt, Flett, Sherry, & Caelian, in press). This may be particularly pertinent as perfectionistic youth reach adolescence, gravitate towards peers, and strive for social acceptance (Berk, 1997; Group for Advancement of Psychiatry, 1996).

Hewitt and Flett's (2002) description of the role of perfectionism and stress in suicide reflects a moderational model whereby perfectionism and stressful experiences are thought to interact such that the likelihood of suicidal outcomes depends on the levels of perfectionism and stress present. The expectation is that suicidal behaviour would be most likely for highly perfectionistic individuals who experience high levels of stress. This model will be investigated in the present study and will be outlined in greater detail shortly. First, research examining the role of perfectionism in suicidal behaviour shall be reviewed.

### ***Perfectionism and Suicidal Behaviour: Research***

The preponderance of research in this area has focused on suicidal ideation and attempts as outcome variables, owing to the relatively rare occurrence of completed suicide and the ethical limitations of studies on such behaviour. Convenience aside, studying past attempts to

gain insight into suicide risk makes sense given the established connection between prior suicidal behaviour and future risk of the same (Lewinsohn et al., 1996; Orbach, 1988). In addition to a focus on ideation and attempts, the majority of perfectionism-suicide research has been conducted with samples of adults or college students and only recently has begun to focus on youth.

Adult Research: Research with adults quickly established that perfectionism was related to suicidal ideation at a correlational level. For instance, Hewitt, Flett, and Weber (1994) assessed levels of perfectionism, depression, hopelessness, and suicidal ideation in a sample of 91 psychiatric patients with heterogeneous Diagnostic and Statistical Manual of Mental Disorders –Third Edition - Revised (DSM-III-R; American Psychological Association, 1987) diagnoses. Their results provided support for the contention that self and socially based expectations for perfection were most relevant to suicide outcomes. That is, both self-oriented and socially prescribed perfectionism were significantly associated with suicidal ideation and distinguished patients with moderate and high levels of suicidal thoughts from those with low levels. In fact, these perfectionism dimensions contributed unique variance to the prediction of suicidal ideation levels, beyond that accounted for by depression and hopelessness. Similar analyses were then completed with a sample of 160 college students and again, the self and social dimensions were associated with suicidal ideation.

In a series of studies, Dean and colleagues also examined the role of perfectionism in the suicidal ideation experienced by both college students and clinical outpatients (Dean & Range, 1996, 1999; Dean, Range, & Goggin, 1996). In contrast to the above research by Hewitt and colleagues, only socially prescribed perfectionism was significantly correlated with and uniquely predictive of suicide ideation in each of these studies. Consistent with the latter findings, a recent study carried out with university students found only socially prescribed perfectionism to be relevant to suicidal thoughts measured 4 months after students first participated (Hewitt et al.,

2002). Additionally, socially prescribed perfectionism continued to predict this outcome when the contributions of depression and hopelessness were accounted for (also see Chang & Rand, 2000). These findings suggest that socially prescribed perfectionism is the dimension related to suicidal ideation as a main effect, which mirrors results in the perfectionism-depression literature. In this area of research, the majority of studies have indicated that the perception that others hold unrealistic expectations of perfection for the self is linked to depression as a main effect (Enns & Cox, 1999; Flett, Hewitt, Garshowitz, & Martin, 1997; also see Dunkley & Blankstein, 2000 and Kawamura, Hunt, Frost, & DiBartolo, 2001). In contrast, striving for perfection in order to meet one's own unrealistic standards is not typically associated with depression as a main effect and appears to be related to maladjustment only in the presence of stress. This moderational relationship will be discussed in greater detail shortly.

In an effort to expand existing knowledge beyond ideation and increase its relevance to suicidal acts, research began to explore the link between perfectionism and suicide potential and attempts. Early in this line of inquiry, Hewitt, Flett, and Turnbull-Donovan (1992) obtained assessments of perfectionism, depression, and suicidal threat from 87 psychiatric patients. In this study, suicide threat was measured with the Threat Suicide Scale (Farberow & Devries, 1967) from the Minnesota Multiphasic Personality Inventory, which measures the degree of suicidal threat or impulses of the respondent. Socially prescribed perfectionism was the only dimension significantly associated with suicide threat. As in the studies of suicide ideation, more detailed analysis of the results revealed that socially prescribed perfectionism accounted for variance in suicide scores that was not accounted for by depression and hopelessness. Evidence that perfectionism contributes non-redundant information to the prediction of suicidal outcomes is particularly meaningful considering that depression and hopelessness are generally regarded as two of the best predictors of suicidal behaviour among adults (Beck, Steer, Beck, & Newman, 1993; Beck, Steer, Kovacs, & Garrison, 1985).

Adkins and Parker (1996) obtained further support for the role of perfectionism in suicidal risk in a sample of 129 undergraduate students. Using the Multidimensional Perfectionism Scale developed by Frost and colleagues (MPS; Frost, Marten, Lahart, & Rosenblate, 1990), with subscales for concerns over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organization, Adkins and Parker (1996) assessed the relationship between these aspects of perfectionism and "suicidal preoccupation", which they defined as levels of suicidal ideation, plan(s), attempt(s), and lethality of attempt(s) during the past 12 months. According to Frost and colleagues (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993), the subscales on their measure that are most closely related to socially prescribed perfectionism as defined by Hewitt and Flett (1991) are concern about mistakes, parental expectations, and parental criticism. Also often related to maladjustment are scores on the subscale measuring doubt about actions (Blatt, 1995). In the Adkins and Parker (1996) study, all four of these subscales were associated with suicide ideation and all but parental criticism were related to plans to end one's life. However, only the subscale measuring doubts about actions displayed a small but significant relationship to suicide attempts. Overall, perfectionism scores accounted for 50% of the variance in levels of suicidal preoccupation with the majority of this variance being contributed by scores on the subscales measuring doubt about actions and concern about mistakes. A possible explanation offered by the authors for the failure of concern over mistakes, parental expectations, and parental criticism scores to be significantly related to suicide attempts is the rarity of attempt occurrence in this sample as only 4% of the students acknowledged attempting suicide in the past year. The discrepant findings based on the Hewitt and Flett (1991) and Frost et al. (1990) scales also highlight difficulties comparing findings across studies when the constructs of interest are measured in different ways.

A study by Chang (1998) clarifies the findings of Adkins and Parker (1996) to some extent. In a sample of 148 college students, information was collected about levels of perfectionism, as measured by the Frost et al. (1990) MPS, at time one and levels of hopelessness and "suicide potential" 4 months later. "Suicide potential" was measured using the Suicidal Probability Scale (SPS; Cull & Gill, 1982), which provides an overall estimate of potential for suicidal behaviour based on an assessment of suicidal ideation, hopelessness, negative self-evaluation, and hostility. Chang (1998) demonstrated that doubts about actions and concern over mistakes were the subscales relevant to both future hopelessness and suicide potential among Caucasian American students<sup>2</sup>. Additionally, overall levels of perfectionism predicted unique variance in future hopelessness and suicide potential scores. Thus, it appears from these two studies that utilized the Frost et al. (1990) MPS that a tendency to characteristically doubt one's actions and be overly concerned about one's mistakes confers a vulnerability to suicidal outcomes (also see Hamilton & Schweitzer, 2000). An overlap with some of the items on these subscales and those measuring socially prescribed perfectionism exists (e.g., People will think less of me if I make a mistake; If I do not do well all the time, people will not respect me; The fewer mistakes I make, the more people will like me, etc.) and may be what accounts for the common link with suicidal behaviour that these subscales share. Reflected in these items from the Frost et al. (1990) measure is the perception that others expect perfection of the self and the belief that the opinions of those individuals are based on one's performance, both of which are certainly characteristic of socially prescribed perfectionism as conceptualized by Hewitt and Flett (1991).

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<sup>2</sup> Chang (1998) assessed these relationships in a group of Caucasian American and a group of Asian American college students. Despite higher levels of hopelessness, suicide potential, and several subscales of perfectionism among the Asian American students, perfectionism was not significantly associated with either hopelessness or suicide potential in this group. This study represents the first effort to examine similarities and differences in the relationship between perfectionism and suicidal outcomes for different ethnic groups and should be pursued further in subsequent research. Such investigation was not possible in the present study owing to the ethnic makeup of the participant sample.



In the only study with adults to examine the role of perfectionism in high-intent suicide attempts, Hewitt, Norton, Flett, Callander, and Cowan (1998) obtained some of the most compelling evidence in support of this link. Participants were matched on demographic characteristics and separated into one of two groups: inpatients with alcoholism and no history of suicide attempts or inpatients with alcoholism and a history of at least one attempt, the most recent of which was rated as moderate to high in lethality by clinicians. Participants completed measures of perfectionism, hopelessness, and depression. As expected, the group including suicide attempters had higher levels of hopelessness, depression, and socially prescribed perfectionism. Furthermore, the socially prescribed dimension was uniquely predictive of lethal suicide attempts after the contributions of depression and hopelessness were accounted for.

In sum, research examining the perfectionism-suicide link among adults provides considerable evidence for the role of socially prescribed perfectionism in suicidal ideation, threat, and attempts among student and clinical groups. Additionally, this research highlights the unique information contributed by socially prescribed perfectionism in the prediction of suicidality beyond other established risk factors. Regarding self-oriented perfectionism, some evidence exists for its relevance to suicidal ideation; however, the bulk of the research completed thus far suggests that this dimension is not predictive of suicidality as a main effect. This is not to say that self-oriented perfectionism is irrelevant to the prediction of suicide risk, but that it does not on its own pose significant risk. As will be reviewed shortly, self-oriented perfectionism may function as a diathesis for suicide that is only activated in the presence of stress.

*Child and Adolescent Research:* Despite the acquired knowledge reviewed above and the present grave concerns regarding the number of young lives lost to suicide each year, research on the perfectionism-suicide link in children and adolescents is sparse. The first in this small collection of studies examined the role of perfectionism in the suicidal ideation experienced by a

sample of 66 adolescent psychiatric inpatients with heterogeneous mental health difficulties (Hewitt et al., 1997). Perfectionism was assessed using the Child-Adolescent Perfectionism Scale (CAPS; Flett, Hewitt, Boucher, Davidson, & Munro, 2002), which measures both self-oriented and socially prescribed perfectionism, and participants also completed measures of hopelessness and suicidal ideation. In like manner to the majority of adult research in this area, self-oriented perfectionism was not associated with suicidal ideation, whereas, socially prescribed perfectionism was positively related to suicide scores. Additionally, the socially prescribed dimension accounted for unique variance in suicide ideation levels after controlling for the contributions of hopelessness (Hewitt et al., 1997). As was seen with the adult research, this finding suggests that socially prescribed perfectionism provides non-redundant information to the prediction of suicidal thoughts among youth.

One year later, Boergers et al. (1998) investigated self-reported reasons for suicide attempts in a sample of 120 adolescents presenting to a pediatric hospital immediately after making their attempts. The motivations most often reported for these attempts included a wish to die, to escape, and/or to obtain relief. Notably, levels of socially prescribed perfectionism were elevated among those adolescents who specifically endorsed a wish to die compared to those whose attempts were not motivated in this way. Furthermore, high levels of socially prescribed perfectionism predicted death as the primary reason offered for the adolescents' attempts. These findings speak to the seriousness of the intent behind perfectionistic adolescents' suicide attempts.

Enns, Cox, and Inayatulla (2003) recently investigated the role of personality variables, including self-criticism, interpersonal dependency, self-oriented and socially prescribed perfectionism, and neuroticism in treatment outcome for 78 adolescents hospitalized with suicidal ideation or behaviour. As in prior research, self-oriented perfectionism was not correlated with depression, hopelessness, or suicidal ideation, whereas, socially prescribed

perfectionism was associated with all three. Hierarchical regression analyses indicated that neuroticism was predictive of depression and suicidal ideation post-treatment and self-criticism was predictive of post-treatment depression and hopelessness. After controlling for neuroticism and symptoms at the time of admission, neither perfectionism dimension was positively related to depression, hopelessness, or suicidality post-treatment. Supporting prior research suggesting that self-oriented perfectionism is not linked to maladjustment as a main effect, this dimension had a significant inverse association with hopelessness post-treatment.

Most recently, Caelian, Hewitt, Garland, Hall, Hsieh, and Flett (2004) examined the role of perfectionism in the suicidal ideation, potential/risk, and prior attempts of a sample of 150 children and adolescents presenting to an outpatient psychiatry unit for a range of psychological difficulties. In correlational analyses, self-oriented perfectionism was not associated with suicidal outcomes, whereas, socially prescribed perfectionism was related to suicidal ideation, potential/risk, and prior attempts. After controlling for depression and hopelessness in regression analyses, only socially prescribed perfectionism accounted for additional variance in suicidal ideation, potential/risk, and prior attempts.

To our knowledge, the above four studies represent the only direct empirical examinations of the relationship between perfectionism and suicide in youth. However, additional support for this connection can be drawn from other studies involving young suicide attempters. Donaldson, Spirito, and Farnett (2000) investigated the role of perfectionism and depressive cognitions, including dependency, self-criticism, and efficacy as measured by the Depressive Experiences Questionnaire for Adolescents (Blatt, Schaffer, Bers, & Quinlin, 1992), in the hopelessness expressed by 68 adolescents who had recently attempted suicide. Although the outcome variable of interest in this study was hopelessness, the findings speak to the importance of perfectionism as a risk factor for suicide in youth given that the participants had all recently attempted suicide. At a correlational level, socially prescribed perfectionism was the

only perfectionism dimension related to hopelessness in this group. Furthermore, regression analyses indicated that socially prescribed perfectionism was uniquely related to hopelessness beyond the effects of prior suicide attempts. These findings provide indirect support for the contention that perfectionism confers vulnerability to suicidal behaviour, given that hopelessness is a demonstrated risk factor for such outcomes (Levy, et al., 1995; Steer et al., 1993).

A longitudinal study carried out by Goldston and colleagues (Goldston et al., 2001) followed 180 adolescents for up to 6.9 years after their discharge from hospital. They obtained information about suicide attempts and completions, hopelessness, reasons for living, dysfunctional attitudes, and problem solving ability at the time of their hospitalization and semiannually thereafter. All participants were hospitalized for psychiatric reasons; however, not all of them had made prior suicide attempts. Dysfunctional attitudes were assessed using the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) and represented attitudes pertaining to need for approval, dependence, self-criticism, and perfectionism. It is important to note here that perfectionism as measured by the DAS is conceptualized as a dysfunctional attitude as opposed to Hewitt and Flett's (1991) conceptualization of perfectionism as a multidimensional personality trait. Although Goldston et al. (2001) did not examine the dysfunctional attitudes separately, their findings provide indirect general support for the importance of perfectionism in youth suicide as higher levels of dysfunctional attitudes were found among suicide attempters vs. non-attempters at the time of hospitalization.

The present review of the literature in this area generated only one study that failed to find a relationship between perfectionism and suicidal ideation among youth; however, the way in which perfectionism was measured likely contributed largely to this result. Gould and colleagues (Gould, King, Greenwald, Fisher, Schwab-Stone, Kramer, et al., 1998) assessed psychiatric disorders, levels of suicidal ideation and attempts, and four "noncriterion" variables previously linked to suicide in a large community sample of 1285 youth ages 9-17 years. One of

the noncriterion variables was viewed by the authors as “perfectionism” and was assessed using a four-item scale derived from the Anxiety Disorders module of the Diagnostic Interview Schedule for Children - Version 2.3 (DISC-2.3; Shaffer, Fisher, Dulcan, & Davies, 1996). These four items reportedly assessed participants’ degree of *worry* about schoolwork/job performance, making a mistake, performance in sports, and making a fool of themselves in front of others. It appears from the listing of these items that they more closely reflect generalized and social anxiety concerns (see DSM-IV; American Psychiatric Association, 1994) than perfectionism as it is typically conceptualized (Hewitt & Flett, 1991; Frost et al., 1990). As such, it is not surprising that “perfectionism” as measured by Gould et al. (1998) was not predictive of suicidal ideation or attempts in this sample.

As can be seen by the above review of initial research linking perfectionism to suicide in youth, much is still to be investigated and learned. Thus far, findings are consistent with those of the adult literature suggesting that some forms of perfectionistic behaviour may be risk factors for suicidal outcomes. More specifically, socially prescribed perfectionism appears to be correlated with suicidal ideation, potential, and attempts and to uniquely predict suicide outcomes beyond other risk factors. In contrast, self-oriented perfectionism does not appear to be associated with youth suicide as a main effect; however, some evidence of self-oriented perfectionism’s relevance to suicidal ideation among adults has been found. Additionally, as will be reviewed shortly, the relevance of self-oriented and socially prescribed perfectionism to suicide may best be seen in the context of stressful life experiences. Within this moderational relationship, perfectionism is one of two risk factors for suicidality as much research has established the role of stress in suicidal behaviour. The relationship between stress and suicide will be reviewed next, followed by a discussion of the moderational model and research that has previously investigated this conceptualization.

### *Stress and Suicidal Behaviour*

Considerable research has explored the link between stress and suicide and has consistently established stress as a risk factor for such behaviour in youngsters (see Brent, 1995; Callahan, 1993; Lewinsohn et al., 1996; Pfeffer, 1996; Sandin, Chorot, Santed, Valiente, & Joiner, 1998; Shaffer & Pfeffer, 2001; Wagner, 1997 for reviews). Cross-sectional investigations have demonstrated associations between the experience of stressful events of various types (e.g., conflict in relationships, school difficulties, loss of significant persons, moves, exposure to another's suicide, legal/disciplinary problems, etc.) and suicidal ideation (Adams & Adams, 1996; Asarnow, 1992; Dubow, Kausch, Blum, Reed, & Bush, 1989) and attempts in psychiatric and community samples (Beautrais, Joyce, & Mulder, 1996; Brent, Perper, Moritz, Baugher, & Allman, 1993; de Wilde, Kienhorst, Diekstra, & Wolters, 1992; Hawton, Fagg, Simkin, Bale, & Bond, 2000; Lewinsohn et al., 1996; Rubenstein, Heeren, Housman, Rubin, & Stechler, 1989; Pillay & Wassenaar, 1997; Wagner, Cole, & Schwartzman, 1995).

To illustrate, Rubenstein and colleagues (1989) examined risk factors for suicidal behaviour, defined as attempts to hurt or kill oneself, in 300 high school students. Twenty percent of their participants acknowledged engaging in suicidal behaviour during the prior year and these youngsters reported overall stress levels 33% higher than those who did not engage in such behaviour. Most predictive of suicidal behaviour over the 12 month period were stressors relating to sexuality, achievement pressure, and personal loss. Further analyses indicated that highly stressed adolescents were approximately six times more likely to engage in suicidal behaviour than were non-stressed youth, even when the effects of depression were controlled. Very similar findings were arrived at in a later attempt to replicate these results in another large sample of high school students (Rubenstein, Halton, Kasten, Rubin, & Stechler, 1998).

Research involving psychological autopsy or retrospective studies of individuals who completed suicide have often found lives punctuated with stressful experiences (Brent, Perper,

Moritz, Baugher, Roth, Balach, & Schweers, 1993; Shafii, Carrigan, Whittinghill, & Derrick, 1985; Shafii et al., 1988), particularly in the time shortly preceding the suicidal act (Hoberman & Garfinkel, 1988; Pillay & Wassenaar, 1997; Pfeffer, Klerman, Hurt, Kakuma, Peskin, & Siefker 1993). For instance, Brent and colleagues (1993) completed psychological autopsies focused on the connection between life stress and suicidal behaviour for 67 adolescents who completed suicide. They then compared this information with assessments of the same relationship among a community control sample of 67 adolescents matched on the demographic variables of age, gender, socioeconomic status, race, and place of residence. Compared to the community controls, suicide completers were more likely to have experienced stressors in the form of conflict in parental or romantic relationships, disruption of romantic relationships, and legal or disciplinary problems in the 12 months before their deaths. In a similar study of 20 adolescents who completed suicide, stressors involving the suicidal behaviour of a significant other or mistreatment from a parent/caregiver were also found to be more characteristic of the victims' experiences in the year preceding their deaths than those of the matched controls (Shafii et al., 1985; also see Shafii et al., 1988).

Speaking more directly to the nature of the role of stress in suicidal outcomes, longitudinal studies have provided support for a potential causal link. Pfeffer and colleagues (1993) conducted a longitudinal investigation of risk factors for future suicide attempts among a sample of 133 predominantly prepubertal youth. Children fell into one of four groups, inpatient suicide attempters, inpatient suicide ideators, nonsuicidal inpatients, and nonpatients, and were followed for 6-8 years after the initial assessment. The non-patient controls had no history of psychiatric care and were matched for age, gender, and ethnicity to the inpatient participants. Compared with non-patient controls, suicidal patients experienced greater degrees of life stress in the follow-up period and life stress was found to pose a risk for recurrence of suicide attempts during this time. Similarly, Lewinsohn and colleagues (1996) found that both major life events

and daily hassles were predictive of future suicide attempts in a representative sample of over 1500 high school students. The specific events that they found to be most predictive of these future attempts included conflict in relationships, suicidal behaviour of a relative/friend, substance use difficulties of relative/friend, moving, loss of relationship (i.e., through death, remarriage, break-up, etc.), and legal troubles.

In their ongoing 14-year longitudinal study of a community sample of children and adolescents, Reinherz, Giaconia, Silverman, Friedman, Pakiz, Frost, and Cohen (1995) investigated the implications of a number of stressful events occurring within the family for future suicidal ideation and attempts. For both males and females, the experience of family conflict and violence was predictive of suicidal ideation by age 15. Further analyses indicated that youth whose family environments were characterized by high levels of arguing and violence were approximately three times more likely to think about suicide than youth that did not experience this form of stress. Lastly, Fergusson and Lynskey (1995) followed a birth cohort of 954 children up to the age of 16 years and examined various risk factors for suicidal ideation and behaviour amongst this group. Stress in the form of childhood and family adversity was predictive of both suicide ideation and attempts later in life; however, attempters experienced significantly greater levels of these forms of stress.

Although the empirical findings reviewed thus far highlight the role of perfectionism and stressful experiences in suicidal behaviour and speak to the importance of considering these variables in assessing risk for suicide, they do not address the mechanism by which they are linked to suicidal outcomes. Consistent with Bolger and Zuckerman's (1995) proposition that reactions to stress are more relevant to negative adjustment outcomes than the sheer amount of stress experienced, the majority of work has explored a moderational model in which perfectionism is seen to exacerbate the impact of stress on the perfectionist.



### ***Perfectionism, Stress, and Suicidal Behaviour***

To date, support has been obtained for the notion that within a diathesis-stress model, perfectionism functions as the vulnerability factor that leads to maladjustment in the presence of stress among adults (see Hewitt & Flett, 2002 for a review). Although this research is beginning to examine suicidal behaviour, the bulk of it has focused on a different but related outcome: depression. Investigators have examined both a general diathesis-stress model and a more specific one in which different perfectionism dimensions are hypothesized to interact only with congruent stressors (i.e., achievement or self-related stressors for self-oriented perfectionists and interpersonal stressors for socially prescribed perfectionists) to lead to maladjustment. The premise behind the specific vulnerability model is that congruent stressors should negatively impact the perfectionist to a greater extent than general or non-congruent stressors because they are more threatening to central aspects of the self (Hewitt & Flett, 2002; Oatley & Bolton, 1985).

Although evidence is mixed when it comes to the specific vulnerability model (e.g., Hewitt & Flett, 1993; Hewitt, Flett, & Ediger, 1996; Joiner & Schmidt, 1995), several studies have shown that higher levels of self-oriented and socially prescribed perfectionism in combination with higher levels of any form of stress are associated with increased levels of concurrent depression in adults (see Hewitt & Flett, 2002 for a review). Furthermore, longitudinal investigations have indicated that both the self-oriented (Hewitt et al., 1996; Flett, Hewitt, Blankstein, & Mosher, 1995) and socially prescribed dimensions (Chang & Rand, 2000; Joiner & Schmidt, 1995) may function as vulnerability factors that interact with stress to predict future depressive experiences (also see Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000).

Only one study has examined the diathesis-stress model of perfectionism and depression in youth. Hewitt et al. (2002) examined the relationships between perfectionism, stress in the form of daily hassles, depression, anxiety, and anger in a community sample of 114 children and

adolescents. Although both self-oriented and socially prescribed perfectionism were associated with measures of maladjustment, only the self-oriented dimension interacted with hassles to predict increased levels of depression.

Similar levels of support for a diathesis-stress relationship between perfectionism, stress, and suicide have not yet been attained; however, preliminary results appear favorable. Sandin and colleagues (1998) proposed that in order to fully understand the nature of the relationship between stress and suicide, one must incorporate moderating and mediating variables into both theory and research. They add that the lack of incorporation of such variables may explain the small contribution of stress to the prediction of suicidal behaviour that is sometimes found despite consistent demonstrations of significant associations between these factors. Similarly, Pfeffer (1996) proposed a diathesis-stress model of suicide in children and adolescents whereby suicidal behaviour is an outcome of the transactional relationships between personality characteristics (e.g., perfectionism) of the youth and features of the environment (i.e., stress).

The findings of Hewitt et al. (1994) provide initial support for a diathesis-stress model involving perfectionism and suicide. They administered measures of perfectionism, negative life events, and suicidal ideation to a sample of 160 college students. For this sample, both self-oriented and socially prescribed perfectionism interacted with life events to predict increased suicidal thoughts; however, the interaction of self-oriented perfectionism and life stress was the stronger predictor. In the second study to explore this model in a sample of university students, Hewitt et al., (2002) examined the ability of perfectionism in conjunction with life events and daily hassles to predict suicidal ideation occurring 4 months in the future. These researchers found that only the socially prescribed perfectionism dimension interacted with both life events and hassles to predict increased levels of future suicidal ideation.

More recently, Caelian et al. (2004) tested a diathesis-stress model involving perfectionism and stress in the form of daily hassles. Participants included 150 children and

adolescents presenting to an outpatient psychiatric unit with heterogeneous mental health difficulties. Participants completed measures of perfectionism, daily hassles, suicidal ideation, suicide potential/risk, and prior suicide attempts. In regression analyses exploring the diathesis-stress model, neither self-oriented nor socially prescribed perfectionism interacted with hassles to predict suicide scores.

Although the evidence is mixed and minimal at present, it does, in conjunction with the diathesis-stress findings with depression discussed above, suggest that perfectionism may function as a vulnerability factor that leads to suicidal outcomes when the perfectionist experiences other risk factors such as stress. Much additional research is needed to determine with more certainty the validity of a diathesis-stress model to explain the relationship between perfectionism and suicide. It is particularly important to explore this model further among youth rather than assuming that findings in adult samples generalize to children and adolescents. Only 4 studies have addressed the relationship between perfectionism and youth suicide and all but one (Caelian et al., 2004) have focused on one aspect of suicide (e.g., ideation vs. attempts) in isolation. Prior studies have also investigated this relationship in heterogeneous clinical samples of youth and have not focused on populations at greatest risk for suicidal behaviour. Existing research has also been limited by the sole use of questionnaires in assessing variables of interest. Thus far, only one study has investigated the diathesis-stress model involving perfectionism and stress in youth suicide (Caelian et al., 2004). As the findings of this study contradict those in the adult literature (Hewitt et al., 1994, 2002), it is important to reassess the validity of this model among youth. The present study plans to extend prior research by addressing these limitations while investigating the role of perfectionism and stress in suicidality within a psychiatric sample of adolescents.

For the present study then, we shall investigate hypothesized links between self-oriented and socially prescribed perfectionism, stress in the form of daily hassles and major stressful

experiences, and suicidality operationalized as suicidal ideation, potential/risk, and prior attempts. As measured in this study, suicide ideation involves thoughts related to taking one's life. Suicide potential provides an overall measure of suicide risk by assessing a collection of risk factors for youth suicidality, including anxious-impulsive depression, suicidal ideation and acts, and family distress (Pfeffer, Jiang, & Kakuma, 2000). Lastly, suicidal behaviour will be assessed by asking adolescents if they have attempted suicide in the past.

As reviewed, self-oriented perfectionism has not consistently been found to be associated with maladjustment as a main effect but has been demonstrated to function as a vulnerability factor that contributes to dysfunction in the presence of stress (e.g., Hewitt et al., 1994, 1996, 2002). Thus, we expect that self-oriented perfectionism will not be associated with suicidal outcomes as a main effect but will interact with stress to predict suicide ideation, potential, and prior attempts. In contrast, socially prescribed perfectionism has consistently been shown to be linked to maladjustment as a main effect (e.g., Hewitt et al., 1997; Caelian et al., 2004) and to function as a vulnerability factor for dysfunction in the presence of stress (e.g., Hewitt et al., 1993, 1994; Joiner & Schmidt, 1995). In this study then, socially prescribed perfectionism is expected to be associated with suicidal outcomes and to predict additional variance in suicide ideation, potential/risk, and attempts after controlling for levels of depression and hopelessness. Furthermore, socially prescribed perfectionism is expected to interact with stress to account for unique variance in suicide outcomes.

In line with the efforts of Hewitt et al. (1998) to better understand the perfectionism-suicide link in specific clinical groups, the above hypotheses will be investigated in a group of clinically depressed adolescents. Such a group was selected for several reasons. First, as depression has been identified as one of the best predictors of youth suicidal behaviour (e.g., De Man, 1999; Dori & Overholser, 1999; Goldston et al., 2001), the base rate of suicidality is likely to be higher in a group of depressed youth than in those with other mental health concerns.

Additionally, focusing our study on adolescents rather than younger children should yield a higher base rate of suicidal behaviour (Leenaars et al., 1998; Health Canada, 1999; National Task Force, 1994) and provide findings relevant to a population of concern because of their heightened risk. Furthermore, as risk factors for suicide such as depression and hopelessness have already been established, it is important to determine whether other risk factors (i.e., perfectionism) contribute non-redundant information to the prediction of suicidality. Although hopelessness is generally regarded as a better predictor of suicide than depression among adults (e.g., Beck et al., 1985, 1993), findings with youth are mixed (De Man, 1999; Dori & Overholser, 1999; Goldston et al., 2001; Levy et al., 1995; Steer et al., 1993) and suggest that depression may be the better predictor (Shaffer & Pfeffer, 2001; Spirito et al., 2003). As each of the participants will be diagnosed with a depressive disorder, we will statistically control for the severity of depression in this group. Levels of hopelessness will also be measured and controlled in order to allow for a more stringent test of the predictive ability of perfectionism dimensions. Additionally, as it is possible that depression and hopelessness may interact with stress to lead to suicidality (Sandin et al., 1998), these relationships will be controlled in regression analyses.

In order to minimize reporting biases that can arise with sole reliance on questionnaire assessment measures, the present study will incorporate two interview methodologies. A wide range of psychopathology will be assessed among adolescents using a semi-structured diagnostic interview, the Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime Version (K-SADS-PL; Kaufman, Birmaher, Brent, Rao, & Ryan, 1996) in addition to relevant questionnaires. The same interview will be completed with parents and both sets of information will be drawn on to arrive at appropriate DSM-IV diagnoses. Stress will also be measured via questionnaire and interview methods, as described below.

It has been suggested in prior research on stress that both major life stressors (e.g., death of a family member) and daily hassles (e.g., being teased by peers) are important to assess when

investigating the relationship of stress to maladjustment (Adrian & Hammen, 1991; Compas, Davis, Forsythe, & Wagner, 1987; DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982). Furthermore, researchers have made reference to the difficulties inherent in assessing stress solely with lists of stressful experiences (Adrian & Hammen, 1991; Brown & Harris, 1978; Duggal, Malkoff-Schwartz, Birmaher, Anderson, Matty, Houck, et al., 2000). For instance, Adrian and Hammen (1991) noted that stress checklists are not sensitive to chronic or recurrent stressors and only capture exposure to a limited number of events. Additionally, although the perfectionism-stress relationship has been investigated numerous times (e.g., Hewitt & Flett, 1993; Flett et al., 1995; Joiner & Schmidt, 1995), existing research is limited by reliance on questionnaire measures of stress. Thus, to assess the occurrence of stress over the past year in the present sample, each adolescent and parent will individually complete a semi-structured stress interview, the Child Life Stress Interview (CLSI; Adrian & Hammen, 1991).

A methodological strength of the present study is the use of multiple measures of suicidality and multiple measures of stress. Three aspects of suicidality will be examined via assessment of suicidal thoughts, suicide potential, and prior attempts. In terms of stress, both daily hassles and major stressful experiences will be measured to capture a comprehensive picture of the levels of stress experienced by the adolescents in this study. Daily hassles will be measured by a self-report questionnaire providing insight into the adolescent's view of daily stress. The Child Life Stress Interview will assess both episodic (e.g., death of a loved one) and chronic stressful experiences (e.g., ongoing conflict with a parent) that have either an objective negative impact on the child or that pose an adjustment or coping challenge. Due to the requirements that an objective impact or coping challenge need to occur for an event to be considered a stressor with this protocol, the CLSI captures major life events and chronic stressors as opposed to daily hassles that are more typical events for adolescents. These will be referred to as major stressful experiences in further discussion of the analyses and results. For the CLSI, the

adolescent's report of major stressful experiences and an objective rating of the combined stress reported by the adolescent and his/her parent will be utilized. These two perspectives on levels of major stress will be referred to as subjective major stress ratings (adolescent report) and objective major stress ratings (those made by objective raters).

Regarding analyses, zero-order correlations will initially be computed in order to examine associations between the perfectionism dimensions and suicidal outcomes. To investigate the unique contribution of perfectionism dimensions to suicidal outcomes, hierarchical multiple regression analyses will be carried out. In each of these analyses, levels of depression and hopelessness will be controlled in order to allow for a more stringent assessment of perfectionism's contribution to suicidal ideation, potential, and attempts. Examination of the moderational model will also involve the use of hierarchical regression. In these analyses, depression and hopelessness levels will also be controlled, as will interactions between these variables and stress, and interaction terms (i.e., perfectionism-by-stress product vectors) will be entered on the final step to determine if they predict additional variance in suicide outcomes beyond that contributed by the other variables.

## **Methods**

Ethical approval for this study was obtained from the University of British Columbia Behavioural Research Ethics Board and the BC Research Institute for Children's & Women's Health Review Committee.

### ***Participants***

Fifty-five adolescents (14 males and 41 females), all of whom were inpatients (n=9) or outpatients (n=46) in the psychiatric wards of a large Canadian children's hospital, participated in this study. All participants had DSM-IV (American Psychological Association, 1994) diagnoses of depressive disorders, including Major Depressive Disorder (65.5%), Dysthymic

Disorder (16.4%), or Depressive Disorder NOS (18.2%) as assessed by the K-SADS-PL (Kaufman et al., 1996). Regarding comorbid diagnoses, 29.1% of participants had a comorbid anxiety disorder, 7.3% had a comorbid behavioural disorder, 5.5% had a comorbid substance use disorder, and 1.8% had a comorbid eating disorder.

Participants ranged in age from 13 to 19 years ( $M = 15.53$ ;  $SD = 1.43$ ) and were in grades 7 through first year post-secondary. In terms of living situations, 78.2% of participants lived at home with two parents compared to 20% who lived in single parent households<sup>3</sup>. When asked to describe their ethnicity or cultural background, the majority of respondents described themselves as Caucasian (74.5%) or Asian (10.9%). At the time of the study, 52.7% of adolescents were taking prescription medications for mental health concerns. Excluded from the project were individuals with current psychotic symptoms or developmental difficulties that impaired their ability to complete the study.

One parent/guardian<sup>4</sup>, including fifty mothers and four fathers in total, participated along with each adolescent in the study. Parents ranged in age from 30 to 58 years ( $M = 46$ ;  $SD = 5.77$ ). In terms of marital status, 78.2% of parents were married or cohabiting, whereas, 20% were either single, divorced/separated, or widowed. Regarding parental education level, 20% of parents completed high school, 25.5% completed college or technical school, 34.5% completed undergraduate university degrees, and 12.7% completed graduate degrees.

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<sup>3</sup> Note that these percentages do not add up to one hundred as one adolescent participant was an emancipated minor and therefore did not live with a parent. Other demographics presented below also reflect the absence of one parent.

<sup>4</sup> Parents/guardians will be referred to as parents from this point onward for ease of expression.



## ***Measures***

### **A. Interview Assessment**

#### **i) Parent and Youth Measures**

Schedule for Affective Disorders and Schizophrenia for School-Age Children - Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1996).

The K-SADS-PL is a semi-structured diagnostic interview that assesses current and lifetime episodes of psychopathology in children and adolescents according to DSM-III-R and DSM-IV criteria (only those for DSM-IV were used in the present study). Administering the K-SADS-PL involves interviewing both the child/adolescent in question and a parent/caregiver and arriving at summary ratings based on all of the information available about the youth. The majority of K-SADS-PL items are rated on a 4-point scale where a score of 0 is given when no information is available, a score of 1 indicates that the symptom is not present, a score of 2 is granted to subthreshold levels of symptomatology, and a score of 3 reflects symptoms meeting threshold criteria. If threshold criteria are met for any of the symptoms in the screening interview, a supplemental interview is completed in order to elicit enough information to determine if a diagnosis is warranted. High interrater and test-retest reliability have been established for diagnoses made with the K-SADS-PL, particularly for depressive disorders. Satisfactory concurrent validity has also been demonstrated (Kaufman, Birmaher, Brent, Rao, Flynn, Moreci, et al., 1997; Kaufman et al., 1996).

For the present study, all diagnostic interviews were conducted by an advanced psychology graduate student or a BA-level psychology student trained in clinical interviewing and the administration of the K-SADS-PL. In line with other similar methodologies (e.g., Esposito & Clum, 2002), satisfactory interrater reliability was established by comparing symptom ratings ( $ICC = .97$ ), presence of diagnosis (100% agreement), and specific assigned diagnoses (86% agreement) from two interviewers for 10% of the interviews. These interviews

were completed with both interviewers present for the interview and the second rater making independent ratings of each symptom and diagnosis. Discrepancies are often encountered between parent and adolescent reports of psychopathology (Duhig, Renk, Epstein, & Phares, 2000; Jensen, Rubio-Stipec, Canino, Bird, Dulcan, Schwab-Stone et al., 1999) and research has generally found that simple procedures for combining discrepant reports are just as effective as complex schemes (e.g., Bird, Gould, & Staghezza, 1992; Piacentini, Cohen, & Cohen, 1992). Thus, for the present study, symptoms were counted as present if either the parent or adolescent endorsed them. If different diagnoses were arrived at based on parent vs. adolescent report (e.g., major depressive disorder vs. dysthymia), the discrepancy was resolved by using the diagnosis arrived at independently by the adolescent's psychiatrist.

Child Life Stress Interview (CLSI; Adrian & Hammen, 1991).

The Child Life Stress Interview is a semi-structured interview that assesses overall stress levels, including both episodic and chronic stress, occurring for children and adolescents over the past 12 months. This measure assesses stress experienced in 12 content areas: family life, friends, pets, school (academic and non-academic issues), health, neighbourhood, activities (i.e., teams, groups, jobs), moves, accidents, thefts or material losses, finances, interactions with authorities (i.e., police) and legal matters, and major disappointments. The interviewer begins with general queries about difficulties in each area and progresses to more specific questions for events that occurred for the respondent. Interviews are completed separately with the child/adolescent and his/her parent.

In the present study, two sets of stress scores were utilized: 1) adolescent reported stress (subjective major stress ratings) and 2) objectively determined adolescent stress (objective major stress ratings). Adolescents' own ratings were utilized to capture the subjective nature of stressful events, recognizing that an event that is stressful for one teen may not be stressful for the next (e.g., Lazarus, 1998). Objective stress ratings were utilized in order to provide

consistency in ratings across stressful events and across participants and minimize the confounding effects of depression on the perception and reporting of stress (Brown, 1989; Brown & Harris, 1978; Monroe & Simons, 1991). These ratings were arrived at by a team of two raters, both of whom were advanced graduate students in clinical psychology, who judged whether an event was a stressor or not. To be counted as a stressor, the event had to have an objective negative impact on the adolescent or result in a coping or adjustment challenge. For the objective ratings, all stressful events reported by the adolescent and his/her parent were considered. If the raters disagreed on whether an event was stressful, that event was excluded from analyses. Raters were blind as to the assignments of the other rater.

When developed, interrater agreement for the Child Life Stress Inventory was satisfactory at 98% for decisions of whether an event was a stressor or not. For the present study, 97% agreement ( $\kappa = .80$ ) was achieved for such decisions.

## **B. Self-Report Assessment**

i) **Youth Measures** (see Appendix, pg. 103, for measures):

Child-Adolescent Perfectionism Scale (CAPS; Flett et al., 2002).

The CAPS is a 22-item measure that assesses self-oriented and socially prescribed perfectionism in children and adolescents with a minimum Grade three reading level. Items are rated on a five-point Likert type scale (where 0 = false/not at all true of me and 5 = very true of me) and higher scores reflect greater perfectionism. The multidimensional nature of the CAPS, specifically that it is comprised of two factors that collectively measure social and personal aspects of perfectionism, was confirmed via factor analysis (Flett et al., 2002). Internal consistency was acceptable at  $\alpha = .85$  for self-oriented perfectionism and  $\alpha = .81$  for socially prescribed perfectionism. Test retest reliability was found to be adequate over a period of 5 weeks ( $r = .74$  for self-oriented and  $r = .66$  for socially prescribed perfectionism). Evidence for

concurrent and discriminant validity was obtained as both self-oriented and socially prescribed perfectionism related in expected ways to measures of locus of control, reasons for academic striving, and psychopathology. Significant relationships between perfectionism as measured by the CAPS and by the perfectionism scale of the Eating Disorders Inventory (Garner, Olmstead, & Polivy, 1983) provided evidence for construct validity.

Children's Hassles Scale (CHS; Kanner, Feldman, Weinberger, & Ford, 1987).

The CHS consists of 25 common situations that children or adolescents may experience (e.g., "Your schoolwork was too hard", "You didn't do well at sports") and requires respondents to indicate whether each hassle occurred within the past month. For hassles that were experienced, respondents rate how badly each hassle made them feel from "Didn't feel bad" to "Felt very bad". For this scale, scores can be obtained for the total number of hassles experienced and/or for the overall intensity of the hassles experienced (i.e., sum of the ratings of how badly the hassles made the respondent feel). For the present study, the total number of hassles experienced was used in analyses. Internal consistency for the CHS was found to be acceptable ( $\alpha = .87$ ) and evidence for construct validity was obtained (Kanner et al., 1987) with findings of positive relationships between the CHS and maladjustment (e.g., anxiety, depression) and negative relationships between the CHS and positive outcomes (e.g., self-worth, social competence).

Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1987).

The BDI-II is a 21-item inventory that assesses severity of depression in adults and youth aged 13 years and onward. As the participants in the current study ranged in age from 13-19 years, the BDI was chosen as the appropriate measure of depression for this sample as the Children's Depression Inventory (Kovacs, 1983) is only considered suitable for children from 7-17 years of age. To complete the BDI, respondents are asked to select the statement(s) that best reflect(s) the way they have been feeling over the past 2 weeks. Symptoms are assessed with a

4-point rating scale for which a rating of zero indicates that a symptom is not present (“I do not feel sad”) and a rating of three indicates the most severe form of a symptom (“I am so sad or unhappy that I can’t stand it”). Higher scores reflect greater depression to a maximum score of 63. Beck et al. (1987) suggest that scores from 14-19 indicate mild depression, those from 20-28 reflect moderate depression, and those from 19-63 indicate severe depression. The BDI-II is a widely used measure of depressive symptoms for which validity and reliability have been demonstrated for adults and adolescents (Beck et al., 1987; Osman, Kopper, Barrios, Gutierrez, & Bagge, 2004). In the present study, scores on the suicide item of the BDI (item #9) were subtracted from participants’ total scores and the new total was used in analyses predicting suicidal outcomes.

Hopelessness Scale for Children (HSC; Kazdin, Rodgers, & Colbus, 1986).

The HSC is comprised of 17 items that measure feelings of hopelessness among youth with a minimum second grade reading level. Respondents rate whether or not each item is true of them and higher scores are reflective of higher levels of hopelessness or pessimism about the future. Adequate internal consistency ( $\alpha = .97$ ), test-retest reliability ( $r = .52$  over 6 weeks), and convergent and divergent validity have been demonstrated with children (Kazdin et al., 1986) and similar psychometric properties have since been demonstrated with adolescents (Spirito, Williams, Stark, & Hart, 1988).

Suicidal Ideation Questionnaire (SIQ; Reynolds, 1987).

The SIQ consists of 30 items intended to assess thoughts about suicide in adolescents and young adults during the past month. Respondents rate the frequency with which each thought occurred to them on a 7-point Likert type scale ranging from never having the thought to having the thought almost every day. Higher scores reflect greater suicidal ideation. Internal consistency reliability is high ( $\alpha > .95$ ) and test-retest reliability is moderate ( $r = .72$ ) over 4

weeks, a finding that is consistent with the state nature of the scale. Evidence has also been found for construct validity as SIQ scores were positively related to measures of depression, hopelessness, anxiety, and stress and negatively related to measures of self-esteem and social support (Reynolds, 1987).

#### Child-Adolescent Suicide Potential Index (CASPI; Pfeffer et al., 2000).

The CASPI consists of 30 items intended to assess overall risk for suicidal behaviour in children and adolescents. The risk variables assessed comprise three broad domains, including anxious-impulsive depression, suicidal ideation and acts, and family distress. Respondents read each statement and rate whether or not it was true of them (YES vs. NO) during the past 6 months. Internal consistency for this scale was demonstrated to be acceptable ( $\alpha = .90$ ) and test-retest reliability was found to be adequate ( $r = .76$  over a period of 2 weeks). Expected associations with other related constructs (e.g., depression, hopelessness) provided evidence of the scale's convergent validity and its ability to distinguish between youth with different levels of suicidal behaviour provided evidence of discriminant validity (Pfeffer et al., 2000).

#### Prior Suicide Attempts

To measure prior suicidal attempts, participants were asked: "Have you ever attempted to kill yourself?" and rated their response on a scale from 0 (never) to 3 (very often). This approach to measuring prior suicide attempts has been used previously in a similar study with children and adolescents (Caelian et al., 2004).

#### ***Procedure***

All participants were patients of either the Mood Disorders Clinic of the outpatient psychiatry unit or of the inpatient psychiatry unit at a large children's hospital. Patients between the ages of 13-19 and presenting with symptoms of a depressive disorder were identified via chart review and intake interview and asked to participate in the study. The nature of the study was explained as was its voluntary and confidential nature. It was also made clear that

participation in the study was separate from families' original reasons for visiting the units and that a decision not to participate would have no effect on their existing assessment/treatment. If agreeable, adolescents were given a questionnaire booklet to complete and a second session was arranged at which to complete the K-SADS-PL and Child Life Stress Interview. The adolescents completed measures of perfectionism, depression, hopelessness, stress, and suicidal behaviour.

At the next meeting, adolescents were interviewed separately from their parents regarding symptoms of psychopathology using the K-SADS-PL and stressful experiences using the Child Life Stress Interview. Parent interviews were completed either in person or over the phone to accommodate family schedules. For a few adolescent participants, parent interviews were not conducted (e.g., emancipated minor, parent who did not speak English). Upon completion of the interviews and return of the questionnaire booklets, adolescents were provided with a small honorarium in appreciation for their time. Parents were also reimbursed for parking costs incurred while participating in the study.

## **Results**

### ***Descriptive Statistics***

The means and standard deviations for measures of perfectionism, hassles, subjective major stress ratings, objective major stress ratings, depression, hopelessness, suicidal ideation, suicide potential, and suicide attempts are presented in Table 1. Cronbach's alpha coefficients for each scale are also reported and were found to be adequate for each scale.

### ***Preliminary Analyses***

Independent samples t-tests were conducted to examine mean differences for predictors and outcome measures on categorical demographic variables. No significant differences were found between male and female adolescents for any predictor or outcome variable. Significant differences were found between outpatients and inpatients for levels of depression [ $t(53) =$

-2.53;  $p < .05$ ], hopelessness [ $t(53) = -3.14$ ;  $p < .01$ ], and suicidal ideation [ $t(51) = -8.22$ ;  $p < .001$ ]. These differences were in the expected direction with inpatients scoring higher than outpatients on the three measures. Due to these differences, patient status (i.e., inpatient vs. outpatient) was controlled in all regression analyses. Differences between ethnic groups were not examined due to the small sample sizes of the non-Caucasian groups. For the continuous demographic variable, adolescent age, correlations between participant age and outcome variables were examined and no significant associations were found. Considering the above findings, it was considered appropriate to analyze data for the entire sample together.

For correlational analyses, bivariate scatterplots were examined for the presence of curvilinear relationships and none were evident. For regression analyses examining main effects, studentized residuals, leverage values, and Cook's Distance were all examined for multivariate outliers, none of which were found (Tabachnick & Fidell, 2001). Scatterplots of residuals were also examined to evaluate assumptions of normality, linearity, and homoscedasticity between predicted scores and residuals. No significant violations of these assumptions were evident. For regression analyses examining the moderational model, predictor variables were centered (i.e., the mean of each variable was subtracted from the individual observations) before conducting the regression analyses to reduce collinearity between the individual variables and their cross products (Cohen, Cohen, West, & Aiken, 2003). As in the prior regression analyses, studentized residuals, leverage values, and Cook's Distance were again examined for multivariate outliers, none of which were found (Tabachnick & Fidell, 2001).

### ***Correlational Analyses***

Zero-order correlations between perfectionism, stress, depression, hopelessness, and aspects of suicidal behaviour are presented in Table 2. A more conservative alpha level of .01 was used to determine statistical significance for all correlations due to the number of analyses conducted and the potential for Type 1 error rate inflation.



### Self-Oriented Perfectionism

As expected and consistent with other research (e.g., Caelian et al., 2004; Enns et al., 2003; Hewitt et al., 1997), self-oriented perfectionism was not correlated with any aspect of suicidality in this sample.

### Socially prescribed perfectionism

Also in line with predictions, socially prescribed perfectionism was positively associated with suicide potential or risk. In contrast with our expectations, this dimension was not significantly correlated with suicidal ideation or prior attempts.

## ***Hierarchical Regression Analyses***

### ***Main Effects***

Hierarchical regression analyses were performed in order to explore whether perfectionism predicted unique variance in suicidal ideation, potential/risk, or prior suicide attempts beyond the effects of depression and hopelessness (see Table 3). In each of these regression analyses, depression and hopelessness were entered at Step 1 to control for their contributions to suicide outcomes. Patient status (inpatient vs. outpatient) was also entered on the first step. At Step 2, self-oriented perfectionism and socially prescribed perfectionism were entered. An alpha level of .05 was used to determine statistical significance for all of the main effect regression analyses.

### Suicidal Ideation

After controlling for depression and hopelessness, neither perfectionism dimension accounted for unique variance in suicidal ideation.

### Suicide Potential

As with suicidal ideation, self-oriented perfectionism did not predict unique variance in suicide potential once depression and hopelessness were controlled. In line with expectations, socially prescribed perfectionism did predict unique variance in this aspect of suicidality

after controlling depression and hopelessness.

### *Suicide Attempts*

In contrast with predictions, neither self-oriented nor socially prescribed perfectionism predicted unique variance in prior suicide attempts once depression and hopelessness were controlled. Interestingly, of the controlled variables, depression did not predict unique variance in prior attempts and hopelessness only approached significance as a unique predictor.

### ***Moderational Model***

Next, the diathesis-stress model by which perfectionism is hypothesized to interact with stressful experiences to predict suicidal outcomes was investigated. As in the prior regression analyses, depression, hopelessness, and patient status were entered at Step 1 to control for their contributions to suicidality. Next, the depression by stress and hopelessness by stress interaction terms (i.e., the cross products of the variables) were entered at Step 2. The perfectionism dimension and type of stress were entered at Step 3. Finally, the perfectionism by stress interaction term was entered at Step 4. Interactions were evaluated against a relaxed alpha level of .15 to determine statistical significance due to the well-documented difficulties in finding significant interactions in non-experimental designs and to protect against Type II error (McClelland & Judd, 2003; Pedhazur, 1982).

### *Suicidal Ideation*

#### *Subjective Major Stress Ratings*

In contrast to study predictions, neither self-oriented nor socially prescribed perfectionism interacted with subjective major stress ratings to predict suicidal ideation (see Table 4).

#### *Objective Major Stress Ratings*

The interaction between self-oriented perfectionism and objective major stress ratings was not significant but showed a trend toward significance in predicting suicidal thoughts (see

Table 5). Socially prescribed perfectionism did not interact with objective major stress ratings to predict suicidal ideation (see Table 5).

#### *Daily Hassles*

Neither self-oriented nor socially prescribed perfectionism interacted with daily hassles to predict suicidal ideation (see Table 6).

### *Suicide Potential*

#### *Subjective Major Stress Ratings*

Self-oriented perfectionism did not interact with subjective major stress ratings to predict suicide potential (see Table 7).

Consistent with study hypotheses, socially prescribed perfectionism interacted with subjective major stress ratings to predict suicide potential (see Table 7). In order to clarify the nature of this interaction, a simple slope analysis was carried out whereby the slopes of the regression of suicide potential on socially prescribed perfectionism at three levels of subjective major stress were calculated. As suggested by Cohen et al. (2003), the levels of stress were set at 1 SD below the mean (low), the mean (medium), and 1 SD above the mean (high). The simple slope analysis revealed that the slopes for the medium ( $\beta = .25, t = 2.10, p < .05$ ) and high levels ( $\beta = .49, t = 2.36, p < .05$ ) of subjective major stress were significant but that the low level was not. Thus, for adolescents who perceive that they are experiencing medium to high levels of major stressful events, suicide potential levels increase as levels of socially prescribed perfectionism increase (see Figure 1).

#### *Objective Major Stress Ratings*

As with the subjective major stress ratings, self-oriented perfectionism did not interact with objective major stress ratings to predict suicide potential (see Table 8).

Again, support for study predictions was obtained with socially prescribed perfectionism, which interacted with objective major stress ratings to predict suicide potential (see Table 8). To interpret the nature of this interaction, a simple slope analysis was carried out whereby the slopes of the regression of suicide potential on socially prescribed perfectionism at three levels of objective major stress were calculated. As before, the levels of stress were set at 1 SD below the mean (low), the mean (medium), and 1 SD above the mean (high; Cohen et al., 2003). The simple slope analysis revealed that the slopes for the medium ( $\beta = .23$ ,  $t = 1.92$ ,  $p < .10$ ) and high levels ( $\beta = .41$ ,  $t = 2.30$ ,  $p < .05$ ) of objective major stress were significant but that the low level was not. These results indicate that suicide potential levels increase as socially prescribed perfectionism increases for adolescents experiencing medium to high levels of major stress as determined by objective raters (see Figure 2).

#### *Daily Hassles*

As predicted, self-oriented perfectionism interacted with daily hassles to predict suicide potential or risk among depressed adolescents (see Table 9). Again, in order to clarify the nature of this interaction, a simple slope analysis was carried out whereby the slopes of the regression of suicide potential on self-oriented perfectionism at three levels of hassles were calculated. The levels of stress were again set at 1 SD below the mean (low), the mean (medium), and 1 SD above the mean (high; Cohen et al., 2003). The simple slope analysis revealed that the slope for the high level of hassles was significant ( $\beta = .29$ ,  $t = 1.78$ ,  $p < .10$ ), whereas, the slopes for the low and medium levels were not. Thus, suicide risk increased as levels of self-oriented perfectionism increased only for adolescents who experienced high levels of daily hassles (see Figure 3).

Also in line with our predictions, socially prescribed perfectionism interacted with daily hassles (see Table 9) to predict suicide potential or risk. To clarify the nature of this interaction,

a simple slope analysis was carried out in which the slopes of the regression of suicide potential on socially prescribed perfectionism at three levels of daily hassles (1 SD below the mean, the mean, and 1 SD above the mean; Cohen et al., 2003) were calculated. The simple slope analysis revealed that the slopes for the medium ( $\beta = .19$ ,  $t = 1.84$ ,  $p < .10$ ) and high ( $\beta = .56$ ,  $t = 3.60$ ,  $p < .05$ ) levels of hassles were significant but that the slope for the low level was not. These results indicate that suicide risk increases as levels of socially prescribed perfectionism increase among youth experiencing medium to high levels of daily hassles (see Figure 4).

### *Suicide Attempts*

In contrast to predictions, neither self-oriented nor socially prescribed perfectionism interacted with any form of stress to predict prior suicide attempts (see Tables 10-12).

## **Discussion**

This study examined the relationships between perfectionism, stress, and aspects of suicidality in a clinical sample of depressed adolescents. Specifically, the present study sought to determine whether self-oriented and socially prescribed perfectionism were correlated with suicidal ideation, potential, and attempts and whether these perfectionism dimensions predicted additional variance in these outcome measures beyond that accounted for by other risk factors. Additionally, a moderational model was examined in which self-oriented and socially prescribed perfectionism were hypothesized to interact with stressful experiences to predict suicide outcomes. Depressed adolescents were selected as the participant group due to their increased risk for suicidality given their age and the nature of their mental health difficulties. Because depression, and arguably hopelessness, are well-established risk factors for suicide among adolescents, the contributions of these variables to the prediction of suicide risk were controlled. This allowed for more stringent tests of the ability of perfectionism to add meaningful information to the prediction of suicide risk among youth.

Results indicate that self-oriented perfectionism was not correlated with or predictive of unique variance in any suicide outcome assessed in the present study. In contrast, socially prescribed perfectionism was correlated with suicide potential and predicted additional variance in this outcome once depression and hopelessness were controlled. Tests of the moderational model indicated that self-oriented perfectionism interacted with stress in the form of daily hassles to predict suicide potential. Additionally, socially prescribed perfectionism interacted with daily hassles and major stressful experiences to predict suicide potential. Neither self-oriented nor socially prescribed perfectionism interacted with stress to predict suicidal ideation or prior attempts. These findings and the implications of them are discussed in greater detail below.

### ***Perfectionism and Suicide***

Findings with self-oriented perfectionism were in line with predictions and consistent with previous results. As in prior research (e.g., Boergers et al., 1998; Donaldson et al., 2000; Enns et al., 2003; Hewitt et al., 1997), self-oriented perfectionism was not correlated with any of the suicide outcome measures and did not predict unique variance in these outcomes after controlling for depression and hopelessness. These findings provide further support for the position that self-oriented perfectionism is not linked to forms of maladjustment as a main effect, as has been demonstrated in research with adults and youth. Although this main effect relationship does not appear to exist, this does not mean that self-oriented perfectionism is not relevant to suicidality in youth. As will be discussed shortly, self-oriented perfectionism may best be viewed as a diathesis that is activated by stress to lead to suicide in this population.

In terms of socially prescribed perfectionism, findings that were consistent with predictions and prior research were found; however, surprising findings also surfaced. Specifically, this dimension was positively associated with suicide potential or risk as expected and as has been demonstrated in initial research with youth (Caelian et al., 2004); however, a

significant relationship was not found between socially prescribed perfectionism and suicidal ideation or attempts in this sample. This is in contrast to expectations and prior research linking socially prescribed perfectionism to suicidal thoughts (e.g., Hewitt et al., 1997; Caelian et al., 2004) and attempts (Boergers et al., 1998; Caelian et al., 2004). Several possible reasons exist for the nonsignificant relationship between these variables.

One possible reason relates to a difference in the nature of the participant sample in the present study versus those that have found a significant relationship between socially prescribed perfectionism and suicidal thoughts or attempts. The present study is the first to examine this relationship in a sample of clearly diagnosed clinically depressed adolescents as opposed to heterogeneous clinical samples of youth. It is possible that socially prescribed perfectionism is not correlated with suicidal ideation and attempts among depressed youth. This conclusion seems unlikely because it is not consistent with theory (e.g., Hewitt & Flett, 1991; Hewitt et al., in press) or prior research that has established a connection between this perfectionism dimension and these suicide outcomes (Caelian et al., 2004; Hewitt et al., 1997). Alternatively, it is possible that the variability in suicidal ideation and attempt scores was lower in the present sample in which all participants were depressed compared to samples that are heterogeneous with regard to types of mental health difficulties. If this were true, it may have made it more difficult to find a significant relationship between the variables. This possibility was investigated by comparing the standard deviation for the suicidal ideation measure within the present sample with that of Hewitt and Flett (1997) and Caelian et al. (2004). More variability in suicidal ideation scores was found in the Hewitt and Flett (1997) sample of inpatients with heterogeneous diagnoses; however, less variability was found in the Caelian et al. (2004) sample of outpatients with heterogeneous diagnoses. As both of these studies found significant associations between socially prescribed perfectionism and suicidal ideation, it does not seem that low variability in scores accounts for the lack of a significant finding in the present study. Regarding suicide

attempts, the range of scores was greater in the present sample than in that of Caelian et al., 2004, again suggesting that restricted variability does not explain the present findings. One other factor that may have contributed to the lack of association between these variables in this study is the small sample size, which also reduces the likelihood of detecting significant findings. That said, the correlations between socially prescribed perfectionism and suicidal ideation and between socially prescribed perfectionism and suicide attempts in this study were not close to significant ( $p = .19$  and  $p = .68$ , respectively), which suggests that additional participants may not have led to a significant relationship. As these are unexpected findings, the explanation for which is unclear, it will be important to examine these relationships again in similar samples to determine whether they are replicable.

Also consistent with expectations and prior research, socially prescribed perfectionism predicted unique variance in suicide potential once depression and hopelessness were controlled. As depression and hopelessness are well-established risk factors for suicidality, controlling for their contributions to the prediction of suicide outcomes was a very stringent test of the ability of socially prescribed perfectionism to predict additional variance. This indicates that knowledge of a depressed adolescent's level of socially prescribed perfectionism adds uniquely to the prediction of suicide risk or potential beyond being depressed or feeling hopeless. This finding is consistent with those of prior research with adults (e.g., Dean & Range, 1999; Hewitt et al., 1994, 1998) and youth (Caelian et al., 2004; Hewitt et al., 1997) in which socially prescribed perfectionism predicted unique variance in suicide outcomes in non-clinical and heterogeneous clinical samples.

This finding is also consistent with theory (Hewitt & Flett, 1991) that proposes that individuals high in socially prescribed perfectionism are vulnerable to outcomes such as suicide because they strive to meet the unrealistic standards of others and rely on feedback from others to determine their self-worth. When they do not meet these high standards, socially prescribed



perfectionists may experience a social form of hopelessness upon realizing that the standards cannot be achieved but also cannot be changed since they are external to the person (Hewitt & Flett, 2002). This may then lead to feelings of alienation or disconnection from others and the perception of low social support that place the individual at risk for suicide (Hewitt et al., in press). Adolescents may be especially vulnerable to the effects of socially prescribed perfectionism as they are developmentally more preoccupied with the opinions of others (Harter, 1999) and may not yet have internalized their own standards. Additionally, as adolescents are particularly invested in being accepted and valued by their peers (Group for Advancement of Psychiatry, 1996), the perception that they do not meet the expectations of their peer group may contribute to feelings of alienation and lack of support that increase suicide risk.

The findings that socially prescribed perfectionism did not predict unique variance in suicidal ideation or attempts were unexpected in this study. These results contradict those of prior research in which socially prescribed perfectionism predicted unique variance in suicidal ideation (e.g., Caelian et al., 2004; Hewitt et al., 1997) and attempts (e.g., Caelian et al., 2004; Hewitt et al., 1998) in clinical samples of youth. One reason for the lack of significant relationships here may be the nature of the present sample as it was comprised of a homogeneous group of depressed adolescents in contrast to the other studies which involved youth with a range of mental health difficulties. It is also possible that among depressed youth, the belief that one needs to meet the unrealistic standards of important others does not increase risk for suicidal thoughts and attempts on its own. Perhaps for this group, socially prescribed perfectionism is a diathesis that requires the presence of stress in order to increase the likelihood of suicidal behaviour.

## ***Perfectionism, Stress, and Suicide***

### *Self-Oriented Perfectionism*

In line with Hewitt and Flett's (2002) diathesis-stress model and the predictions that stemmed from it, self-oriented perfectionism interacted with stress in the form of daily hassles to predict suicide potential or risk in this study. These findings are also consistent with those of prior research with adults (e.g., Hewitt et al., 1993, 1994, 1996) and initial work with youth (e.g., Hewitt et al., 2002) in which self-oriented perfectionism interacted with stress to lead to outcomes such as depression and suicidal thoughts.

The results of this study provide further support for the conceptualization of self-oriented perfectionism as a vulnerability factor that leads to maladjustment, in this case suicide risk, in the presence of stress. Taken together, the nonsignificant correlations between self-oriented perfectionism and the suicide outcome variables and the significant interaction between self-oriented perfectionism and daily hassles satisfy the characteristics of an ideal personality vulnerability factor according to Coyne and Whiffen (1995). These authors posit that a vulnerability factor (i.e., self-oriented perfectionism) should demonstrate low or nonsignificant correlations with the current level of the outcome variable of interest (i.e., suicide) because the diathesis alone is not sufficient to result in the outcome; the presence of the moderator (i.e., stress) is required. This particular study suggests that adolescents who strive to meet their own unrealistically high standards are at increased risk for suicide when they experience high levels of daily hassles. As proposed by Hewitt and Flett (2002), the experience of stress may disrupt the self-oriented perfectionist's need for control and make salient the discrepancies between the perfectionist's goals and current level of performance. The self-oriented perfectionist may also magnify the importance of the stressful events and may view them as indications of his/her worthlessness. In the case of daily hassles, the stressors may not be as intense as major life events but they occur much more frequently and may affect more domains of the perfectionist's

life. The resulting frustration, worthlessness, and lack of control the self-oriented perfectionist feels may place him/her at increased risk for suicide.

A surprising finding regarding self-oriented perfectionism was that it did not interact with major stressful experiences measured by subjective or objective ratings to predict suicide outcomes. This perfectionism dimension has been found to interact with life events to predict suicidal ideation (Flett et al., 1995; Hewitt et al., 1994) among student samples. Prior to the present study, the perfectionism-by-life-events stress interaction to predict suicidality has not been investigated in youth. Several possible explanations exist for the lack of findings here. First, others have found that stress in the form of daily hassles is more relevant to negative outcomes than are major life events (DeLongis et al., 1982; Monroe, 1983) and perhaps that is what is demonstrated here with self-oriented perfectionism. Additionally, the present research investigated the self-oriented perfectionism and major stress link in a sample of depressed adolescents, in contrast to the samples of Flett et al. (1995) and Hewitt et al. (1994) that were comprised of college students. Perhaps self-oriented perfectionism and major stressful experiences do not have a moderational relationship among depressed youth. Furthermore, major life stress was measured via an interview in the present study, whereas, daily hassles were assessed via questionnaire. Additionally, in the adult research that detected a significant interaction between self-oriented perfectionism and life events (Flett et al., 1995; Hewitt et al., 1994), stress was only measured via questionnaire. Perhaps differences in assessment methodology account for the difference in findings. It will be important to explore this relationship again in future studies with clinical samples to determine its replicability.

Also surprising was the failure of self-oriented perfectionism to interact with any form of stress to predict suicidal ideation or attempts. This contradicts expectations based on theory (Hewitt & Flett, 2002) and prior research in which this dimension interacted with life events stress to predict suicidal ideation (Hewitt et al., 1994). The only study to examine these

relationships in youth thus far also did not find a significant interaction between self-oriented perfectionism and daily hassles to predict ideation or attempts (Caelian et al., 2004). It is possible that self-oriented perfectionism is a vulnerability factor for overall suicide risk but not for ideation or attempts specifically. It is also possible that among depressed adolescents, self-oriented perfectionism does not predict unique information in suicidal thoughts or attempts. It will be important to reassess the diathesis-stress model involving perfectionism and suicidal ideation and attempts among youth in future research before concluding that self-oriented perfectionism is not relevant to ideation and attempts in this group.

### *Socially Prescribed Perfectionism*

Additional support for the diathesis-stress model (Hewitt & Flett, 2002) was obtained with socially prescribed perfectionism as this dimension was found to interact with daily hassles and both subjective and objective major stress ratings to predict suicide potential or risk. Specifically, socially prescribed perfectionism in the presence of medium to high levels of daily hassles or major stressful experiences predicted increased suicide risk among depressed teenagers. This finding is consistent with those of prior studies with adults (e.g., Hewitt et al., 1993, 1994; Joiner & Schmidt, 1995) in which socially prescribed perfectionism interacted with stress to predict depression and suicidal thoughts. Then again, the present results with socially prescribed perfectionism contradict those of Hewitt et al. (2002) and Caelian et al. (2004) in which this dimension did not interact with stress to predict depression or suicide outcomes in children and adolescents. It is possible that the present findings supporting a moderational relationship between socially prescribed perfectionism and suicide risk are relevant to depressed adolescents but not to the broad class of adolescents with various types of mental health difficulties.

The above findings provide further support for the conceptualization of socially prescribed perfectionism as a vulnerability factor that increases risk for suicide in the presence of

stress. In the present study, it appears that stress in the form of daily hassles and major stressful experiences are both important in activating the diathesis of socially prescribed perfectionism to increase suicide potential. As already reviewed (Hewitt & Flett, 2002), it is likely that stressful experiences make obvious the fact that the socially prescribed perfectionist is not living up to the perceived high expectations of significant others. As the socially prescribed perfectionist does not control those expectations, he/she cannot lower them in the face of perceived failures and thus may experience a sense of hopelessness to alter the situation. To the extent that adolescents strive to meet the perceived standards of important peers, this sense of social hopelessness may lead to feelings of disconnection and lack of support, which may elevate suicide risk (Hewitt et al., in press).

In contrast to study predictions, socially prescribed perfectionism did not interact with stress in any form to predict suicidal ideation or attempts. As with self-oriented perfectionism, this contradicts findings of prior studies in which this dimension interacted with daily hassles and life events to predict suicidal ideation among students (Hewitt et al., 1994, 2002). That said, the present finding is in line with those of Caelian et al. (2004) in which socially prescribed perfectionism did not interact with daily hassles to predict suicidal ideation or attempts in a heterogeneous clinical sample of children and adolescents. As socially prescribed perfectionism was not associated with ideation or attempts in the present study and did not predict unique variance in them once depression and hopelessness were controlled, it is possible that this perfectionism dimension does not play a role in these suicide outcomes among depressed youth. As suggested with the self-oriented dimension, it is possible that socially prescribed perfectionism is a vulnerability factor for overall suicide risk as opposed to ideation or attempts specifically. Another possibility in relation to suicide attempts is that the measure used in the present study did not adequately assess prior attempts. The fact that depression and hopelessness were also not uniquely predictive of suicide attempts in this sample, a finding that is unusual

given their established connection in prior research (e.g., De Man, 1999; Dori & Overholser, 1999; Levy et al., 1995), supports this notion. Again, it will be important to reassess the diathesis-stress model involving perfectionism and suicidal ideation and attempts among youth in future studies before concluding that socially prescribed perfectionism is not relevant to ideation and attempts in this age group.

Considering the above findings with self-oriented and socially prescribed perfectionism, more support was obtained for the socially prescribed dimension as a diathesis that interacts with stress to increase suicide risk. Although both dimensions interacted with daily hassles, socially prescribed perfectionism also interacted with subjective and objective ratings of major stressful experiences. The present findings suggest that both self-oriented and socially prescribed perfectionism in conjunction with stress increase overall risk or potential for suicide among depressed youth.

Several methodological strengths of the present study are apparent within the tests of the diathesis-stress model. These strengths include: 1) the inclusion of interview methodology in addition to a questionnaire measure of stress, 2) the utilization of multiple informants for the stress interview, 3) the utilization of subjective and objective ratings of major stress, and 4) the inclusion of measures of major stressful experiences and smaller daily hassles. Interview measures of stress offer the advantages of accessing a wider range of stressful experiences than do checklists and minimizing some of the bias that may affect respondents' ratings on checklist measures. The utilization of multiple informants (i.e., adolescents and their parents) allows for a more complete picture of the stress experienced by each participant in the past year. The adolescent can report on events that the parent may not be aware of and the parent can report events that the adolescent may not wish to share. Within the stress literature, some researchers (e.g., Lazarus, 1998) advocate the assessment of the respondent's own perceptions of stressful occurrences due to the highly subjective nature of stress and one's reaction to it. Others (e.g.,

Brown, 1989; Brown & Harris, 1978) recognize the importance of individual differences but argue that a person's mental health difficulties may influence how he/she perceives and reacts to events and how he/she reports on stressful occurrences. These authors advocate the use of objective ratings of stress that are based on general rules about what is stressful or not stressful for most people. Lastly, prior research examining the relationship between stress and various forms of maladjustment have found that it is important to measure both major life events (e.g., death of a family member) and daily hassles (e.g., being teased by peers) as they may evidence different relationships with the outcomes of interest (e.g., Adrian & Hammen, 1991; Compas, et al., 1987; DeLongis et al., 1982).

In terms of the present analyses testing the diathesis-stress model, both interview and questionnaire measures of stress were involved in predicting suicide potential. Additionally, both subjective and objective major stress ratings moderated the relationships between perfectionism and suicide potential. As the subjective and objective ratings interacted with different dimensions of perfectionism, the present study suggests that it is important to assess both the respondent's own perceptions of stress and to utilize objective ratings of reported stress to fully understand relationships between stress and maladjustment. Furthermore, both the measure of major stressful experiences and the measure of daily hassles were involved in significant interactions in the present study. Again, the different stress measures interacted in different ways with self-oriented and socially prescribed perfectionism, supporting the importance of assessing both major stressful experiences and daily hassles when examining the role of stress in outcomes of interest.

It is important to explain why different alpha levels were utilized in the present study to determine statistical significance. For the correlational analyses, the alpha level was set at a more stringent level ( $\alpha = .01$ ) than the conventional level of  $\alpha = .05$  in order to provide protection from Type I error with the number of analyses being conducted. For regression

analyses looking at main effects, the conventional level of  $\alpha = .05$  was used. For regression analyses involving interactions, a relaxed alpha level was used for two reasons. First, as discussed at length by McClelland and Judd (1993), interactions are incredibly difficult to detect in non-experimental research. As these authors explain, overall model error and error involved in measuring variables of interest are much higher in field studies than experiments, in part due to the higher levels of control possible within experiments. As interaction terms in regression analyses are created by multiplying together the two predictor terms, this error is even greater in the interaction term, which makes detection of a significant effect very difficult. One remedy for this problem proposed by McClelland and Judd (1993) is to increase one's sample size; however, they also note that the sample sizes needed to achieve levels of power similar to experiments are enormous and impractical for most field researchers. Particularly in the current study where the sample includes clinical patients, this was not regarded as feasible. Another remedy proposed by McClelland and Judd (1993) is to evaluate interactions against a relaxed alpha level as was done in the present study. As noted by Pedhazur (1982), this also provides protection from Type II errors, which are often made in field studies when the power to detect significant interactions is too low (McClelland & Judd, 1993).

It is also important to note that in the present analyses testing a moderational model of perfectionism, stress, and suicide that the amount of variance accounted for by the interaction terms is not large ( $\Delta R^2$  ranged from 3-10%). Due to the above mentioned difficulties detecting interactions in non-experimental research designs, it has been suggested that findings that account for as little as 1% of the variance in the outcome of interest should be considered meaningful (McClelland & Judd, 1993). As the significant interactions in this study account for between 3 and 10% of the variance in the outcome measures, they are regarded as important findings. In fact, the presence of significant interactions in this study is particularly telling due to



the small sample size in which they were found and the many controls put in place in the regression analyses, both of which further reduce the likelihood of detecting significant interactions. In particular, the interaction between socially prescribed perfectionism and daily hassles that accounted for 10% of the variance in suicide potential stresses the important role of this perfectionism dimension in suicide risk among adolescents.

Although it was not a purpose of this study to examine the relative contributions of depression and hopelessness to the prediction of suicide outcomes among depressed youth, it is worth commenting on the insights that the present findings provide. In terms of predicting suicidal ideation, both depression and hopelessness were significant contributors. For suicide potential/risk, depression predicted unique variance in scores but hopelessness did not. Lastly, for prior suicide attempts, depression did not predict unique variance in scores and hopelessness only approached significance as a predictor. This suggests that other risk factors not assessed in the present study may have accounted for unique variance in attempt history once depression and hopelessness were controlled. Taken together, these findings support the importance of depression and hopelessness as risk factors for suicidal thoughts and of depression for suicide potential but suggest that other risk factors may be more useful in predicting suicide attempts.

### ***Limitations and Future Directions***

Although the present study addressed limitations of prior research by incorporating interview and questionnaire methodologies and including multiple informants in the data collection process, other aspects of the study may limit the usefulness of the findings. One limitation stems from the small sample size. While research with clinical samples is typically characterized by much smaller samples than community research, the sample size in the present study may have resulted in insufficient power to detect some of the effects that were investigated. Furthermore, a clinical sample of adolescents was chosen because depression and

suicidal behaviour are more prevalent and likely more severe in this group compared to a community sample of youth; however, the present findings may not generalize to the latter group of teenagers. Other issues relating to the characteristics of the sample are that the majority of youth were female and Caucasian. The gender ratio in this study reflects that of rates of depression in teens (e.g., Lewinsohn et al., 2001) as females experience depression more often than males; however, the small number of males that participated in this study may limit the generalizability of the findings. Similarly, cultural differences in the relationships between perfectionism, stress, and suicide could not be explored due to the small numbers of non-Caucasian youth that participated.

It will be important in future research on this topic to examine similar relationships within non-clinical samples and nondepressed samples of youth. For instance, it has been found that the increased risk of suicidal attempts in females vs. males is confined to nondepressed adolescents and children (Hollis, 1996). As such, it would be interesting to explore the role of self-oriented and socially prescribed perfectionism in suicidal behaviour among a sample of nondepressed and depressed teenagers in the community. Additionally, in future studies with larger sample sizes, it will be important to examine the influence of gender and ethnic background on the relationships studied here. As rates of depression and suicidal behaviour have consistently been shown to differ among males and females (e.g., Lewinsohn et al., 2001; Shaffer & Pfeffer, 2001), it is important to assess whether predictors of suicidality differ by gender.

In terms of aspects of suicidal behaviour, this study focused on ideation, potential, and attempts and the results may not generalize to adolescents who complete suicide. Although research on youth who complete suicide is rare, some differences have been demonstrated between those who think about or attempt suicide and those who actually take their own lives

(e.g., Beautrais, 2001). Thus, it is important for future studies to consider the relationships explored in the present study when carrying out research on suicide completion.

This study involved a cross-sectional analysis of the relationships between self-oriented and socially prescribed perfectionism, stress, and suicidality, which precludes examination of direction of causality and of the prediction of suicidal outcomes over time. As depression tends to be a recurrent difficulty (American Psychological Association, 1994) and perfectionism has been found to play a role in chronic depression (Hewitt et al., 1998), future research should examine the role of perfectionism and stress in predicting suicidality over time. Additionally, an important test of the diathesis-stress model of perfectionism and suicide outcomes involves the demonstration that perfectionism and stress interact to predict suicide over time. As this can only be addressed longitudinally, such a design is an important next step in this line of inquiry.

### ***Clinical Implications***

The findings of this study further indicate that self-oriented and socially prescribed perfectionism play important roles in suicide risk among young people. These results also highlight the non-redundant information about suicide risk that these perfectionism dimensions and stress offer beyond what depression and hopelessness contribute. Many studies have shown that depression is a strong predictor, if not the strongest, of suicidal ideation and behaviour among children and adolescents (De Man, 1999; Goldston et al., 2001; Lewinsohn, Rohde, & Seeley, 1993; Pfeffer et al., 1993). Yet, not every depressed youth attempts or commits suicide. Thus, clinicians may benefit from knowledge of additional variables that predict suicide risk beyond depression. This study suggests that children and adolescents with high levels of self-oriented or socially prescribed perfectionism who are experiencing moderate to high levels of stress experience increased suicide risk.

The results of this study may also inform preventative strategies for minimizing the number of young people affected by suicide and treatment strategies for those with high levels of self-oriented or socially prescribed perfectionism. For instance, treatment goals may include the reduction of life stress and the development or enhancement of coping strategies among young self-oriented and socially prescribed perfectionists. Hewitt and Flett (2002) also maintain that treatment for perfectionism must target the motivations for and precursors of perfectionistic behaviour in order to be successful. Additionally, as perfectionistic individuals have been shown to have difficulty benefiting from treatment for depression (Blatt, Quinlan, Pilkonis, & Shea, 1995; Zuroff, Blatt, Sotsky, Krupnick, Martin, Sanislow, et al., 2000), it will be useful for practitioners working with depressed youth to evaluate their clients' levels of perfectionism and anticipate the vulnerabilities it may pose in the treatment setting.

### ***Conclusions***

This study aimed to examine links between perfectionism, stress, and suicidal outcomes among depressed adolescents. Within this sample of youth, it appears that self-oriented perfectionism is not associated with suicide outcomes as a main effect, but rather, increases suicide risk in the presence of daily minor stressors. Socially prescribed perfectionism is linked to suicide risk as a main effect but also interacts with daily hassles and major stressful experiences to increase suicide risk. More evidence was gained in support of socially prescribed perfectionism as a diathesis among depressed youth, as it was predictive of suicide risk in the context of both daily hassles and major stress. Overall, it appears that self-oriented and socially prescribed perfectionism function as vulnerability factors for general suicide risk. This study marks an important extension of prior work with children and youth and helps to shed light on the nature of the relationship between self-oriented and socially prescribed perfectionism and aspects of suicide in this population. As research in this area is in its infancy, it will be important

to continue investigating and clarifying the role of perfectionism in suicide outcomes among youth in years to come.

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**Table 1**

Means, standard deviations, and alpha coefficients for perfectionism, stress, depression, hopelessness, and suicide outcomes for the total sample (N=55)

Variable	Mean	SD	Cronbach's $\alpha$
Self-Oriented Perfectionism	35.17	9.17	.88
Socially Prescribed Perfectionism	24.96	7.89	.87
Hassles	12.07	4.58	.82
Subjective Major Stress Ratings	4.04	1.87	NA
Objective Major Stress Ratings	4.36	1.94	NA
Depression*	29.67	12.31	.92
Hopelessness	8.85	4.23	.83
Suicidal Ideation	64.09	47.92	.98
Suicide Potential	17.96	4.86	.80
Prior attempts	.78	.96	NA

\* Note: Depression = BDI total score – score on suicide item.

**Table 2**

Zero-order correlations of perfectionism, stress, depression, hopelessness, and suicide outcomes for the total sample (N=55)

	SPP	CHS	Subj. Ratings	Object. Ratings	BDI	HSC	SIQ	CASPI	prior ATTM
SOP	.42*	-.15	.07	.08	.13	-.14	.05	.06	-.04
SPP		.33*	.15	.17	.25	.11	.18	.39*	-.06
CHS			-.01	.22	.22	.06	.27	.46**	.19
Subj. Ratings				.63**	.20	.23	.21	.28	.08
Object. Ratings					.34	.24	.35*	.36*	.26
BDI						.58**	.68**	.58**	.26
HSC							.68**	.50**	.35*
SIQ								.56**	.48**
CASPI									.47**

\*  $p < .01$  \*\*  $p < .001$

*Note:* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, CHS = Children's Hassles Scale, Subj. Ratings = subjective major stress ratings, Object. Ratings = objective major stress ratings, BDI = depression, HSC = hopelessness, SIQ = suicidal ideation, CASPI = suicide potential, and prior ATTM = prior suicide attempts

**Table 3**

Hierarchical regression analyses for self-oriented perfectionism and socially prescribed perfectionism predicting suicidal ideation, suicide potential, and prior suicide attempts.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Suicidal Ideation</i></b>						
<b>Step 1</b>	.72					
Depression			.07	.33	3.48	p = .00
Hopelessness			.08	.35	3.65	p = .00
Patient Status			.14	.41	5.00	p = .00
<b>Step 2</b>	.72	.00				
Self-Oriented Perfectionism			< .01	.03	.31	p = .76
Socially Pres. Perfectionism			< .01	-.05	-.54	p = .59
<b><i>Suicide Potential</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.44	3.05	p = .00
Hopelessness			.04	.24	1.69	p = .10
Patient Status			< .01	.03	.245	p = .81
<b>Step 2</b>	.44	.06				
Self-Oriented Perfectionism			.01	-.11	-.836	p = .41
Socially Pres. Perfectionism			.06	.29	2.29	p = .03
<b><i>Suicide Attempts</i></b>						
<b>Step 1</b>	.15					
Depression			< .01	.04	.24	p = .81
Hopelessness			.06	.30	1.82	p = .08
Patient Status				.14	.95	p = .34
<b>Step 2</b>	.17	.02				
Self-Oriented Perfectionism			< .01	.00	.03	p = .98
Socially Pres. Perfectionism			.02	-.14	-.92	p = .36

**Table 4**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and subjective major stress ratings to predict suicidal ideation.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.75					
Depression			.08	.35	3.77	p = .00
Hopelessness			.07	.34	3.72	p = .00
Patient Status			.16	.43	5.53	p = .00
<b>Step 2</b>	.75	.00				
Depression X Subjective Major Stress Ratings			< .01	.04	.46	p = .65
Hopelessness X Subjective Major Stress Ratings			< .01	-.02	-.16	p = .87
<b>Step 3</b>	.75	.00				
Self-Oriented Perfectionism			< .01	-.02	-.28	p = .79
Subjective Major Stress Ratings			< .01	.01	.15	p = .89
<b>Step 4</b>	.75	.00				
SOP X Subjective Major Stress Ratings			< .01	.05	.55	p = .59
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.75					
Depression			.08	.35	3.77	p = .00
Hopelessness			.07	.34	3.72	p = .00
Patient Status			.16	.43	5.53	p = .00
<b>Step 2</b>	.75	.00				
Depression X Subjective Major Stress Ratings			< .01	.04	.46	p = .65
Hopelessness X Subjective Major Stress Ratings			< .01	-.02	-.16	p = .87
<b>Step 3</b>	.75	.00				
Socially Pres. Perfectionism			< .01	-.01	-.06	p = .96
Subjective Major Stress Ratings			< .01	.01	.14	p = .89
<b>Step 4</b>	.75	.00				
SPP X Subjective Major Stress Ratings			< .01	-.03	-.36	p = .72

**Table 5**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and objective major stress ratings to predict suicidal ideation.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.74					
Depression			.08	.37	3.83	p = .00
Hopelessness			.08	.34	3.64	p = .00
Patient Status			.14	.40	4.99	p = .00
<b>Step 2</b>	.74	.01				
Depression X Objective Major Stress Ratings			< .01	.08	.94	p = .36
Hopelessness X Objective Major Stress Ratings			< .01	-.05	-.53	p = .60
<b>Step 3</b>	.75	.01				
Self-Oriented Perfectionism			< .01	-.01	-.12	p = .91
Objective Major Stress Ratings			< .01	.09	.99	p = .33
<b>Step 4</b>	.76	.01				
SOP X Objective Major Stress Ratings			.01	.12	1.43	p = .16
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.74					
Depression			.08	.37	3.83	p = .00
Hopelessness			.08	.34	3.64	p = .00
Patient Status			.14	.40	4.99	p = .00
<b>Step 2</b>	.74	.01				
Depression X Objective Major Stress Ratings			< .01	.08	.94	p = .36
Hopelessness X Objective Major Stress Ratings			< .01	-.05	-.53	p = .60
<b>Step 3</b>	.75	.01				
Socially Pres. Perfectionism			< .01	.01	.07	p = .95
Objective Major Stress Ratings			.01	.08	.97	p = .34
<b>Step 4</b>	.75	.00				
SPP X Objective Major Stress Ratings			< .01	.03	.35	p = .73

**Table 6**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and daily hassles to predict suicidal ideation.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.72					
Depression			.08	.33	3.48	p = .00
Hopelessness			.08	.35	3.65	p = .00
Patient Status			.14	.41	5.00	p = .00
<b>Step 2</b>	.72	.00				
Depression X Hassles			< .01	.00	.01	p = 1.00
Hopelessness X Hassles			< .01	-.06	-.58	p = .56
<b>Step 3</b>	.73	.00				
Self-Oriented Perfectionism			< .01	.02	.25	p = .81
Daily Hassles			< .01	.07	.78	p = .44
<b>Step 4</b>	.73	.00				
SOP X Hassles			< .01	.00	.00	p = 1.00
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.72					
Depression			.08	.33	3.48	p = .00
Hopelessness			.08	.35	3.65	p = .00
Patient Status			.14	.41	5.00	p = .00
<b>Step 2</b>	.72	.00				
Depression X Hassles			< .01	.00	.01	p = 1.00
Hopelessness X Hassles			< .01	-.06	-.58	p = .56
<b>Step 3</b>	.73	.01				
Socially Pres. Perfectionism			< .01	-.06	-.75	p = .46
Daily Hassles			< .01	.08	.90	p = .38
<b>Step 4</b>	.73	.00				
SPP X Hassles			< .01	.70	.70	p = .49

**Table 7**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and subjective major stress ratings to predict suicide potential (CASPI).

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.44	3.02	p = .00
Hopelessness			.04	.24	1.65	p = .11
Patient Status			< .01	.03	.26	p = .80
<b>Step 2</b>	.39	.01				
Depression X Subjective Major Stress Ratings			< .01	-.08	-.58	p = .56
Hopelessness X Subjective Major Stress Ratings			< .01	.10	.67	p = .51
<b>Step 3</b>	.41	.01				
Self-Oriented Perfectionism			< .01	.01	.08	p = .94
Subjective Major Stress Ratings			< .01	.19	1.41	p = .17
<b>Step 4</b>	.41	.00				
SOP X Subjective Major Stress Ratings			< .01	.00	-.02	p = .99
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.44	3.02	p = .00
Hopelessness			.04	.24	1.65	p = .11
Patient Status			< .01	.03	.26	p = .80
<b>Step 2</b>	.39	.01				
Depression X Subjective Major Stress Ratings			< .01	-.08	-.58	p = .56
Hopelessness X Subjective Major Stress Ratings			.01	.10	.67	p = .51
<b>Step 3</b>	.46	.07				
Socially Pres. Perfectionism			.05	.23	1.94	p = .06
Subjective Major Stress Ratings			.02	.16	1.27	p = .21
<b>Step 4</b>	.49	.03				
SPP X Subjective Major Stress Ratings			.03	.19	1.51	p = .14



**Table 8**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and objective major stress ratings to predict suicide potential (CASPI).

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.43	2.95	p = .01
Hopelessness			.04	.24	1.64	p = .11
Patient Status			< .01	.04	.293	p = .77
<b>Step 2</b>	.39	.01				
Depression X Objective Major Stress Ratings			.01	-.09	-.66	p = .51
Hopelessness X Objective Major Stress Ratings			< .01	-.04	-.29	p = .78
<b>Step 3</b>	.44	.05				
Self-Oriented Perfectionism			< .01	.02	.19	p = .85
Objective Major Stress Ratings			.05	.25	1.95	p = .06
<b>Step 4</b>	.46	.02				
SOP X Objective Major Stress Ratings			.02	.16	1.22	p = .23
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.43	2.95	p = .01
Hopelessness			.04	.24	1.64	p = .11
Patient Status			< .01	.04	.293	p = .77
<b>Step 2</b>	.39	.01				
Depression X Objective Major Stress Ratings			.01	-.09	-.66	p = .51
Hopelessness X Objective Major Stress Ratings			< .01	-.04	-.29	p = .78
<b>Step 3</b>	.48	.09				
Socially Pres. Perfectionism			.04	.21	1.77	p = .08
Objective Major Stress Ratings			.04	.22	1.77	p = .09
<b>Step 4</b>	.51	.03				
SPP X Objective Major Stress Ratings			.03	.17	1.49	p = .15

**Table 9**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and daily hassles to predict suicide potential (CASPI).

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.44	3.05	p = .00
Hopelessness			.04	.24	1.69	p = .10
Patient Status			< .01	.03	.25	p = .81
<b>Step 2</b>	.38	.00				
Depression X Hassles			< .01	-.05	-.34	p = .74
Hopelessness X Hassles			< .01	.01	.03	p = .97
<b>Step 3</b>	.51	.12				
Self-Oriented Perfectionism			.01	.11	.95	p = .35
Daily Hassles			.12	.39	3.30	p = .00
<b>Step 4</b>	.53	.03				
SOP X Hassles			.03	.17	1.54	p = .13
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.38					
Depression			.12	.44	3.05	p = .00
Hopelessness			.04	.24	1.69	p = .10
Patient Status			< .01	.03	.25	p = .81
<b>Step 2</b>	.38	.00				
Depression X Hassles			< .01	-.05	-.34	p = .74
Hopelessness X Hassles			< .01	.01	.03	p = .97
<b>Step 3</b>	.52	.14				
Socially Pres. Perfectionism			.03	.17	1.52	p = .14
Daily Hassles			.08	.32	2.77	p = .01
<b>Step 4</b>	.62	.10				
SPP X Hassles			.10	.35	3.30	p = .00

**Table 10**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and subjective major stress ratings to predict prior suicide attempts.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	β	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.16					
Depression			< .01	.05	.27	p = .79
Hopelessness			.05	.29	1.75	p = .09
Patient Status			.02	.15	1.05	p = .30
<b>Step 2</b>	.16	.00				
Depression X Subjective Major Stress Ratings			< .01	.04	.22	p = .83
Hopelessness X Subjective Major Stress Ratings			< .01	-.06	-.36	p = .72
<b>Step 3</b>	.17	.01				
Self-Oriented Perfectionism			< .01	-.08	-.55	p = .59
Subjective Major Stress Ratings			< .01	.07	.45	p = .66
<b>Step 4</b>	.20	.03				
SOP X Subjective Major Stress Ratings			.03	.19	1.22	p = .23
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.16					
Depression			< .01	.05	.27	p = .79
Hopelessness			.05	.29	1.75	p = .09
Patient Status			.02	.15	1.05	p = .30
<b>Step 2</b>	.16	.00				
Depression X Subjective Major Stress Ratings			< .01	.04	.22	p = .83
Hopelessness X Subjective Major Stress Ratings			< .01	-.06	-.36	p = .72
<b>Step 3</b>	.18	.02				
Socially Pres. Perfectionism			.01	-.12	-.81	p = .42
Subjective Major Stress Ratings			.01	.08	.51	p = .61
<b>Step 4</b>	.18	.00				
SPP X Subjective Major Stress Ratings			< .01	-.07	-.43	p = .67

**Table 11**

Hierarchical regression analyses for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and objective major stress ratings to predict prior suicide attempts.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.14					
Depression			< .01	.06	.36	p = .72
Hopelessness			.05	.29	1.68	p = .10
Patient Status			.01	.11	.76	p = .45
<b>Step 2</b>	.15	.00				
Depression X Objective Major Stress Ratings			< .01	.03	.15	p = .88
Hopelessness X Objective Major Stress Ratings			< .01	-.07	-.46	p = .65
<b>Step 3</b>	.20	.05				
Self-Oriented Perfectionism			< .01	-.05	-.36	p = .72
Objective Major Stress Ratings			.05	.25	1.64	p = .11
<b>Step 4</b>	.21	.01				
SOP X Objective Major Stress Ratings			.01	.12	.77	p = .45
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.14					
Depression			< .01	.06	.36	p = .72
Hopelessness			.05	.29	1.68	p = .10
Patient Status			.01	.11	.76	p = .45
<b>Step 2</b>	.15	.00				
Depression X Objective Major Stress Ratings			< .01	.03	.15	p = .88
Hopelessness X Objective Major Stress Ratings			< .01	-.07	-.46	p = .65
<b>Step 3</b>	.21	.07				
Socially Pres. Perfectionism			.02	-.14	-.96	p = .34
Objective Major Stress Ratings			.06	.27	1.76	p = .09
<b>Step 4</b>	.22	.00				
SPP X Objective Major Stress Ratings			< .01	-.06	-.43	p = .67

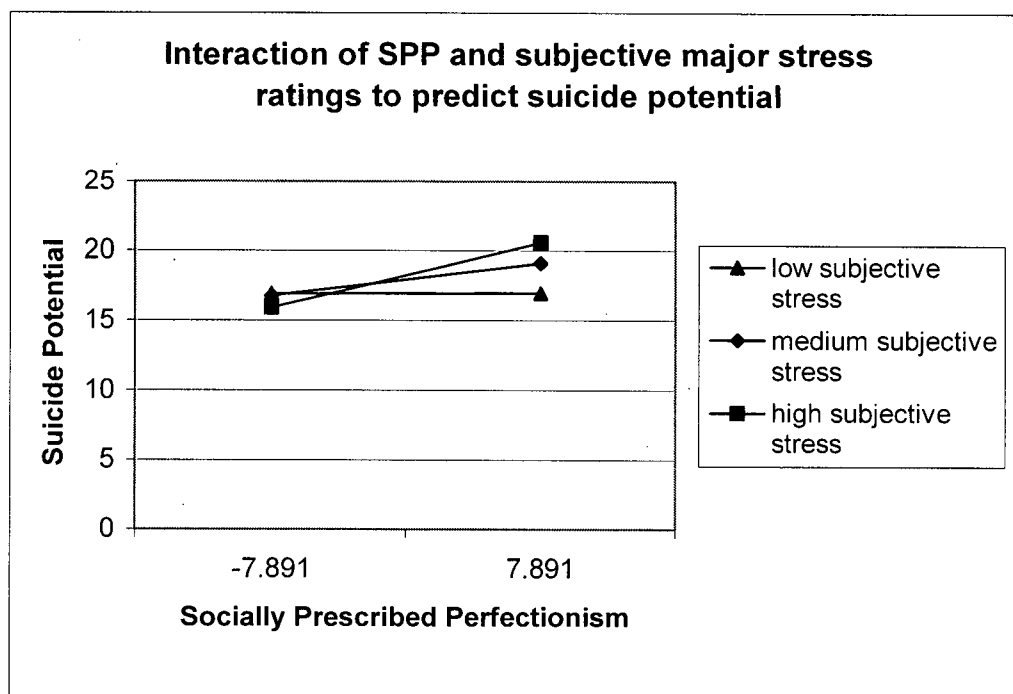
**Table 12**

Hierarchical regression analysis for the interaction of self-oriented perfectionism vs. socially prescribed perfectionism and daily hassles to predict prior suicide attempts.

Variable	R <sup>2</sup>	R <sup>2</sup> change	sr <sup>2</sup>	$\beta$	T	Sig.
<b><i>Self-Oriented Perfectionism</i></b>						
<b>Step 1</b>	.15					
Depression			< .01	.04	.24	p = .81
Hopelessness			.06	.30	1.82	p = .08
Patient Status			.02	.14	.95	p = .35
<b>Step 2</b>	.17	.02				
Depression X Hassles			.01	-.15	-.85	p = .40
Hopelessness X Hassles			.01	.16	.88	p = .39
<b>Step 3</b>	.20	.03				
Self-Oriented Perfectionism			< .01	.00	.00	p = 1.00
Daily Hassles			.02	.17	1.15	p = .26
<b>Step 4</b>	.22	.02				
SOP X Hassles			.02	-.15	-1.02	p = .32
<b><i>Socially Prescribed Perfectionism</i></b>						
<b>Step 1</b>	.15					
Depression			< .01	.04	.24	p = .81
Hopelessness			.06	.30	1.82	p = .08
Patient Status			.02	.14	.95	p = .35
<b>Step 2</b>	.17	.02				
Depression X Hassles			.01	-.15	-.85	p = .40
Hopelessness X Hassles			.01	.16	.88	p = .39
<b>Step 3</b>	.22	.05				
Socially Pres. Perfectionism			.03	-.18	-1.27	p = .21
Daily Hassles			.04	.21	1.48	p = .15
<b>Step 4</b>	.23	.01				
SPP X Hassles			.01	.10	.64	p = .53

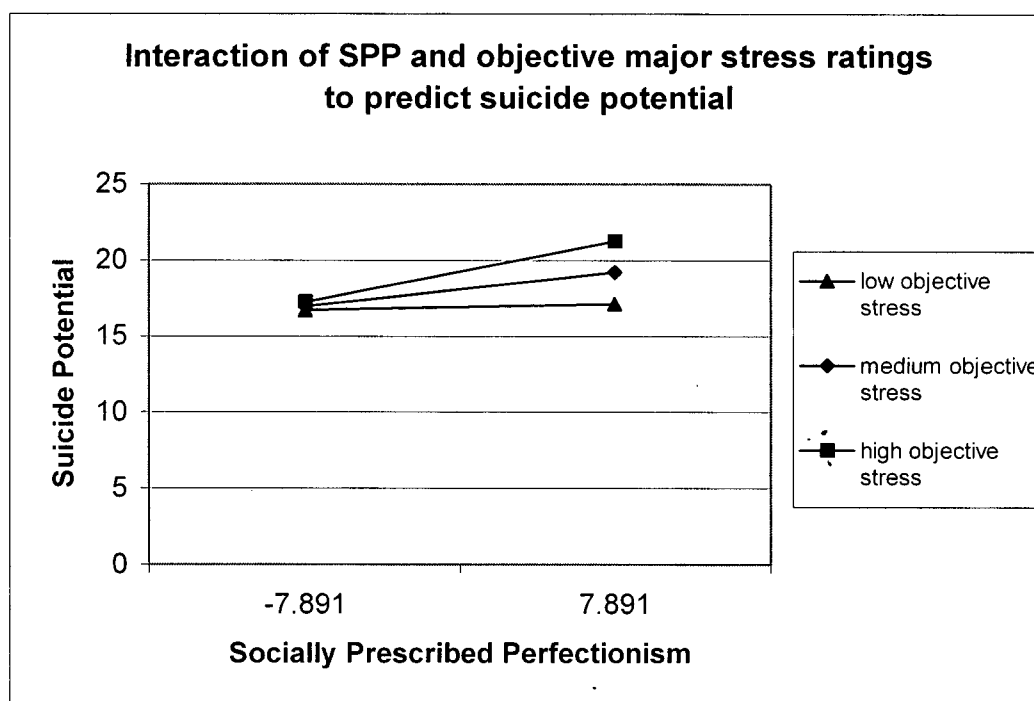
**Figure 1**

Graph depicting interaction of socially prescribed perfectionism and subjective major stress ratings to predict suicide potential (CASPI).



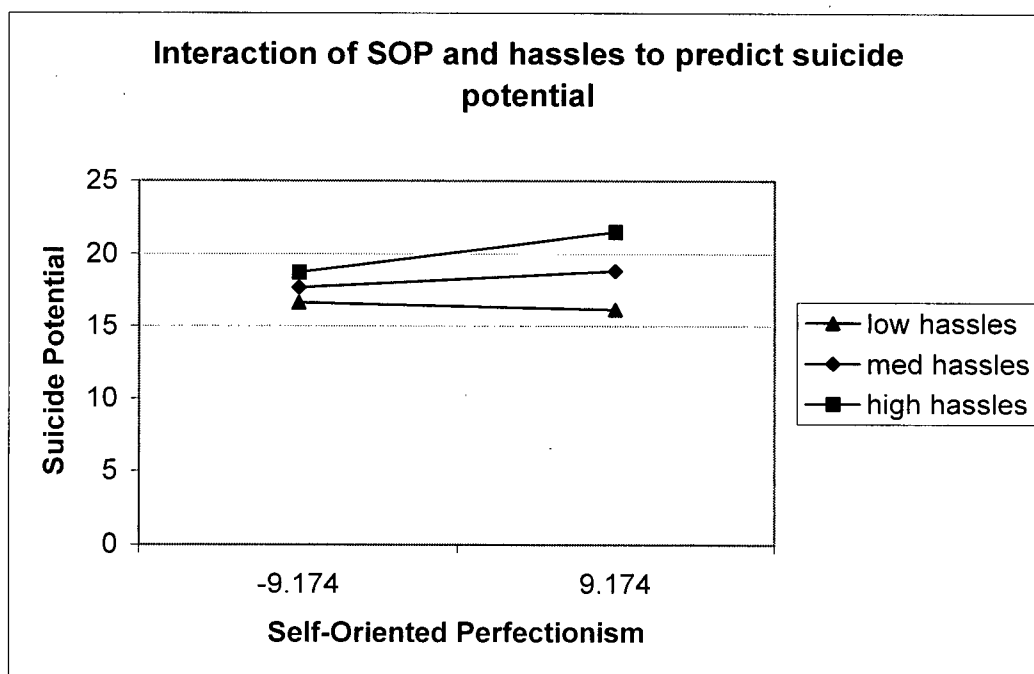
**Figure 2**

Graph depicting interaction of socially prescribed perfectionism and objective major stress ratings to predict suicide potential (CASPI).



**Figure 3**

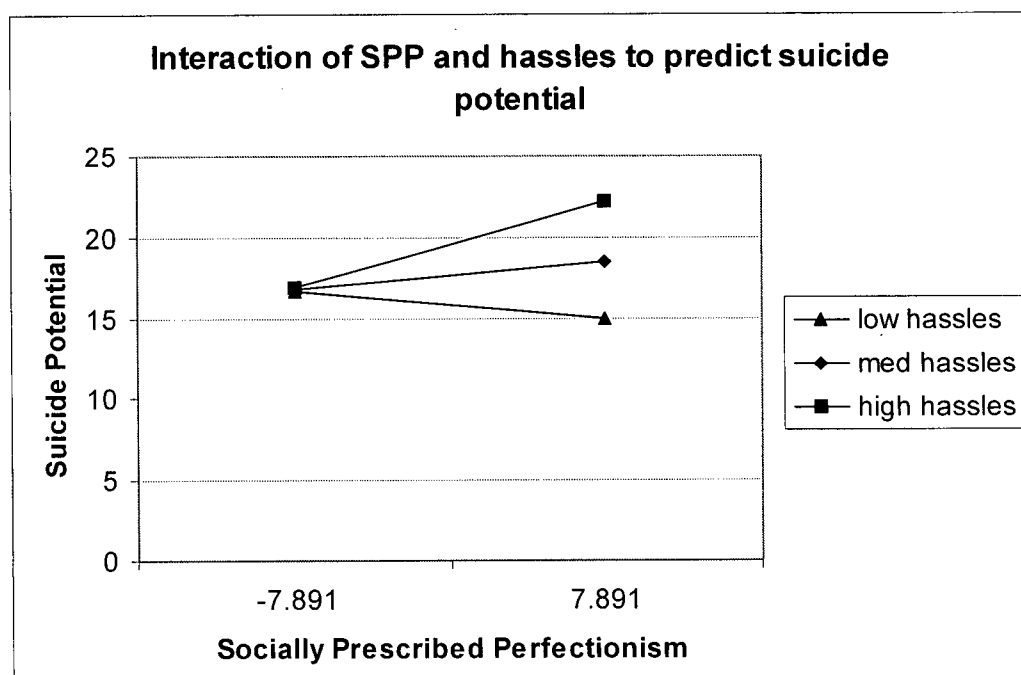
Graph depicting interaction of self-oriented perfectionism and daily hassles to predict suicide potential (CASPI).





**Figure 4**

Graph depicting interaction of socially prescribed perfectionism and daily hassles to predict suicide potential (CASPI).



## CAPS

This is a chance to find out about yourself. It is not a test. There are no right answers and everyone will have different answers. Be sure that your answers show how you actually are. Please do not talk about your answers with anyone else. We will keep your answers private and not show them to anyone.

When you are ready to begin, please read each sentence below and pick your answer by circling a number from “1” to “5”. The five possible answers for each sentence are listed below:

- |   |   |                             |
|---|---|-----------------------------|
| 1 | = | False—Not at all true of me |
| 2 | = | Mostly False                |
| 3 | = | Neither True Nor False      |
| 4 | = | Mostly True                 |
| 5 | = | Very True of me             |

For example, if you were given the sentence “I like to read comic books,” you would circle a “5” if this is very true of you. If you were given the sentence “I like to keep my room neat and tidy,” you would circle a “1” if this was false and not at all true of you. You are now ready to begin.

Please be sure to answer all of the sentences.

		False			True		
1.	I try to be perfect in every thing I do .....	1	2	3	4	5	
2.	I want to be the best at everything I do .....	1	2	3	4	5	
3.	My parents don't always expect me to be perfect in everything I do .....	1	2	3	4	5	
4.	I feel that I have to do my best all the time .....	1	2	3	4	5	
5.	There are people in my life who expect me to be perfect .....	1	2	3	4	5	
6.	I always try for the top score on a test .....	1	2	3	4	5	
7.	It really bothers me if I don't do my best all the time .....	1	2	3	4	5	
8.	My family expects me to be perfect .....	1	2	3	4	5	
9.	I don't always try to be the best .....	1	2	3	4	5	
10.	People expect more from me than I am able to give .....	1	2	3	4	5	
11.	I get mad at myself when I make a mistake .....	1	2	3	4	5	

- 
12. Other people think that I have failed if I do not do my very best  
all the time ..... 1 2 3 4 5
13. Other people always expect me to be perfect ..... 1 2 3 4 5
14. I get upset if there is even one mistake in my work ..... 1 2 3 4 5
15. People around me expect me to be great at everything ..... 1 2 3 4 5
16. When I do something, it has to be perfect ..... 1 2 3 4 5
17. My teachers expect my work to be perfect ..... 1 2 3 4 5
18. I do not have to be the best at everything I do ..... 1 2 3 4 5
19. I am always expected to do better than others ..... 1 2 3 4 5
20. Even when I pass, I feel that I have failed if I didn't get one of the  
highest marks in the class ..... 1 2 3 4 5
21. I feel that people ask too much of me ..... 1 2 3 4 5
22. I can't stand to be less than perfect ..... 1 2 3 4 5
- 
-

# CHS

You will be given a list of 25 hassles that are sometimes experienced by children. Your job is to indicate which hassles you have had in the past month. Indicate whether each hassle was experienced by circling either “did happen” or “didn’t happen” in the first column. Next, you are to indicate how each hassle made you feel by circling a choice ranging from “didn’t happen” to “felt very bad” in the second column. If a hassle did not happen, you would circle a “1” in the column on the right side of the page. If a hassle happened but you “didn’t feel bad”, you would circle a “2”. If a hassle happened and you felt “sort of bad”, you would circle a “3”. Finally, if a hassle happened and you felt “very bad”, you would circle a “4”. Please be sure to circle a number for each of the 25 hassles, even if each hassle did not happen.

How did this hassle make you feel?

		Didn't Happen	Didn't Feel Bad	Felt Very Bad	
1. Kids at school teased you.	Did happen / Didn't happen	1	2	3	4
2. You had to clean up your room.	Did happen / Didn't happen	1	2	3	4
3. You were punished for something you didn't do.	Did happen / Didn't happen	1	2	3	4
4. You got punished when you did something wrong.	Did happen / Didn't happen	1	2	3	4
5. Your pet died.	Did happen / Didn't happen	1	2	3	4
6. Your best friend didn't want to be your best friend anymore.	Did happen / Didn't happen	1	2	3	4
7. Your mother or father wasn't home when you expected them.	Did happen / Didn't happen	1	2	3	4
8. You lost something.	Did happen / Didn't happen	1	2	3	4
9. Your mother or father got sick.	Did happen / Didn't happen	1	2	3	4
10. Your mother or father was mad at you for getting a bad school report.	Did happen / Didn't happen	1	2	3	4
11. Your teacher was mad at you because of your behavior.	Did happen / Didn't happen	1	2	3	4
12. Your schoolwork was too hard.	Did happen / Didn't happen	1	2	3	4

Remember: Circle a "1" if the hassle did not happen, a "2" if it happened and you didn't feel bad, a "3" if it happened and you felt sort of bad, and a "4" if it happened and made you feel very bad.

13. You got into a fight with another kid.	Did happen / Didn't happen	1	2	3	4
14. You didn't do well at sports.	Did happen / Didn't happen	1	2	3	4
15. You had to go to bed when you didn't feel like it.	Did happen / Didn't happen	1	2	3	4
16. Your mother or father didn't have enough time to do something with you.	Did happen / Didn't happen	1	2	3	4
17. You didn't know the answer when the teacher called on you.	Did happen / Didn't happen	1	2	3	4
18. When the kids were picking teams you were one of the last ones to be picked.	Did happen / Didn't happen	1	2	3	4
19. Your mother and father were fighting.	Did happen / Didn't happen	1	2	3	4
20. Your mother or father forgot to do something they said they would do.	Did happen / Didn't happen	1	2	3	4
21. You felt bored and wished there was something interesting to do.	Did happen / Didn't happen	1	2	3	4
22. Your brothers and sisters bugged you.	Did happen / Didn't happen	1	2	3	4
23. You didn't like the way you looked and wished you could be different (e.g., taller, stronger, better-looking).	Did happen / Didn't happen	1	2	3	4
24. Another kid could do something better than you could.	Did happen / Didn't happen	1	2	3	4
25. You didn't have enough privacy (a time and place to be alone) when you wanted it.	Did happen / Didn't happen	1	2	3	4

The Beck Depression Inventory-II (BDI-II) is a copyrighted measure that is available from The Psychological Corporation.

Beck, A. T., Steer, R. A., & Brown, G. K. (1987). *Manual for the Beck Depression Inventory-II*.  
New York: The Psychological Corporation.

## HSC

Please indicate true or false to each of the following sentences by circling a "T" if you think the sentence is true and you agree with it, or "F" if you think the sentence is false and you disagree with it.

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

The Suicidal Ideation Questionnaire (SIQ) is a copyrighted measure that is available from Psychological Assessment Resources.

Reynolds, W. M. (1987). *Manual for the Suicidal Ideation Questionnaire*. Odessa, FL:

Psychological Assessment Resources.



## CASPI

INSTRUCTIONS: Please answer the questions about yourself in **the past 6 months**.  
For the following questions, please circle YES or NO.

1. Did you find it hard to concentrate on what you were doing?..... Yes No
2. Were you impatient?..... Yes No
3. Did you often feel nervous?..... Yes No
4. Did you feel like doing dangerous things?..... Yes No
5. Did you often feel that you like to be alone?..... Yes No
6. Did you often feel angry?..... Yes No
7. Did you blame yourself for bad things that happened to you?..... Yes No
8. Did you often feel sad?..... Yes No
9. Did you feel that things were not going to get better for you?..... Yes No
10. Did you daydream a lot?..... Yes No
11. Did you ever feel that you wanted to die?..... Yes No
12. Did you feel that things you did were not worth much?..... Yes No
13. Did you feel people didn't like you?..... Yes No
14. Did you find it difficult to make decisions?..... Yes No
15. Were you frequently punished?..... Yes No
16. Did you feel that you were the cause of family problems?..... Yes No
17. Did you see frequent arguments between your parents?..... Yes No
18. Did you see your father hit your mother? ..... Yes No
19. Was your father or mother sad a lot?..... Yes No
20. Did your father or mother drink alcohol a lot?..... Yes No
21. Did you feel people talked about you?..... Yes No
22. Did you often become sad when you didn't get your way?..... Yes No
23. Did you feel that you wanted to hurt yourself?..... Yes No
24. Did you try to hurt yourself?..... Yes No
25. Did you ever think of killing yourself?..... Yes No
25. Did you ever try to kill yourself?..... Yes No
26. Did your parents frequently get angry that they stopped talking  
to each other?..... Yes No
28. Did your father or mother yell at you a lot?..... Yes No
29. Did your parents ever hit you very hard?..... Yes No
30. Did you often become angry when you did not get your way?..... Yes No