Perfectionism and Interpersonal Functioning

by

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Statement

I certify that this thesis contains no material which has been accepted for a degree or diploma by the university or any other institution, except by way of background information where acknowledgement is made in the text of the thesis, and that to the best of my knowledge and belief this thesis contains no material previously published or written by another person except where due acknowledgement is made in the text of the thesis.

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ABSTRACT

The aim of the present study was to investigate associations between various dimensions of perfectionism and key aspects of interpersonal functioning. Participants in Study 1 were 371 adults. In studies 2 to 5 a more homogenous sub-sample of 165 adults 25 years and under was used. The measures of perfectionism were the *Perfectionism Cognitions Inventory* (PCI, Hewitt, Flett, Blankstein & Gray, 1998), two measures both named the *Multidimensional Perfectionism Scale* (MPS-F and MPS-H; Frost, Marten, Lahart & Roseblate, 1990; Hewitt & Flett, 1991b), and the *Positive and Negative Perfectionism Scale* (PANPS, Terry-Short, Owens, Slade & Dewey, 1995). These measures yielded 12 different scales or dimensions that were classified into two domains, *negative evaluation concerns* (NEC) and *standards and achievement* (SA) according to whether the dimension was characterised as primarily negative or more positive in nature.

Study 1 established that almost all dimensions of perfectionism were positively related to anxiety and depression. To establish relationships of perfectionism to social functioning independently of the influence of depression and anxiety, subsequent studies used high and low groups on each perfectionism dimension and analysis of covariance to adjust for any effects of anxiety and depression. The major finding of Study 2 was that most NEC but not SA dimensions were related to estimates of more frequent negative interpersonal interactions. NEC groups showed increased levels of *interpersonal rejection sensitivity* to a greater extent than SA groups.

Studies 3 to 5 examined attributions of the interpersonal behaviour of one-self and others using photographs of facial expressions (Study 3), vignettes describing friendly, neutral and unfriendly interactions (Study 4), and ratings of self-reported negative interpersonal interactions based on a diary methodology (Study 5). Study 3 failed to find any evidence that perfectionists categorised facial expressions more negatively or made attributions of more negative mood based on facial expression relative to non-perfectionists. In Study 4 some high NEC but not SA groups made more negative attributions about the friendly and neutral behaviour of others and attributed more negative emotional responses to the person who was the object of the behaviour. In Study 5 two high NEC but no SA groups engaged in increased avoidance behaviour and some high NEC groups and one SA group differentially showed increased interpersonal distress. Individuals high in SA dimensions did not demonstrate more constructive approach behaviours.

It was concluded that increased levels of *interpersonal rejection sensitivity* and more negative attributions about the friendly or neutral behaviour of others may mediate perceptions of increased negative interpersonal interactions for individuals high in some NEC dimensions. It was further concluded that increased interpersonal distress and subsequent vulnerability to psychopathology may be determined in part by the extent to which individuals are motivated by different perfectionistic concerns. Six distinctive profiles of results relating to interpersonal functioning and vulnerability to psychological distress were identified corresponding to individual or groups of perfectionistic traits. These conclusions must be considered in the light of limitations of the sample which was primarily confined to younger adults.

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CHAPTER 1

The Construct of Perfectionism

1.1 Brief Rationale and Aims of the Investigation

In recent years there has been a proliferation in the development of new measures of perfectionism. These newer measures reflect changes in the conceptualisation of the construct of perfectionism from a unidimensional to a more multidimensional focus (Burns, 1980; Frost, Marten, Lahart & Rosenblate; 1990; Hamachek, 1978; Hewitt & Flett, 1991b; Hollender, 1965; Pacht, 1984, Slade & Owens, 1998; Terry-Short, Owens, Slade & Dewey, 1995). Investigations using multidimensional measures of perfectionism have identified dimensions of perfectionism that are associated with disorders such as anxiety and depression (Antony, Purdon, Huta & Swinson, 1998; Enns & Cox, 1997; Frost et al., 1990; Frost, Heimberg, Holt, Mattia & Neubauer, 1993; Flett, Hewitt, Blankstein & Grey, 1998; Flett, Hewitt, Endler & Tassone, 1994; Hewitt & Flett, 1991a, 1991b, 1993; Rhéaume, Freeston, Dugas, Letarte & Ladoucer, 1995). However, there are inconsistent results for other dimensions (Chang & Sanna, 2001; Flett, Hewitt, Ediger, Norton & Flynn, 1998; Frost et al., 1993; Hewitt & Flett, 1991a, 1991b, 1993). Various researchers have proposed that these differences in association between dimensions of perfectionism and psychopathology may be reflective of a proposed positive/adaptive, negative/maladaptive distinction in dimensions of perfectionism (Enns & Cox, 1999; Dunkley, Blankstein, Halsall, Williams & Winkworth, 2000; Frost et al., 1993; Hamachek, 1978; Slade & Owens, 1998; Terry-Short et al., 1995).

In an attempt to explain the links between perfectionism and psychopathology, researchers have begun to investigate cognitions and behaviours relating to interpersonal functioning and perfectionism that are thought to increase or decrease vulnerability to psychological distress. It is generally accepted that negative interpersonal interactions can have a significant impact on psychological well-being and interpersonal conflicts have been identified as one of the most upsetting stressors in a daily diary self-report study (Bolger, DeLongis, Kessler & Schilling, 1989; Flett, Hewitt, Garshowitz & Martin, 1997). In addition, anxiety and depression have been found to be associated with deficits in interpersonal functioning independently of perfectionism (Dow & Craighead, 1987; Gotlib & Robinson, 1982).

Individuals with high levels of specific dimensions of perfectionism have been found to engage in a range of maladaptive interpersonal behaviours (Hewitt & Flett, 1991b; Hill, McIntyre & Bacarach, 1997; Hill, Zrull & Turlington, 1997) and to perceive that they experience negative interpersonal interactions more frequently than those low in perfectionism (Flett et al., 1997). It is suggested that perfectionism-related cognitions and behaviours may contribute to the onset and maintenance of symptoms of anxiety and depression. This is thought to occur by increasing self-generated stressors and activating more negative internal attributions about oneself and others that renders the individual more vulnerable to the experience of distress (Alden, Bieling & Wallace, 1994; Dunkley et al., 2000; Flett, Hewitt & DeRosa, 1996; Flett et al., 1997; Hill, Zrull & Turlington 1997; Hewitt & Flett, 2002). Yet some perfectionism theorists also propose that specific aspects of perfectionism may reduce vulnerability to psychological distress through more

adaptive interpersonal behaviours and cognitions (Dunkley et al., 2000; Frost et al., 1993; Slade & Owens, 1998).

Investigations to date have relied largely on the Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991b) to measure perfectionism in relation to interpersonal functioning and distress. Thus there is little information available in regard to the ways in which dimensions of perfectionism from other perfectionism measures might be implicated in behavioural and cognitive differences in interpersonal functioning and levels of interpersonal distress that might increase or decrease vulnerability to psychopathology. In order to clarify this issue four measures of perfectionism are used to investigate aspects of interpersonal functioning with reference to the aims set out below.

The *first aim* of the investigation is to identify associations between dimensions of perfectionism and sample characteristics such as age, sex, the presence of medical and mental illness, work or school absenteeism related to stress and illness and a history of suicide attempts and self-mutilation. An additional aim is to identify the extent to which dimensions of perfectionism predict symptoms of anxiety and depression, and perceptions of subjective well-being. These aims are pursued in Study 1.

The *second aim* is to identify dimensions of perfectionism involved in estimates of more frequent unpleasant interpersonal interactions and with increased interpersonal rejection sensitivity (Boyce & Parker, 1989; Boyce et al., 1990, 1993; Harb, Heimberg, Fresco, Schneier & Liebowitz, 2002). This aim is achieved through Study 2.

The *third aim* of this investigation is to identify whether individuals high in dimensions of perfectionism report different perceptions about the nature of social information such as facial expression or interpretations about negative or positive interpersonal behaviour of others as well as their perceptions of the emotional impact for the people who are the objects of this behaviour. This aim is achieved through Studies 3 and 4.

The *fourth aim* is to examine whether there are differences in interpersonal behaviour, perfectionistic motivations and levels of interpersonal distress in relation to self-reported unpleasant interpersonal interactions. This is aim is achieved through Study 5. The use of a daily diary methodology is expected to more directly capture the experience of high trait perfectionism in daily interpersonal situations. A *fifth aim* of this research is to examine the extent to which the results of the studies undertaken in this investigation can be explained by existing conceptualisations of perfectionism.

Despite an increasing body of literature identifying associations between perfectionism and psychopathology and various personality traits and behaviours, there is limited consensus among researchers in relation to an underlying theory or definition of the construct. There is also considerable debate as to whether existing measures of perfectionism adequately measure the different conceptualisations of perfectionism proposed (Dunkley et al., 2000; Frost et al., 1990, 1993; Hewitt & Flett, 1991b; Rhéaume et al., 2000; Shafran & Mansell, 2001; Terry-Short et al., 1995). Therefore, before reviewing associations between perfectionism and psychopathology, interpersonal traits and behaviours it is necessary to review some of the changes in the conceptualisation of

perfectionism and the on-going debate about the nature and measurement of perfectionism that inform the findings and conclusions drawn in the current investigations.

1.2 Unidimensional Theories of Perfectionism

Until recently perfectionism has been largely viewed as a unidimensional construct focusing on self-imposed setting of unattainable goals and heightened self-criticism for perceived failure to meet these goals (Burns, 1980; Hollender, 1965; Pacht, 1984). Hollender (1965) proposed that perfectionism exists when the individual "characterises his mode of performing as perfectionistic...not only does the perfectionist demand a certain level of performance himself, but he cannot accept or be content with anything short of perfection" (p. 94). Hollender qualified this by suggesting that the definition referred to the manner in which the individual aspires to perform rather than the manner in which the person may think of him or her self.

Similarly Burns (1980) and Pacht (1984) put forward more unidimensional definitions of perfectionism. These definitions describe perfectionism as largely negative in its consequences for the individual and indicative of psychopathology. Pacht suggested that it is a "striving for nonexistent perfection" that is associated with psychopathology (p. 386). Similarly Burns (1980) stated that perfectionists are those whose "standards are high beyond reach or reason...and who measure their own worth entirely in terms of productivity and accomplishment. For these people the drive to excel can only be self-defeating" (p. 34). Others, however, have drawn a distinction between those who are

successful in their perfectionism (those who are able to set high standards and strive towards them and who gain pleasure from success achieved without undue self-criticism or distress for failure), from those for whom perfectionism is a more pathological trait (Frost et al., 1993; Hamachek, 1978). In describing this proposed difference between perfectionistic individuals, Hamachek distinguished between 'normal' and 'neurotic' perfectionists.

Hamachek (1978) suggested that normal perfectionists are those who set high standards for themselves but are able to be more flexible in their perceptions of success or failure. Conversely, neurotic perfectionists set high standards for themselves but do not allow any flexibility in the latitude allowed for making mistakes or failing to reach goals. Frost et al. (1990) have since argued that the distinction between normal and neurotic perfectionists is that neurotic perfectionism involves not only the setting of high standards, but a tendency for overly critical evaluation of one's own behaviour. They further suggest that the association of perfectionism with various psychopathologies is more closely related to this tendency for critical evaluation, rather than the setting of high standards in itself.

1.3 The Development of Multidimensional Measures of Perfectionism

The Multidimensional Perfectionism Scale (MPS-F;Frost et al., 1990)

In order to enable investigation of these differing aspects or dimensions of perfectionism, Frost et al. (1990) developed a measure to reflect the theorised multidimensional nature of the construct of perfectionism, *The Multidimensional Perfectionism Scale* (MPS-F).

The MPS-F comprises six dimensions of perfectionism. *Personal standards* (PS) reflects a tendency to set very high standards while placing excessive importance on these standards for self evaluation. The personal standards dimension most closely resembles previous uni-dimensional conceptualisations of perfectionism. *Concern over mistakes* (CM) reflects the perfectionists over-concern about making mistakes in performance situations. Frost et al. suggest that neurotic perfectionists are so over-concerned about making a mistake that even the smallest mistake is perceived as failing to meet the standards they have set. Thus this dimension measures a tendency to react negatively to mistakes and equate mistakes with personal failure and fears that one will lose the respect of others following perceived failure. *Doubts about actions* (DA) is suggested to reflect the perfectionist's sense of doubt about the quality of his or her actions or beliefs. It is suggested that this dimension is not about the recognition or evaluation of specific mistakes but rather the sense that a task is not completed satisfactorily.

Two further scales of the MPS-F reflect the tendency of perfectionists to place considerable value on the expectations and evaluations of their parents in regard to their performance. *Parental expectations* (PE) reflects a tendency to perceive one's parents as having very high expectations, and *parental criticism* (PC) reflects a tendency to perceive one's parents as being overly critical. Frost et al. (1990) argue, as has previously been hypothesised by Burns (1980), Pacht (1984), Hamachek (1965) and Hollender (1965), that perfectionists were raised in an environment where love and approval may have been conditional upon performance. Any failure or mistake may mean a risk of rejection or

withdrawal of approval for the perfectionist. Thus to gain love and approval the individual must perform at increasingly perfect levels.

Finally, the *organisation* scale (OR) is suggested to measure the tendency of perfectionists to emphasise precision, order and organisation. It is suggested that while the *organisation* subscale does not directly relate to the setting of standards or evaluation of performance, it may reflect the way in which perfectionistic individuals attempt to meet standards and may therefore be an important component of perfectionism. Although the MPS-F measures individual subscales, a total perfectionism score can be generated using five of the subscale scores. The *organisation* subscale score is omitted from the calculation of the total score because of low correlation with the other subscales (Frost et al., 1990).

In their initial investigations of the MPS-F, Frost et al. (1990) reported that their results indicated that although previous definitions of perfectionism had emphasised the setting of excessively high standards for performance as the primary characteristic of perfectionism (Burns, 1980; Hollender, 1965; Pacht, 1984), it is *concern over mistakes* rather than high standards that is more central to the concept of perfectionism and the dimension most closely related to psychopathology. Furthermore, Frost et al. found *personal standards* was associated with more positive characteristics such as increased perceptions of self-efficacy and could be characterised as more consistent with normal perfectionism as described by Hamachek (1978).

The Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991b)

Almost concurrently with the development of the MPS-F, Hewitt and Flett (1991b) developed a scale of the same name although from a different conceptual standpoint. Hewitt and Flett (1990) argued that rather than focusing on perfectionism from a purely cognitive viewpoint, perfectionism should be viewed as a broad personality style that encompasses multiple aspects of functioning including affective, interpersonal, behavioural and motivational components as well as the cognitive component. Hewitt and Flett (1991b) argued that existing measures of perfectionism failed to address the interpersonal situations in which perfectionistic attitudes might be activated and were consequently too narrowly focused on perfectionism as an aspect of self-criticism. They also suggest that although previous conceptualisations of perfectionism made implied references to other dimensions of perfectionism, the focus of these conceptualisations remained almost exclusively related to self-directed cognitions.

Hewitt and Flett (1991b) contended that although self-directed perfectionism remained an essential part of any conceptualisation of the construct, perfectionism also contained interpersonal aspects that contributed to the adjustment difficulties thought to characterise perfectionists. They further suggested that although behaviours demonstrated in relation to the different dimensions may be the same, the distinguishing feature among MPS-H dimensions involve from whom the perfectionistic behaviours are perceived to be derived (self or others) or to whom the perfectionistic behaviours are directed (self or others; Hewitt & Flett, 2002). The *Multidimensional Perfectionism Scale* (MPS-H, 1991b) developed by Hewitt and Flett thus measures three dimensions of perfectionism. The

self-oriented perfectionism (SOP) scale reflects the more traditional concept of perfectionism: the tendency to set high standards for oneself as well as to evaluate one's own behaviour stringently. High levels of *self-oriented perfectionism* involve maintaining unrealistic expectations of one-self when failing and a self-evaluative focus on one's own flaws. *Self-oriented perfectionism* is conceptualised as a dimension in which perfectionistic behaviours are derived from one self and are directed towards one self. The *self-oriented perfectionist* sets their own perfectionistic standards and requires only him or her self to be perfect (Hewitt & Flett, 2002).

Other-oriented perfectionism (OOP) is proposed to reflect a tendency to set unrealistically high expectations for the behaviour of others and is an outwardly directed form of *self-oriented perfectionism.* That is that *other-oriented perfectionism* entails strong motivations that others should be perfect coupled with unrealistic expectations and stringent evaluation of others. The perfectionism stems from one-self but is directed towards others. Hewitt and Flett (2002) propose that this dimension of perfectionism may not be directly involved in the generation of distress for the individual but is more likely to be implicated in producing dissatisfaction with the target of the perfectionists expectations. Distress may be experienced only in relation to perceptions that the target of the *other-oriented perfectionists'* high expectation may have failed to provide expected social support or recognition. *Other-oriented perfectionists* may also experience difficulties in relationships and other interpersonal contexts as a result of their unrealistic expectations of others.

Socially prescribed perfectionism (SPP) is suggested to reflect the perception of individuals that others have imposed high standards on them and are engaging in stringent evaluation of them, and are exerting pressure on them to be perfect. Perfectionistic expectations are perceived to be imposed by others yet are directed towards the self. In other words although perfectionistic expectations are perceived to be imposed by others the *socially prescribed perfectionist* is concerned with their own lack of perfection in meeting these externally imposed standards. Hewitt and Flett (2002) propose that it is the *socially prescribed perfectionists* high level of concern about obtaining and maintaining the approval and care of others by being perfect in the eyes of others that is more important in the generation of distress for these individuals. *Socially prescribed perfectionism* and *other-oriented perfectionism* are characterised as interpersonal aspects of perfectionism that will be involved in psychosocial problems whereas *self-oriented perfectionism* is characterised as a more intrapersonal dimension of perfectionism that is less related to interpersonal difficulties (Enns & Cox, 2002; Habke & Flynn, 2002).

Hewitt and Flett (2002) propose that perfectionism is involved in the generation of psychopathology through four mechanisms. These mechanisms are *stress generation*; the tendency to engage in behaviours, make choices or pursue unrealistic goals that create stressful events; *stress anticipation*; a future orientation that involves preoccupation with potential stressors and important personal problems, *stress perpetuation*; the tendency to activate maladaptive responses to stress (such as rumination) that serve to maintain and prolong stressful episodes, and finally *stress enhancement*; the tendency to magnify stress

from engaging in self-defeating styles of cognitive appraisal (such as equating minor mistakes and flaws as personal failure) and engaging in maladaptive coping and problems solving styles.

Hewitt and Flett (2002) further propose that the three MPS-H perfectionism dimensions are core vulnerability factors that may be directly or indirectly involved with the onset or exacerbation of symptoms of psychopathology. This same research team has developed a further unitary measure of the frequency of perfectionism cognitions, the *Perfectionism Cognitions Inventory* (PCI; Flett, Hewitt, Blankstein & Gray, 1998). This measure of perfectionism has also been found to be associated with psychological distress.

1.4 The Perfectionism Cognitions Inventory

The PCI (Flett, Hewitt, Blankstein & Gray, 1998) was developed to assess the frequency with which perfectionists experience perfectionistic cognitions. The authors suggested that frequent perfectionistic cognitions are experienced by individuals who are aware of a discrepancy between their ideal standards and their actual characteristics and that personality traits involved in anxiety and depression have a cognitive component involving rumination. The activation of this personality component contributes to increased distress.

Thus the PCI measures individual differences in the frequency of perfectionistic cognitions involving the need to be perfect, upward striving, social comparison and competitiveness as well as the individuals' awareness of being imperfect and not

obtaining higher level goals. Flett, Hewitt, Blankstein and Gray (1998) argue that whereas the MPS instruments focus more globally on the degree of trait levels of perfectionism, the PCI provides an assessment of the frequency with which individuals make evaluative comparisons at a cognitive level between the ideal perfectionistic self and the current self or current situation.

In their investigation of the PCI, Flett, Hewitt, Blankstein and Gray (1998) found in a student population, that although automatic perfectionistic thoughts were associated with both anxiety and depression, this measure may have a stronger association with anxiety than with depression. Results from two of their five studies suggested that the PCI is associated with the presence of general distress but not a lack of positive affect. However, those with high PCI scores also reported their anxious and depressive thoughts created increased levels of sadness, worry and guilt and that these thoughts were perceived as highly self-relevant and difficult to remove.

Hewitt and Flett (2002) cite a study by Flett, Parnes and Hewitt (2001) showing that although almost all of the MPS-F and MPS-H dimensions of perfectionism were significantly and positively associated with measures of perceived pressure, self-imposed pressure and hassles, PCI scores showed associations of greater magnitude than any of the other dimensions investigated. Hewitt and Flett concluded that these results suggest that perfectionists, particularly those with frequent perfectionistic cognitions, experience significant levels of self-imposed pressure in an effort to meet unrealistic goals. They

further conclude that this pressure is associated with an internal dialogue involving thoughts about one's inability to attain perfection.

1.5 Criticisms of Multidimensional Measures of Perfectionism

Various criticisms have been made about the utility and/or factor structure of the MPS-F and MPS-H measures of perfectionism. Researchers have identified both three and four factor solutions for the MPS-F (Purdon, Antony & Swinson, 1999; Stöber, 1998; Stumpf & Parker, 2000), and reduced item content for both the MPS-F and MPS-H (Cox, Enns, & Clara, 2002). Another research team has reported that the dimensions of *socially prescribed* and *self-oriented perfectionism* each consist of two separate facets that are differentially associated with adaptive and maladaptive outcomes for the individual (Campbell & Di Paula, 2002). This latter finding will be discussed at greater length in Chapter 4.

Other criticisms of the MPS instruments have been made. For example Purdon et al. (1999) voiced concerns that item content in the MPS-F subscales of *personal standards*, *parental criticism, parental expectations*, and *organisation* might not adequately capture the emotional impact of failure to meet these aspects of perfectionism. Shafran and Mansell (2001) argue that the scales of *parental expectations* and *parental criticism* are not state measures of perfectionism but rather retrospective perceptions of the individual that are unable to reflect the current state of the individual and may not be sensitive to clinical change.

Shafran and Mansell (2001) also suggested that dimensions such as *socially prescribed perfectionism* in fact measure beliefs about the high expectations of others in relation to oneself, but that individuals high in this dimension of perfectionism may not perceive themselves as perfectionists. It is suggested that although socially prescribed beliefs of this kind may be relevant to perfectionism they are not central to it. Rhéaume et al. (2000) in a related argument suggested that some subscales of existing measures of perfectionism represent developmental aspects that make interpretation of results and understanding of perfectionism difficult.

Slaney, Rice, Mobley, Trippi & Ashby (2001) have also argued that some dimensions of perfectionism of the MPS-F and MPS-H appear to be based on assumed causes, or the concomitant or resulting effects of being a perfectionist rather than being a definition of perfectionism itself. Slaney et al. contend that the MPS-H dimension of *socially prescribed perfectionism* appears to be a cause of perfectionism (a belief that others set high standards and therefore one needs to maintain perfection). It is similarly suggested that the MPS-F dimensions of *parental expectations* and *parental criticism* are causal rather than based on any definition of the construct.

1.6 Positive and Negative Conceptualisations of Perfectionism

Investigators have argued that much of the research generated by multidimensional perfectionism instruments has been directed towards clinical populations and the psychopathology of perfectionism rather than towards more general or normal populations who may engage in more positive aspects of perfectionism (Bieling, Israeli &

Antony, 2004; Slade & Owens, 1998; Slaney & Ashby, 1996; Terry-Short et al., 1995). Despite some criticism of the factor structures or item sets for the MPS-F and MPS-H, there has been an increasing body of opinion that two over-arching dimensions of perfectionism can be identified that fall within the conceptualisation of two forms of normal/healthy or neurotic/unhealthy perfectionism proposed by Hamachek (1978; Bieling et al., 2004; Cox et al., 2002; Dunkley et al., 2000; Frost et al; 1993; Slade & Owens, 1998; Terry-Short et al., 1995).

These two forms of perfectionism have been variously labeled *healthy* and *unhealthy* (Stumpf & Parker, 2000), *adaptive* and *maladaptive* (Bieling, Israeli, Smith & Antony (2003), *sound* and *dysfunctional* (Rhéaume et al., 2000), *active* and *passive* (Lynde-Stevenson & Hearne, 1999), *personal standards* and *evaluative concerns* (Dunkley et al., 2000), *positive achievement striving* and *maladaptive evaluation concerns* (Frost et al., 1993) and *positive* and *negative perfectionism* (Terry-Short et al., 1995, Slade & Owens, 1998). Investigations of the MPS-F and MPS-H have found that there is considerable overlap between specific dimensions derived from each instrument.

1.7 Overlap Between the MPS-F and MPS-H Scales

In comparing the MPS-F and MPS-H instruments, it was found that there was considerable overlap between the measures in a university student sample (Frost et al., 1993). Correlation analyses were conducted among the perfectionism measures and with measures of affect. Results from these analyses showed that *personal standards* was most closely related to *self-oriented perfectionism* (r = .62) with a separate but less

substantial association between *self-oriented perfectionism* and *concern over mistakes (r* = .38). *Concern over mistakes (r* = .49), *parental expectations (r* = .49) and *parental criticism (r* = .49) were most closely associated with *socially prescribed perfectionism. Other-oriented perfectionism* showed a more mixed profile of association between positive and negative aspects of perfectionism as this dimension was associated with *personal standards (r* = .33) as well as *concern over mistakes (r* = .22) and *parental expectations (r* = .19). Other studies have also found a similar pattern of associations between these dimensions of perfectionism in student (Flett, Sawatzky & Hewitt, 1995) and clinical disorder populations (Enns & Cox; 1999; Hewitt, Flett & Blankstein, 1991). Frost et al. conclude that the total perfectionism score generated by the MPS-F appears to reflect a more global measure of perfectionism that is associated with *self-oriented perfectionism (r* = .49) and *socially prescribed perfectionism (r* = .57) but less so to *other-oriented perfectionism (r* = .28).

Frost et al. (1993) also found that the dimensions of *socially prescribed perfectionism, concern over mistakes* and *doubts about actions* were associated with symptoms of depression as measured by the *Beck Depression Inventory* (BDI, Beck, Ward, Mendelson, Mock & Erbaugh, 1961; r = .23, r = .28, r = .31 respectively) as well as a measure of negative affect from the *Positive Affect-Negative Affect Scale* (PANAS, Watson, Clark & Tellegen, 1988; r = .24, r = .26, r = .28 respectively). None of these dimensions showed any association with positive affect, although both *personal standards* (r = .25) and *self-oriented perfectionism* did (r = .19). *Self-oriented perfectionism* was found not to be associated with measures of depression or negative

affect. As none were associated with positive affect, it was concluded that the dimensions of *concern over mistakes*, *doubts about actions*, and *socially prescribed* perfectionism may be more a reflection of anxiety symptoms rather than depression.

On the basis of a factor analysis of the nine perfectionism scales Frost et al. (1993) further concluded that the dimensions of perfectionism from both the MPS-F and MPS-H broadly fell into two domains of perfectionism and referred to them as *maladaptive evaluation concerns* and *positive achievement striving*. Maladaptive evaluation concerns was found to be significantly related to negative affect and symptoms of depression and was comprised of the scales of *concern over mistakes, doubts about actions, parental expectations* and *parental criticism* from the MPS-F and *socially prescribed perfectionism* from the MPS-H. The second factor, positive achievement striving, showed no relationship to symptoms of depression but was significantly associated with positive affect and was comprised of the dimensions of *personal standards and organisation* (MPS-F) and *self-oriented perfectionism* and *other-oriented perfectionism* (MPS-H). Frost et al. speculated that individuals with high positive achievement striving scores would be those who had had success in achievement and that their personal experiences of success were the result of skills which in turn resulted in high expectations for the self.

Subsequent research has provided some support for this proposed distinction between maladaptive and positive (or at least neutral) forms of perfectionism that can be derived from the MPS measures of perfectionism (Bieling et al., 2004; Cox et al., 2002).

Dunkley et al. (2000) suggest that individuals high in a cluster of perfectionism dimensions they labeled *evaluative concerns* (comprised of *socially prescribed perfectionism, concern over mistakes* and *doubts about actions*) may be characterised as experiencing increased perceptions that others impose unrealistically high standards on them, and that consequently these individuals engage in overly critical evaluation of their behaviour and are unable to gain satisfaction from their performance. Furthermore, individuals high in *evaluative concerns* focus on the negative aspects of a situation to the extent that they may experience normal daily events as serious stressors. It is also speculated that lower levels of self-efficacy in regard to ability to cope adequately or to the satisfaction of others may result in an avoidance orientation or less active coping that may in turn increase both the frequency and duration of events perceived to be distressing. These individuals may also perceive that any mistake made may result in loss of respect or rejection from others.

Dunkley et al. (2000) use the term *personal standards perfectionism* (comprised of *self-oriented perfectionism* and *personal standards*) for those who set high self-imposed standards and goals with a tendency to engage in stringent self-evaluation that is suggested to result in the increased generation of stress for these individuals. However, individuals high in *personal standards perfectionism* are also suggested to have a more active problem solving orientation and are assumed to work until a solution is reached. It is further suggested that the proposed tendency to engage in more active strategies and less avoidant strategies may decrease the frequency and duration of any negative experiences.

1.8 Positive and Negative Perfectionism Scale

(PANPS; Terry-Short et al., 1995)

Another research team has also proposed a distinction between a positive/adaptive form of perfectionism and a negative/maladaptive form of perfectionism. Working from the standpoint that previous research into perfectionism was too narrowly focused on clinical populations and that this resulted in negatively biased and pathologically oriented conceptualisations, Terry-Short et al. (1995; see also Slade & Owens, 1998) argued that it is possible to distinguish between aspects of perfectionism on the basis of the perceived consequences of perfectionism for the individual. They proposed that the distinction between positive and negative aspects of perfectionism mirrored a learning theory behavioural distinction between positive and negative reinforcement.

Terry-Short et al. (1995) suggested that existing conceptualisations of perfectionism fail to take adequately into account the role of the consequences of perfectionistic behaviour and that from a behaviorist viewpoint the consequences of behaviour would be central to the meaning of perfectionism for individuals with high trait perfectionism. On this basis Terry-Short et al. theorised that highly perfectionistic individuals would be motivated to behave according to behaviourist principles of reinforcement. It was argued that behaviours and cognitions directed towards higher level goals in order to obtain positive consequences constituted *positive perfectionism* (PosP) whereas behaviours and cognitions directed towards higher level goals in order to avoid or escape from negative consequences constituted *negative perfectionism* (NegP).

In short, *positive perfectionism* is driven by positive reinforcement (such as recognition and goal achievement) and a desire for success, whereas *negative perfectionism* is driven by negative reinforcement (fear of failure to meet goals) and a desire to avoid negative or aversive consequences such as criticism or failure. Consistent with the ideas of Skinner (1968) it was also suggested that the same behaviours may be associated with differing emotional states dependent on whether the behaviour was a function of negative or positive reinforcement.

Terry-Short et al. (1995) developed a new measure of perfectionism, the *Positive and Negative Perfectionism Scale* (PANPS). Questions were developed to tap the dimensions of *self-oriented* and *socially prescribed perfectionism* and drew on the content of the MPS-H. However within each category, further questions were formulated to specifically measure *positive* and *negative perfectionism*.

The PANPS was administered to four participant groups (control, eating disorder, depressed and athlete). Results showed that in reference to the control group, athletes scored highly on *positive perfectionism* but at normal levels of *negative perfectionism*, whereas depressed participants scored in the reverse and eating disorder participants scored highly on both dimensions. Principal Components Analysis of the data yielded three factors: *Negative Perfectionism, Positive Perfectionism* and *Positive Social Perfectionism*. When the number of factors extracted was limited to two, it was found that a clear distinction could be made between *positive* and *negative perfectionism*.

Terry-Short et al. (1995) and subsequently Slade and Owens (1998) have therefore argued that individuals high in *positive perfectionism* will tend to pursue success, perfection and excellence, whereas individuals high in *negative perfectionism* will seek to avoid failure, imperfection and mediocrity. With regard to social or interpersonal functioning individuals high in *positive perfectionism* will seek approval from others whereas those high in *negative perfectionism* will be motivated by the desire to avoid the disapproval of others. It is also proposed that overt behaviours may appear identical, but that the differing underlying motivations of those high in *positive* and *negative perfectionism* result in very different emotional consequences. In this context it is suggested that individuals high in *positive perfectionism* will tend to experience satisfaction and pleasure when they achieve success but will not be unduly affected by failure. Individuals high in *negative perfectionism* will not feel satisfaction as a result of goal achievement because failure may still be imminent (Terry-Short et al., 1995; Slade & Owens, 1998).

Other research has found some support for this distinction between *negative* and *positive perfectionism* in a sample of athletes, as *negative perfectionism* was found to be associated with disturbed eating attitudes and social physique anxiety (Haase, Prapavessis, & Owens, 1999; 2002) where *positive perfectionism* was not. However, a recent study investigating the factor structure of the PANPS in a sample of 500 athletes did not substantiate the original 40-item, two factor structure (Haase & Prapavessis, 2004). Haase & Prapavessis suggest that a 19-item, two factor model, provided a more parsimonious account of the data which was cross-validated in a further sample.

1.9 The Benefits of Positive Aspects of Perfectionism

Despite agreement in some quarters that forms of positive and negative perfectionism exist, there remain doubts that good evidence exists for the beneficial effects of positive aspects of perfectionism. Efforts to identify benefits or an increase in adaptive outcomes in relation to positive forms of perfectionism have been limited. Rice, Ashby and Slaney (1998) investigated the ways in which self-esteem might mediate the effects of perfectionism on depression. This investigation failed to find evidence of a relationship between positive aspects of perfectionism and self-esteem and concluded that there was not good evidence for increased beneficial outcomes.

However, in a subsequent study (Ashby & Rice, 2002) using a measure relating only to high standards (*standards* subscale of the *Almost Perfect Scale-Revised*; Slaney et al., 2001), Ashby and Rice found that *standards* was a positive predictor of self-esteem. Discrepancies between ideal and actual outcomes and self-criticism related to performance were found to be negative predictors of self-esteem. Ashby and Rice argued that these findings offered support for the contention that high personal standards are not in and of themselves negative traits and could in fact provide benefits for the individual.

Bieling et al., (2003) examined perfectionism within a real achievement experience and concluded that there was some evidence to support the notion of a distinction for what they termed *adaptive* and *maladaptive* forms of perfectionism. It was found that adaptive perfectionism did show a moderate but positive significant association with exam performance and positive affect in regard to the exam. It was concluded that these results

represented evidence of a performance advantage to adaptive or positive aspects of perfectionism not previously identified.

Bieling et al. (2004) examined the proposed distinction between *maladaptive evaluation concerns* and *positive achievement striving* in an achievement situation and compared three models of perfectionism based on the Frost et al. (1990) and Hewitt and Flett (1991b) MPS measures. The first model separately examined the total scores derived from each of the MPS measures. The second model, a unitary model combined the total scores of both measures, while the third model examined the two factor model based on the Frost et al. (1993) distinction between *maladaptive evaluation concerns* and *positive achievement striving*. Using Confirmatory Factor Analysis (CFA) it was found that the two factor Frost et al. model was a better fit to the data than the other two models. However, the data from the two factor Frost et al. model also showed that *positive achievement striving* retained positive associations with all psychopathology scales (*Depression, Anxiety and Stress Scale* 21 Item Version, DASS-21, Lovibond & Lovibond, 1995; and the Test Anxiety Scale, TAS; Sarason, 1984), although smaller than the associations found between measures of psychopathology and the *maladaptive evaluation concerns* scales.

In order to determine to what extent *maladaptive evaluation concerns* and *positive achievement striving* contributed uniquely to the psychopathology measures, a series of multiple regression analyses were undertaken. *Maladaptive evaluation concerns* was found to significantly predict scores on all of the psychopathology scales, whereas

positive achievement striving was not found to be a significant predictor for any analysis. *Positive achievement striving* was thus thought not to contribute any unique variance to the psychopathology variables that was not already explained by *maladaptive evaluation concerns*. Overall there appears to be only limited evidence available that indicates that there are beneficial outcomes related to dimensions of perfectionism related to high standards and achievement striving.

Bieling et al. (2004) concluded that there was evidence to support a distinction between the two types of perfectionism. However, although their study showed a positive association between *maladaptive evaluation concerns* and various measures of psychological distress, *positive achievement striving* did not show an inverse relationship to these same measures. It was also found that *positive achievement striving* and *maladaptive evaluative concerns* correlated positively and significantly indicating that these two forms of perfectionism are not independent of each other. It was concluded that *positive achievement striving* might best be characterised as a neutral form of perfectionism that does not imply either positive or negative emotional outcomes for the individual.

1.10 Issues of Definition

Despite increasing consensus among some researchers that a multidimensional approach remains valid, others are advocating a return to a unidimensional perspective for the measurement of pathological or clinical aspects of perfectionism. For example, following a review of perfectionism literature, Shafran and Mansell (2001) concluded

that existing measures of perfectionism do not adequately reflect the original construct of perfectionism and that new measures are required to address this. Shafran and Mansell argued that on the basis of their review of empirical evidence, increased personal standards were specifically elevated in individuals with eating disorders, and that beliefs around high standards for the self were associated with a wide range of psychopathology. On this basis they argued that *personal standards, concern over mistakes* (MPS-F), and *self-oriented perfectionism* (MPS-H) are the dimensions that most closely resemble the original construct and that other dimensions do not.

Shafran, Cooper and Fairburn (2002) continued this line of argument and suggested a new definition of "clinical" perfectionism. They proposed that the defining feature of clinically significant perfectionism is "the over-dependence of self-evaluation on the determined pursuit of personally demanding, self-imposed, standards in at least one highly salient domain, despite adverse consequences" (p. 778). In making their case Shafran et al. argued that the measurement of perfectionism has now extended beyond the original construct and that multidimensional measures of perfectionism tend to describe and measure a group of "related" constructs that are not those contained in early descriptions of perfectionism. They further suggested that more recent investigations using multidimensional instruments constitute a failure to distinguish between perfectionism and its associated features, and as such provides explanation for their view that there have been few advances in the clinical treatment or theoretical understandings of perfectionism related disorders.

In response to the model of clinical perfectionism proposed by Shafran et al. (2002), research teams such as Hewitt, Flett, Besser, Sherry and McGee (2003) have offered a number of arguments to refute aspects of the clinical perfectionism model and to reiterate the empirical and theoretical bases that support multidimensional models of perfectionism. In part Hewitt, Flett, Besser et al. argued that in making their case, Shafran et al. failed to take into account existing research on the cognitive aspects of perfectionism including the role of ruminative processes and frequent automatic thoughts about attaining perfectionism. Hewitt, Flett, Besser et al. also argued that Shafran et al. failed to acknowledge aspects of early theories of perfectionism (e.g., Hamacek, 1978; Horney, 1950) that discuss the interpersonal aspects of perfectionism. The issues raised by these different research teams are complex and are not addressed in detail within this thesis. However, it should be noted that the model proposed by Shafran et al. continues to be a subject of debate among perfectionism theorists and researchers.

Rhéaume et al., (2000) have also concluded that a new definition of perfectionism is required, at least in relation to what they have termed as "pathological" perfectionism. Rhéaume et al. suggested that any new definition of perfectionism would need to be less related to dimensions such as *concern over mistakes* and those related to developmental aspects of perfectionism. They further argued that at its simplest expression, pathological perfectionism would be the belief that a perfect state exists and that one should always try to attain this perfect state. Rhéaume et al. propose that although this definition of perfectionism may be applied to concrete occurrences such as errors, it can also be applied to abstract cognitive constructs (e.g., I should be able to perfectly understand

everything I read) or physiological constructs (e.g., I should feel perfectly well and free of anxiety) and can thus be applied to all to all aspects of life. Although Rhéaume et al. agree that positive perfectionism exists, they suggest that measures of perfectionism should be focused on the exaggerated nature of perfectionism, as it is this exaggeration that is associated with different forms of psychopathology.

1.11 An Approach to Perfectionism Primarily Based on Two Domains

It is apparent from the review of the literature provided in this chapter that there remains a great deal of debate about the nature and definition of perfectionism and the way in which the construct should most properly be measured. Researchers are divided about the way in which perfectionism should be defined and whether current measures are in fact measuring perfectionism or merely a group of related constructs.

One school of thought suggests that perfectionism can be clearly conceptualised as having both maladaptive/negative and adaptive/positive aspects of perfectionism that both warrant research attention and clearer measurement. Despite the increasing theoretical focus on the potential benefits of positive aspects of perfectionism there is little research available that is able to demonstrate a clear benefit derived from having high levels of positive/adaptive perfectionism. However, it is implicit in conceptualisations put forward that these benefits should exist.

A second school of thought argues that many of the measures and dimensions of perfectionism currently being used to research the construct are not good reflections of

the original construct of high personal standards and stringent self-criticism. In fact some of these theorists argue that conceptualisations of perfectionism should be limited to aspects of perfectionism related to psychopathology as it is the extreme and exaggerated nature of perfectionism that results in distress and disorder. Increasing numbers of investigations are being undertaken in an attempt to clarify these issues of appropriate measurement and definition but results from these investigations have been inconsistent about the nature of associations between some specific dimensions of perfectionism and measures of psychological distress. This literature in regard to perfectionism in relation to symptoms of anxiety and depression will be reviewed in Chapter 3.

As has been described in this chapter, dimensions of perfectionism derived from the Frost et al. (1990) and Hewitt and Flett (1991b) multidimensional measures, have been theoretically and empirically clustered together under the umbrella of two primary domains of perfectionism considered to be associated with more negative or positive/neutral traits and outcomes for the individual. Although dimensions such as *self-oriented perfectionism*, *other-oriented perfectionism* and *personal standards* have been associated with increased psychopathology as will be discussed in the following chapter, these and other dimensions have also been found to be associated with positive traits and behaviours. Therefore all of the measures and dimensions of perfectionism described in this chapter can be characterised as either primarily negative in nature or as more positive or neutral. The dimensions of perfectionism described within this chapter are thus considered within this thesis under the umbrella of two domains of perfectionism.

An attempt has been made to avoid using existing labels found in the literature relating to different conceptualisations of perfectionism, however, given the great variety of labels already applied to various dimensions and conceptualisations of perfectionism it has been difficult to avoid terminology already in use altogether. Thus those dimensions of perfectionism characterised as primarily negative in nature are discussed within a domain labeled *negative evaluation concerns* (NEC). Those dimensions of perfectionism characterised as more positive or neutral in nature are contained within a domain labeled *standards and achievement* (SA) as shown in Table 1. In addition throughout the remainder of this thesis, all individual scales from measures of perfectionism will be referred to as dimensions, including the unitary measure of the PCI, for greater ease of reference.

Table 1.

Dimensions of Perfectionism Within the Domains of Negative Evaluation Concerns and Standards and Achievement Perfectionism

	Perfectionism domain	
Perfectionism measure	NEC	SA
PANPS	negative perfectionism	positive perfectionism
MPS-F	concern over mistakes doubts about actions parental criticism parental expectations	personal standards organisation
MPS-H	socially prescribed	self-oriented other-oriented
PCI	PCI	

Note. Dimensions/Domains of Perfectionism: NEC = negative evaluation concerns; SA = standards and achievement; PCI = Perfectionism Cognitions Inventory, Flett et al, 1998; MPS-F = Multidimensional Perfectionism Scale, Frost et al.1990; MPS-H = Multidimensional Perfectionism Scale, Hewitt & Flett, 1991b; PANPS = Positive and Negative Perfectionism Scale, Terry-Short et al, 1995.

CHAPTER 2

Dimensions of Perfectionism and Associations with Anxiety and Depression

2.1 Dimensions of Perfectionism and Psychopathology

In the previous chapter, literature was reviewed in regard to changes in the conceptualisation of perfectionism over the last two decades and the on-going debate that exists about the definition and appropriate measurement of the construct. As different research teams have sought to clarify the nature of perfectionism, there has been a growing body of work that identifies links between perfectionism and psychopathology. Perfectionism has been shown to be negatively associated with aspects of general functioning such as academic achievement orientation and emotional distress (Arthur & Hayward, 1997; Brown et al., 1999); levels of self-efficacy (Hart, Gilner, Handal & Gfeller, 1998), somatic health concerns (Saboonchi & Lundh, 2003), and work related stress (Flett, Hewitt & Hallett, 1995; Mitchelson & Burns, 1998).

Perfectionism research has also identified associations between dimensions of perfectionism and increased levels of clinical symptoms and disorders. These include associations between perfectionism and anxiety (Antony et al., 1998; Flett et al., 1994; Jones & Menzies, 1997; Juster et al., 1996; Rhéaume et al., 1995), and depression (Enns & Cox, 1997; Hewitt & Dyck, 1986; Hewitt & Flett, 1991a, 1991b; 1993; Hewitt, Flett & Ediger, 1996; Hewitt, Flett, Ediger, Norton & Flynn, 1999; Lynd-Stevenson & Hearne, 1999) as well as a range of maladaptive behaviours linked to increased psychological distress such as suicide attempts and related cognitions (Chang, 1998; Dean, Range &

Goggin, 1996; Hewitt, Flett & Weber, 1994; Hewitt, Newton, Flett & Callander, 1997; Hunter & O'Connor, 2003). While it is beyond the scope of this thesis to examine all of these associations in any depth, they are briefly addressed within this chapter. Anxiety and depression are identified as among the most common mental health problems experienced by adults (Beumont, Andrews, Boyce & Carr, 1997) and associations between anxiety and depression have been extensively examined within the perfectionism literature and will therefore be the focus of the review presented later in this chapter.

Early investigations using the MPS-F and MPS-H have found associations between somatic health complaints and a range of dimensions of perfectionism including *concern over mistakes, doubts about actions, self-oriented* and *socially prescribed perfectionism* (Frost et al, 1990; Hewitt & Flett, 1991b). Researchers have found associations between perfectionism and somatic complaints such as insomnia (Lundh, Broman, Hetta & Saboonchi, 1994) and tension and fatigue in women (Saboonchi & Lundh, 2003). In the latter study although *socially prescribed* and *self-oriented perfectionism* were weakly associated with tension and fatigue, only *other-oriented perfectionism* predicted undergoing medical treatment.

Perfectionism has also been found to be associated with work stress. For example, investigators have found that *socially prescribed perfectionism* is associated with the emotional and physiological manifestations of work stress in teachers but not absenteeism (Flett, Hewitt et al., 1995). Other research has found *socially prescribed* and

negative perfectionism to be associated with exhaustion and cynicism in working mothers (Mictchelson & Burns, 1997).

There is also evidence to suggest that the experience of perfectionism may change with age. The results of an investigation by Chang (2000) suggest that although greater levels of perfectionism were found to be associated with increased psychological distress in both younger and older adults, younger adults experienced greater levels of perfectionism and increased levels of negative affect. Chang concluded that although perfectionism is characterised as a personality trait, the expression of aspects of perfectionism may change with age.

Suicidal behaviour and increased suicidal ideation have also been associated with increased levels of perfectionism. More specifically *socially prescribed perfectionism* has been associated with increased suicidal ideation (Hewitt et al., 1994, 1997) contributing uniquely to variance in suicidal ideation scores (Hewitt et al., 1997; Dean et al., 1996). One study found *self-oriented perfectionism* to be associated with increased suicidal ideation (Hewitt et al., 1994).

Although suicidal ideation and suicidal behaviours have been increasingly investigated within the perfectionism literature, other behaviours such as self-mutilation linked with suicidal behaviour (Esposito, Spririto, Boergers & Donaldson, 2003) have gained little attention. While perfectionism has been anecdotally identified as a characteristic

associated with self-mutilating behaviour (Favazza & Rosenthal, 1993) there is no literature that has examined possible links between this behaviour and perfectionism.

Self-mutilation is frequently characterised as a behaviour utilised by the individual to reduce unbearable levels of tension and distress (Brain, Haines & Williams, 1998; Favazza, 1989; Favazza & Simeon, 1995). As dimensions of perfectionism such as *socially prescribed perfectionism, concern over mistakes* and *doubts about actions* are characterised as being involved in the generation of increased levels of stress and distress (Dunkley et al., 2000; Frost et al., 1990, 1993; Hewitt & Flett, 1991b, 2002) it is possible that associations may exist between self-mutilative behaviour and these and other *negative evaluation concerns* dimensions of perfectionism.

The behaviours and characteristics associated with perfectionism outlined above will be used to examine associations between perfectionism and participant characteristics within this thesis in order to isolate characteristics that may be differentially associated with specific dimensions of perfectionism. Other associations between symptoms of psychological distress such as anxiety and depression have been comprehensively investigated. These findings are discussed below.

2.2 Associations Between Negative Evaluation Concerns Dimensions of Perfectionism and Anxiety and Depression.

As noted in the previous chapter Frost et al. (1993) found that dimensions of perfectionism from both the MPS-F and MPS-H were positively related to symptoms of

depression and anxiety. Enns and Cox (1999) also examined both MPS measures with a specific focus on depressive symptoms self-reported by 145 clinical patients and independent ratings by observers. Only *socially prescribed perfectionism* and *concern over mistakes* from these measures consistently showed medium to large effect sizes with self-reported depression symptoms. Other researchers reported that *socially prescribed perfectionism* was uniquely associated with chronic bipolar symptoms (Flett, Hewitt, Ediger et al., 1998).

In studies from a large investigation of the brief treatment of depression a number of findings relating to perfectionism have emerged. *Self-critical perfectionism* (comparable to *maladaptive evaluation concerns* dimensions; Frost et al., 1993) has been found to impact negatively on therapeutic outcomes in the brief treatment of depression (Blatt, Zuroff, Bondi, Sanislow & Pilkonis, 1998). This negative impact was evident not only in the self-report ratings of patients but was also found in ratings by the therapists and independent clinical evaluators 18 months after cessation of treatment. Perfectionism negatively affected outcomes on measures of clinical condition and patient ratings of satisfaction with treatment.

Subsequent investigations have also identified *self-critical perfectionism* as a specific vulnerability factor in depression. Zuroff, Blatt, Sanislow, Bondi & Pilkonis (1999) reported that despite lower scores in measures of depression at the end of treatment, individuals with high levels of perfectionism and other dysfunctional attitudes maintain

these attitudes at comparatively high levels at termination and at follow up (see also Blatt, Quinlan, Pilkonis & Shea, 1995; Blatt, Zuroff, Quinlan & Pilkonis, 1996).

Zuroff and Blatt (2002) examined predictors of the intensity of symptoms of depression after termination of the short term treatment program. Their results suggested that patients who remained relatively high in perfectionism after termination of treatment were more vulnerable to symptoms of depression when they experienced increased levels of stress relative to less perfectionistic patients. It was found that perfectionism interacted with overall stress levels rather than fluctuations in stress. The authors suggested that one possible reason for this finding is that self-critical or perfectionistic individuals may have more negative mental representations of themselves and their interpersonal experiences and that these negative mental representations might be more accessible during times of stress. In a further examination of data, it was found that in addition to interference with treatment because of deficits in ability to build therapeutic alliance poor treatment outcomes were also a function of pre-treatment perfectionism interfering with the ability to establish and maintain satisfying social relationships outside treatment.

More recently Shahar, Blatt, Zuroff, Krupnick and Sotsky (2004) have also suggested that self-critical perfectionists' own negative internal attributions in regard to self and others account for some of this impairment in relationships. It was further suggested that these findings in relation to highly self-critical individuals and their level of interpersonal functioning may in part be explained by the findings of others. Highly self-critical

individuals do not attend to positive interpersonal cues (Aube & Whiffen, 1996), avoid intimacy and self-disclosure (Zuroff & Fitzpatrick, 1995) and act in a hostile manner in personal relationships (Zuroff & Duncan, 1999).

Dimensions of perfectionism have also been found to distinguish between different aspects of anxiety in examinations of the relationship between dimensions of perfectionism with state and trait measures of anxiety. Flett, Hewitt et al. (1994) found that *socially prescribed perfectionism* is significantly associated with both the cognitive worry and autonomic arousal components of state anxiety and with ambiguous and daily routine facets. When dimensions of perfectionism and state/trait anxiety were examined under conditions of high versus low ego-involvement it was found that *socially prescribed perfectionism* was associated with higher state anxiety but only in the high ego involvement condition. The authors concluded that overall *socially prescribed perfectionism* is the dimension most closely linked to state/trait anxiety especially under conditions of ego threat.

Increased scores on the dimensions of *concern over mistakes, doubts about actions, parental criticism,* and *socially prescribed perfectionism* have also been shown to be associated with social phobia. In addition these dimensions have been able to distinguish between different anxiety disorders (Antony et al., 1998; Alden et al., 1994; Frost & Skeketee, 1997; Purdon et al., 1999) and symptom severity in some disorders (Juster et al.,1996; Rhéaume et al., 1995).

2.3 Moderating and Mediating Variables in Relation to Negative Evaluation Concerns Dimensions of Perfectionism and Psychological Distress

Investigators have also found that there are a wide range of variables that appear to mediate or moderate the effects of perfectionism on psychological distress. Bieling and Alden (1997) examined levels of perfectionism in individuals with social phobia and the consequences of perfectionism for these individuals. Individuals with social phobia scored more highly on *socially prescribed perfectionism* and increased trait perfectionism was associated with higher social standards in those with social phobia than in a control group. The authors concluded that although social phobia and *socially prescribed perfectionism* were interrelated they appeared to contribute to negative self-appraisal through different mechanisms. Individuals with social phobia who are also perfectionistic are likely to have low levels of self-efficacy and also to feel that others will have high expectations of them in social situations.

Bieling and Alden (1997) concluded that it appeared that these socially phobic individuals believed that they needed to be perfect in meeting the expectations of others but they did not require perfection from themselves. They suggested that highly perfectionistic individuals with social phobia may therefore be at dual risk as they may not only see themselves as less socially able than others but also perceive that the goals they must meet as being further beyond their reach.

A more recent investigation conducted by Kawamura and Frost (2004) offers evidence that self-concealment (the tendency to conceal negative personal information in order to

maintain a flawless appearance and avoid the negative evaluation of others) may also have a role in mediating the relationship between perfectionism and psychological distress. Correlation analysis revealed that *maladaptive perfectionism* (comprised of the MPS-F dimensions of *concern over mistakes, doubts about actions, parental expectations* and *parental criticism*), self-concealment and psychological distress were all positively associated. Additional results suggested that the tendency to conceal negative information might be greater with family and friends. Results from multiple regression analysis also showed that maladaptive perfectionism and self-concealment both significantly predicted psychological distress. However, once self-concealment was controlled, maladaptive perfectionism was no longer significantly associated with psychological distress.

On the basis of these results Kawamura and Frost (2004) concluded that active concealment of personally distressing information appears to be a common pattern for those who engage in highly critical self-evaluation. They further concluded that perfectionists may be particularly sensitive to having those close to them become aware that they are struggling with personal issues.

Saboonchi and Lundh (1997) also found associations between measures of social anxiety and other fears and the dimensions of *socially prescribed perfectionism*, *concern over mistakes*, and *doubts about actions* in a student population. Saboonchi and Lundh concluded that the associations found between these dimensions of perfectionism and anxiety were a function of fears of failing, concern over mistakes and worrying about the

adequacy of one's behaviour as well as beliefs that others are placing excessive demands contribute to experiencing social interactions as being tense. (See also Saboonchi, Lundh & Ost, 1999).

2.4 Negative Evaluation Concerns Dimensions of Perfectionism and Specific Stressors

Hewitt and Flett (1993) examined whether dimensions of perfectionism interact with specific stressors to predict depression in a depressed only sample and a general psychiatric sample. *Socially prescribed perfectionism* among several other variables interacted with interpersonal stress in the depressed group and with achievement stress in the general psychiatric group to predict depression. The authors concluded that although *socially prescribed perfectionism* was correlated with depression in both samples, there was little to support the notion that *socially prescribed perfectionism* acted as a specific vulnerability factor in symptoms of depression.

Similarly in a later investigation, Hewitt et al., (1996) found that after controlling for initial depression scores (Time 1), *socially prescribed perfectionism* scores predicted Time 2 depression scores four months later as a main effect, but did not interact with either achievement or interpersonal stressors. Rice et al. (1998) found that *maladaptive perfectionism* (characterised by individuals having excessive concern about making mistakes, doubts about their actions, a tendency to procrastinate, feel tense and anxious and have perceptions that their parents are highly critical) was associated with both low self-esteem and greater depression.

However, self-esteem did not mediate the association between perfectionism and depression. Rather self-esteem provided a buffer to maladaptive perfectionism. It was suggested that perhaps individuals high in maladaptive perfectionism only become depressed when they also experience feelings of inadequacy and low self-worth. However, Preusser, Rice and Ashby (1994) found that self-esteem mediated an association between depression and perfectionism for both males and females but only for the dimension of *socially prescribed perfectionism.* Other studies have also identified that in student samples, *socially prescribed perfectionism* was directly associated with depression as well as indirectly via negative associations with two facets of self-esteem (Flett, Besser, Davis & Hewitt, 2003).

Yet another study (Flett, Hewitt, Blankstein & O'Brien, 1991) found *socially prescribed perfectionism* was the dimension most closely associated with depression symptoms. When increased *socially prescribed perfectionism* interacted with lower perceptions of self-control, *socially prescribed perfectionism* accounted for unique variance in depression scores. Lynd-Stevenson and Hearne (1999) have found that *passive perfectionism* (the tendency for individuals to procrastinate because they fear making a mistake) is related to higher levels of depressive affect and that passive perfectionism moderated the impact of stressful life events on symptoms of depression. Lynde-Stevenson and Hearne proposed that these findings provide support for the assumption that perfectionism represents a vulnerability factor that increases the chance that an individual will experience increased symptoms of depression during events that are perceived to be highly stressful and that stressful life events and passive perfectionism

are involved in an active interplay in the onset of symptoms of depression. Other researchers have found that responses to perceived mistakes also increase levels of distress.

2.5 Making Mistakes in an Achievement Context

Using a diary methodology, Frost et al., (1997) investigated responses to making mistakes in an achievement context. Individuals high in *concern over mistakes* did not report differences in the quality and quantity of mistakes they had made relative to those low in perfectionism. Nor did independent raters judge there to be differences in the level of importance, harmfulness or wrongness of mistakes made between high and low *concerns over mistakes* perfectionists.

However, individuals high in *concern over mistakes* were more negative in their beliefs about their mistakes and in their affective responses. Not only did those high in *concern over mistakes* report increased levels of negative affect, they reported being more bothered by their mistakes and rated them as more serious, wrong and "morally reprehensible" than their low perfectionism counterparts.

Additionally, individuals high in *concern over mistakes* believed their mistakes would cause greater harm to themselves but not others, compared to low perfectionists. This belief that mistakes would be more harmful to one-self appeared to derive from beliefs that others would think badly of them because of their mistakes. Although these results related to a specific achievement and evaluation context there appears to be a clear

interpersonal aspect to these fears about what others will think if a mistake is made (Frost et al., 1997). It is not clear to what extent increased *concern over mistakes* might increase levels of negative affect and distress in other contexts such as interpersonal interactions, as other researchers have found that negative social interactions in and of themselves add incrementally to the experience of psychological distress above that experienced as a result of stressful life events and hassles (Lakey, Tardiff & Drew, 1994).

These results are all consistent with the findings of Dunkley et al. (2000) who investigated the over-arching positive/adaptive and negative/maladaptive conceptualisations of perfectionism based on the MPS instruments. Dunkley et al investigated a form of perfectionism labeled *evaluative concerns* (comprised of *socially prescribed perfectionism, concern over mistake*s and *doubts about actions*). These researchers investigated the ways in which coping style, perceived social support and daily hassles may mediate the relationship between the dimensions of perfectionism and symptoms of depression and anxiety. All three variables were found to be unique mediators of a strong relationship between evaluative concerns and psychological distress.

Dunkley et al. (2000) found that *evaluative concerns* perfectionists experienced daily stressors with increased frequency and intensity; engaged in increased avoidant coping by strategies such as disengagement and denial and had lower perceptions that others are available to assistance during stressful events. They argued that these results can be explained within a dual process of cognitive appraisal and coping as mediators between

stressful events and outcomes (Lazarus & Folkman, 1984). Dunkley et al. proposed that their results that evaluative concerns perfectionists experience more frequent daily stressors of greater duration is consistent with the idea that these perfectionists generate stress which in turn contributes to a greater experience of distress. This initial response is then compounded by the use of avoidant coping strategies that further compound the negative effects of hassles and distress. See also Hewitt and Flett (1993) and Blankstein and Dunkley (2002) for further review and discussion.

2.6 Psychological Distress and the Negative Effects of Standards and Achievement Dimensions of Perfectionism

Despite demonstrated associations between some dimensions of perfectionism and more adaptive traits such as increased self-esteem, the literature also suggests that even among dimensions of perfectionism characterised as more positive in nature there are also associations with negative cognitive and behavioural characteristics. For example, Flett et al., (2003) found negative associations between all MPS-H dimensions of perfectionism and reduced unconditional self-acceptance. Unconditional self-acceptance was itself associated with increased levels of depression.

Although there were no indirect links found between *self-oriented perfectionism* and depression via unconditional self-acceptance, Flett et al. (2003) proposed that these results support their contention that *self-oriented perfectionism* involves a contingent sense of self-worth. If an individual high in *self-oriented perfectionism* is experiencing positive life outcomes, high levels of *self-oriented perfectionism* will have a more

adaptive outcome as positive outcomes will increase perceptions of self-worth. However, if the individual experiences negative life outcomes, high levels of *self-oriented perfectionism* are likely to take on a more maladaptive character by lowering the individuals' sense of self-worth.

High levels of *other-oriented perfectionism* also showed indirect links with depression via lower unconditional self-acceptance. Flett et al., (2003) speculate that their findings could be explained by the extent to which individuals high in *other-oriented perfectionism* view others as a source of disappointment to them in terms of providing adequate social support and suggest that the self-esteem of individuals high in *other-oriented perfectionism* is not robust and may be conditional on feedback and support received from others.

Overall the results reported in the literature regarding associations between *other-oriented perfectionism* and measures of psychological distress have been somewhat inconsistent. Studies have either found no association between *other-oriented perfectionism* and depression (Chang & Sanna, 2001; Flett et al., 1997; Flett, Hewitt, Blankstein & Mosher, 1991; Frost et al., 1993; Hewitt & Flett, 1991a, 1991b, 1993); a negative relationship (Flett, Hewitt, Blankstein & Pickering, 1998; Hewitt & Flett, 1993), or a positive relationship (Enns & Cox, 1999; Hewitt & Flett, 1990; Hewitt et al., 1998; Wiebe & McCabe, 2002). In another study, researchers found *other-oriented perfectionism* was associated with chronic bipolar symptoms whereas *self-oriented*

perfectionism was found to be uniquely associated with chronic unipolar depression symptoms (Flett, Hewitt, Ediger et al., 1998).

These latter results regarding *self-oriented perfectionism* are consistent with the findings of Hewitt & Flett (1991a) who found that depressed patients had higher levels of *self-oriented perfectionism* compared to anxiety or control groups. It was suggested that *self-oriented perfectionism* may be specific to depressed patients and did not generalise to anxiety. It was argued that high levels of *self-oriented perfectionism* may be specific to depressed patients because of their tendency to set unrealistic goals and that subsequent stringent self-evaluation of performance increased perceptions of the experience of failure and increased the personal impact and meaning of failure experiences. This is consistent with findings from two studies which concluded that failure in tasks of greater or lesser importance interacts with perfectionism to produce dysphoric mood (Hewitt, Mittelstaedt et al., 1990; Hewitt et al., 1989). *Self-oriented perfectionism* has also been associated with different forms of anxiety.

In one investigation it was found that *self-oriented perfectionism* (as measured by the *Burns Perfectionism Scale*; Burns, 1980) was related to trait anxiety and marginally to state anxiety (Flett, Hewitt & Dyck, 1989). Flett et al., (1994) found that *self-oriented perfectionism* was significantly associated with both the cognitive worry and autonomic arousal components of state anxiety and with ambiguous and social evaluation facets but was unrelated to state anxiety in conditions of either high or low ego threat. However, in another study *self-oriented perfectionism* was found to interact with achievement

stressors to predict depression scores in a depressed only and in a general psychiatric sample (Hewitt & Flett, 1993). Hewitt and Flett concluded that the results regarding *self-oriented perfectionism* were consistent with the idea that the impact of a stressor is dependent on the particular meaning of the stressful event. Hewitt and Flett proposed that individuals high in *self-oriented perfectionism* may perceive even minor shortfalls as major failures and that achievement stressors may serve as a reminder of imperfections in the self and be interpreted as failure with implications for self-concept.

In a later investigation, Hewitt et al., (1996) found that after controlling for initial depression scores (Time 1), *self-oriented perfectionism* interacted with achievement stressors to predict depression scores four months later (Time 2). Hewitt et al. argued that the results support the notion that perfectionism dimensions are involved in vulnerability to depression over time, but that *self-oriented perfectionism* specifically may be the most important as a stress related vulnerability factor in depression (see also Hewitt et al., 1998). Yet Rice et al., (1998) found that *adaptive perfectionism* (characterised as individuals having high personal standards, a need for order and organisation, and an unwillingness to procrastinate) does not have a significant role in depression.

However, Preusser et al., (1994) found that self-esteem played a mediating role in the effects of *self-oriented perfectionism* on depression scores but only for females. Conversely *self-oriented perfectionism* was positively associated with self-control but was not correlated with measures of self-esteem or depression (Flett, Hewitt, Blankstein

& O'Brien, 1991). The authors suggested that the latter result may have occurred because *self-oriented perfectionism* was not considered within the context of a failure experience. Lynd-Stevenson and Hearne (1999) found that those who tend towards increased *active perfectionism* (striving towards achievement) did not show higher levels of depression. Their investigations also found active perfectionism did not moderate the impact of stressful life events on symptoms of depression.

As noted previously Dunkley et al. (2000) investigated two over-arching positive/adaptive and negative/maladaptive conceptualisations of perfectionism based on the MPS instruments. In their investigations Dunkley et al. found that *personal standards perfectionism* (comprised of *personal standards* and *self-oriented perfectionism*) showed a positive but weaker relationship with measures of distress than the negative form of perfectionism of *evaluative concerns*. Personal standards perfectionism was positively associated with both hassles and active coping, but was not related to avoidant coping and perceptions of lowered social support.

Dunkley et al. (2002) proposed that although personal standards perfectionists may experience increased levels of hassles, the effects of these stressors may be mitigated by the motivation and increased tendency of these individuals to engage in more active problem solving strategies and by suppressing the maladaptive coping strategies of *evaluative concerns perfectionists*. However, the results also suggested that when hassles were experienced as overwhelming and there was a perceived absence of social support individuals high in *personal standards perfectionism* may not engage in positive coping

strategies (Dunkley et al., 2000). For further review and discussion see also Blankstein and Dunkley (2002).

2.7 Perfectionism, Depression and Interpersonal Relationships

Wiebe and McCabe (2002) note that interpersonal theories of depression have conceptualised the problematic interpersonal behaviours of depressed individuals as manifestations of symptoms of depression (such as anhedonia or fatigue) or as impairments in social skills (the individual will facilitate fewer positive interactions; Coyne, 1976; Lewinsohn, 1974; Segrin & Abramson, 1994). However, Wiebe and McCabe contend that it is cognitive factors separate from social rules or symptoms of depression that impact on the social difficulties experienced by depressed individuals. They argue that the idea that social behaviours related to depression are simply an expression of depressive symptoms is inconsistent with evidence that suggests that these difficulties tend to persist even when the individual is asymptomatic or that conflictual relationships can actually precipitate the onset of depression.

Wiebe and McCabe (2002) therefore examined whether perfectionism in personal relationships could account for some of these behaviours associated with depression. A new measure was designed to tap extreme or excessive standards for one self and also extreme and excessive relationship standards for others in regard to social interactions and interpersonal relationships. Based on a female university sample, it was found that dysphoric females held greater relationship expectations for others but this did not generalise to symptoms of anxiety. However, increased *self-directed relationship*

perfectionism was found to relate to increased symptoms of both depression and anxiety. It was speculated that this association between increased relationship expectations for one self and anxiety was the result of fears of behaving below ones own standards. Self-directed relationship perfectionism did not mediate the relationship between increased levels of depression and increased hostility in interpersonal behaviours.

It can be seen from the review provided above that there is some conflicting information about the positive or negative nature of specific *standards and achievement* dimensions of perfectionism in relation to symptoms of psychological distress. It is also apparent from the review provided above that the majority of information about associations between perfectionism and measures of distress relates to the MPS-H measure of perfectionism. This does not allow consideration of the ways in which other positively characterised dimensions of perfectionism might be involved in vulnerability to, or protection against, psychological distress.

Although specific dimensions of perfectionism do have associations with psychological distress and interpersonal functioning, there is a considerable body of literature that has examined the ways in which symptoms of anxiety and depression can adversely affect interpersonal functioning and social interactions independently of perfectionism. It is beyond the scope of this thesis to provide a comprehensive review of this literature, nevertheless some examination is required of the ways in which these symptoms of psychological distress can affect interpersonal behaviour and is provided below.

2.8 Depression, Anxiety and Interpersonal Functioning

Research unrelated to perfectionism has long found associations between symptoms of anxiety and depression and various aspects of interpersonal functioning. It has been found that depressed individuals not only tend to report inadequate social relationships, but when engaged in social interactions show a tendency towards increased expectations of poor social skills and relatively strict self-evaluation, rather than objective deficits in social behaviour (Dow & Craighead, 1987). Dow and Craighead conclude that these findings may be more specific to depression than to anxiety.

It has also been shown that depressed persons may perceive their interpersonal impact on others as being more negative (Siegal & Alloy, 1990); and that they may seek to avoid those who they believe are happy (Wenzlaff & Prohaska, 1989). Depressed individuals also tend to elicit more negative information from their interaction partner if they believe that the interaction partner is happy in mood and that they may thus be exposed to an increase of negative interpersonal experiences (Wenzlaff & Beevers, 1998). In addition it has been identified that depressed people tend to be more hostile than non-depressed people and will more frequently express greater anger and criticism towards others (Gotlib & Robinson, 1982; Kahn, Coyne & Margolin, 1985; McCabe & Gotlib, 1993).

Other research has found that both depressed (Boyce et al., 1990, 1993) and socially anxious individuals (Harb et al., 2002) have increased interpersonal sensitivity as measured by the *Interpersonal Sensitivity Measure* (IPSM). Interpersonal sensitivity is a construct defined as "undue and excessive awareness of and sensitivity to, the behaviour

and feelings of others' (Boyce & Parker, 1989, p. 342). It has been suggested that this construct describes those who demonstrate sensitivity to social feedback, vigilance with regard to the reactions of others, increased concern about the behaviour and statements of others, and fear of perceived or actual criticism by others. More recently Harb et al. have suggested that the construct should more properly be described as "interpersonal rejection sensitivity" in order to distinguish it from the more common understanding of interpersonally sensitive individuals as those who are more interpersonally aware and sensitive, as opposed to those who experience fear and discomfort as a result of perceived interpersonal rejection.

Hewitt and Flett (2002) cite an investigation linking *socially prescribed perfectionism* to total scores for the IPSM as well as facets of interpersonal sensitivity such as *separation anxiety*, *fragile inner self* and *interpersonal awareness* in an undergraduate population (Flett, Velyvis & Hewitt, 2001). No similar associations were found for *self-oriented perfectionism* and *other-oriented perfectionism*. Hewitt and Flett argue that the data from the Flett, Velyvis and Hewitt study suggests that *socially prescribed perfectionists* with high levels of interpersonal sensitivity are more likely to over react to perceived slights and may respond to ambiguous feedback as though it were negative. Thus even a relatively benign situation may be experienced as stressful. Such a response orientation is also further likely to contribute to conflict and interpersonal problems.

2.9 Concluding Comments

The literature reviewed in this chapter suggests that specific dimensions of perfectionism are related to a wide range of symptoms of psychopathology across a range of disorders. *Negative evaluation concerns* dimensions of perfectionism such as *socially prescribed perfectionism* and *concern over mistakes* are consistently linked with greater levels of depression and anxiety. Specific *negative evaluation concerns* dimensions are also able to distinguish between clinical disorders, suggesting that individual dimensions of perfectionism may need to be considered when investigating relationships between perfectionism and psychological distress.

Evidence for associations between psychological distress and *standards and achievement* dimensions such as *personal standards*, *self-oriented perfectionism*, and *other-oriented perfectionism* are less clear, although there does appear to be evidence indicating that these dimensions may not be as pathological in nature as *negative evaluation concerns* dimensions. There is also evidence that dependent on context, high levels of perfectionism may activate positive or negative psychological outcomes for the individual. Evidence has also been put forward indicating perfectionism may interact with stressful events to mediate the effects of perfectionism on levels of distress. This can occur when in the context of negative or positive outcomes, dimensions of perfectionism such as *self-oriented perfectionism* may activate increased or decreased perceptions of variables such as self-esteem or self-worth that moderate or exacerbate the experience of distress.

Finally, the evidence reviewed in this chapter suggests that symptoms of anxiety and depression are associated with poorer interpersonal functioning and negative psychological and behavioural outcomes in interpersonal contexts independently of perfectionism. Accordingly there is a need to control for the potential effects of anxiety or depression in any examination of the effects of perfectionism in relation to interpersonal functioning. However, it is possible that by controlling for anxiety and depression, the indirect effects of perfectionism through these forms of psychological distress may be diminished or lost. Any results obtained may therefore be underestimating the effects of perfectionism on the individual, as there is good evidence that different dimensions of perfectionism are highly implicated in both depression and anxiety. However, as depression and anxiety symptoms are multiply determined, controlling for these variables provides a conservative approach that allows greater confidence in identifying any additional effects found as being specific to perfectionism and not a result of these forms of psychopathology.

CHAPTER 3

Review of Perfectionism and Interpersonal Functioning

3.1 Negative Interpersonal Interactions

In the previous chapter evidence for associations between symptoms of anxiety, depression and dimensions of perfectionism was reviewed and the ways in which anxiety and depression can impact on interpersonal functioning. In addition to the impact of symptoms of psychological distress on interpersonal functioning other factors such as negative interpersonal interactions have been found to be involved increased levels of distress.

Negative interpersonal interactions have been found to be related to low self-esteem, an external locus of control and dysfunctional attitudes (Lakey et al., 1994) and it is generally accepted that negative interpersonal interactions have an impact on levels of distress (Flett et al., 1997). Additionally negative interpersonal interactions or interpersonal conflict have been identified as one of the most upsetting daily stressors experienced by individuals in a diary based self-report study, accounting for up to 80% of variance in daily ratings of mood (Bolger et al., 1989).

As research into perfectionism has become more diverse it has been found that perfectionism is also related to a range of interpersonal traits and behaviours that are suggested to either increase or decrease the likelihood that an individual will experience psychological distress (Dunkley et al., 2000; Flett et al., 1997). This chapter therefore

reviews evidence for associations between dimensions of perfectionism, aspects of interpersonal functioning and psychological distress.

3.2 Negative Evaluation Concerns Dimensions of Perfectionism, Interpersonal Functioning and Psychological Distress

In an investigation of perfectionism and aspects of interpersonal functioning in undergraduate students, Alden et al. (1994) found socially anxious and dysphoric individuals obtained higher scores for the dimension of *socially prescribed perfectionism* compared to non-socially anxious and dysphoric individuals. Paradoxically, despite higher *socially prescribed perfectionism* scores, socially anxious and dysphoric individuals did not differ in their ratings of perceived standards as to how others viewed them compared to non-dysphoric and socially anxious individuals.

When engaged in a social task using a confederate, individuals high in *socially prescribed perfectionism* more frequently engaged in evaluation of their social performance but did not appear to have a poorer perception of their social self-efficacy or the extent to which they perceived a discrepancy between their own perceived self-efficacy and perceived standards imposed on them by others. Alden et al. (1994) concluded that socially anxious and dysphoric individuals may view the same social expectations as more demanding than non-socially anxious and dysphoric individuals but that those who had increased perceptions that others held high standards for them (*socially prescribed perfectionism*) were more likely to evaluate their behaviour more frequently. Alden et al. suggested that this increased perception of the imposition of

higher standards for the self by others then rendered individuals high in *socially prescribed perfectionism* vulnerable to social difficulties by increasing self-focused attention and appraisal. This increased self-focused attention and appraisal might subsequently exacerbate other maladaptive cognitions already present.

These results are somewhat inconsistent with the findings of Flett, Hewitt and DeRosa (1996) who found individuals in a university student population with higher levels of *socially prescribed perfectionism* perceived themselves as having less social skill than others and lower levels of social self-esteem. Additionally, results of correlation analysis showed that *socially prescribed perfectionism* was the perfectionism dimension most closely related to a measure of loneliness. Flett, Hewitt and DeRosa speculated that this latter result may indicate that those individuals with increased perceptions of unrealistic expectations from others may respond to anticipated criticism of performance by becoming isolated and withdrawn.

Hill, Zrull and Turlington (1997) investigated the relation between perfectionism, and interpersonal relationships in an undergraduate population using canonical correlations and circumplex analyses. They found that *socially prescribed perfectionism* was associated with increased interpersonal distress for females and a range of interpersonal problems such as controlling, trying to change others, social anxiety and embarrassment, over generosity and over permissiveness with others, trying too hard to please others, attention seeking and difficulty spending time alone. The authors note that the pattern of results did not provide a coherent theme but rather suggested a diverse pattern of

maladaptive social interaction and lack of satisfaction in interpersonal contexts. The results of Hill, Zrull and Turlington are also consistent with those of Hewitt and Flett (1991b) that *socially prescribed perfectionism* is associated with a diverse range of maladaptive personality traits such as avoidant and passive aggressive traits as well as associations with a range of traits related to personality disorders and an increase in personal distress.

In a similar study of an undergraduate population, Hill, McIntire and Bacharach (1997) investigated dimensions of perfectionism and the Big Five model of personality factors (*NEO Personality Inventory-Revised*; Costa & McCrae, 1992b) which comprise *Neuroticism, Extraversion, Openness, Agreeableness,* and *Conscientiousness*. Multivariate regression analysis showed that *socially prescribed perfectionism* was not associated with any of the more adaptive facets of the Big Five and was associated only with the *depression* subscale of the *neuroticism* factor. It was suggested that this profile of results for individuals high in *socially prescribed perfectionism* appeared to involve a constant need for approval from others and a predisposition towards perceptions that one is lacking in accomplishment with a consequent vulnerability to depression.

In a review of literature relating to perfectionism and interpersonal behaviour, Habke and Flynn (2002) point out with regard to the results of Hill, McIntyre and Bacharach (1997) that the *inter*personal dimension of *socially prescribed perfectionism* was linked only to the *intra*personal factor of neuroticism and not more interpersonal factors as predicted. Habke and Flynn speculate that perhaps the links between *socially prescribed*

perfectionism and neuroticism are so strong that interpersonal associations are overwhelmed.

Other studies have found that individuals high in the dimension of *socially prescribed perfectionism* have an increased tendency to make external attributions for outcomes of success or failure in interpersonal contexts (Flett, Hewitt, Blankstein & Pickering, 1998) and have increased perceptions of lack of control over external events (Flett, Hewitt, Blankstein & O'Brien, 1991; Hewitt & Flett, 1991b). Flett, Hewitt, Blankstein and Pickering (1998) suggest that this link between *socially prescribed perfectionism* and external attributions may reflect the importance of the presence of others as a key component of many situations. It is suggested that individuals high in *socially prescribed perfectionism* tend to blame other people for their difficulties and this may reflect a tendency more broadly to blame others for problems. These authors further suggest that personal helplessness across situations may be a core feature of *socially prescribed perfectionism* and may thus lead to avoidance coping.

Findings from an investigation of dimensions of perfectionism and problem solving ability supports the idea that *socially prescribed perfectionism* is related to a helplessness and avoidant coping orientation. Flett, Hewitt, Blankstein et al. (1996) in two studies using a self-report questionnaire measure of perceived problem solving ability found that *socially prescribed perfectionism* was related to a more negative problem solving orientation characterised by not only negative beliefs about problem solving ability, but a tendency to respond with emotional distress and a problem solving style that was

associated with avoidance rather than approach. This association between a negative problem-solving orientation and *socially prescribed perfectionism* remained even after controlling for the effects of anxiety and depression. The authors suggest that the perception that one is being exposed to high standards imposed by others may undermine beliefs about problem solving self-efficacy.

Flett et al. (1996) speculate that at extreme levels of *socially prescribed perfectionism*, individuals may react to problem solving situations by making little or no attempt to persist in problem solving, perhaps out of fear that these others perceived to be imposing unattainable standards of performance may raise existing standards if a problem is solved. It is further speculated that this sense of hopelessness around problem-solving ability may then be expressed by avoidant oriented coping. Similarly Flett, Russo and Hewitt (1994) found that *socially prescribed perfectionism* was associated with less active coping.

In other research Flett, Sawatzky and Hewitt (1995) also concluded that some perfectionists may be focused on minimising failure rather than attaining high standards and that there are salient motivational aspects to perfectionism. Using both the MPS-F and MPS-H instruments, Flett, Sawatzky et al. examined the perfectionists' commitment to different perfectionistic goals in an undergraduate population. Correlation analyses showed that individuals high in the dimensions of *socially prescribed perfectionism, parental expectations* and *parental criticism* but not others were associated with commitment to goals such as having a perfect relationship with a romantic partner or

spouse. Flett, Sawatzky et al. speculated that the fact that dimensions such as *concern over mistakes* and *doubts about actions* were not associated with any commitment measures may suggest that these dimensions are more cognitive in nature. Alternatively they suggest that individuals high in *concern over mistakes* and *doubts about actions* are not committed to perfectionistic striving but rather provides evidence of a link with a failure orientation in which these individuals are more focused on minimising failure. Other researchers have reached similar conclusions with particular reference to the dimension of *socially prescribed perfectionism.*

As noted in Chapter 1, Campbell and Di Paula (2002) have proposed that there are two separate sets of beliefs captured within the dimensions of *self-oriented* and *socially prescribed perfectionism.* The *self-oriented* and *socially prescribed perfectionism* subscales as well as measures of individual differences were administered to a sample of 243 undergraduates and a factor analysis of the items in the two perfectionism scales was conducted. On the basis of this analysis Campbell and DiPaula concluded that *socially prescribed perfectionism* is comprised of a facet described as *conditional acceptance* (being loved and accepted by others is contingent on high levels of achievement) and a second facet described as *others' high standards* (the belief that others hold high standards for the self). They further concluded that *self-oriented perfectionism* comprises two facets described as *importance of being perfect* (the belief that it is important to be perfect) and *perfectionistic striving* (one actively strives for perfection).

Campbell and Di Paula (2002) investigated associations between these facets of *self-oriented* and *socially prescribed perfectionism.* Correlation analysis showed that both of the *socially prescribed perfectionism* facets were inter-related (r = .36) as were both of the *self-oriented perfectionism* facets (r = .43). However, the *socially prescribed perfectionism* facet of others high standards was also associated with both of the *self-oriented perfectionism* facets of perfectionistic striving (r = .18) and the importance of being perfect (r = .50). The facet of conditional acceptance was only positively associated with the importance of being perfect (r = .29) but was negatively associated with perfectionistic striving (r = .25). It was concluded that the belief that other peoples' love and acceptance is contingent on performance inhibits individuals high in *socially prescribed perfectionism* from striving for superior performance.

Cambell and Di Paula (2002) found that consistent with the findings of others (Frost et al., 1993; Hewitt & Flett, 1991b; Hill, McIntire & Bacharach, 1997), *socially prescribed perfectionism* was positively associated with depression, neuroticism, negative affect and was negatively associated with self-esteem, extraversion, agreeableness, positive affect and openness to experience. Further investigation also revealed that *socially prescribed perfectionism* was associated with a lack of clarity in self-concept, goal instability and an inability to initiate and change goal directed behaviour.

However, a breakdown of these associations showed that all associations with maladaptive traits and behaviours appeared to derive only from the conditional acceptance facet of *socially prescribed perfectionism.* These associations with

maladaptive outcomes all occurred in the same direction but with a greater magnitude than that shown by *socially prescribed perfectionism.* Conditional acceptance was also negatively associated with effortful goal pursuit and lower levels of satisfaction with goal progress as well as goal abandonment and rumination with regard to goals in an academic achievement context. In contrast the belief that others have high expectations for the self did not appear to important in accounting for the problems associated with high levels of *socially prescribed perfectionism.* Campbell and Di Paula suggest that the fact that an individual believes that others have high standards for one-self, does not necessarily mean that the individual has internalised these beliefs (i.e. does not accept them as reasonable) and that the individual may just resent the other person for imposing these high standards upon them.

Campbell and Di Paula (2002) argue that individuals high in conditional acceptance hold beliefs that they will only be accepted by others if some standard is reached (such as grades). Yet this belief is associated with setting gaols that the individual does not identify with to any great extent, in that the goals are chosen in order to gain the approval of others rather than for any intrinsic reward for the self. They further argue that it is this lack of a sense of personal commitment to goals that is critical to performance outcomes. Thus individuals high in conditional acceptance, rather than engaging in effortful goal pursuit will engage in increased rumination, thereby undermining the attainment of the standards they have set as important. They suggest that these individuals are motivated to avoid failure and are concerned with minimising failure rather than achieving success. These conclusions appear similar to those drawn by researchers such as Terry-Short et al

(1995) and Slade and Owens (1998) that it is the consequences of failing to meet high standards that are involved in the onset and maintenance of psychopathology for high perfectionists rather than the setting of high standards in and of itself.

The findings from these studies are also consistent with those of Flett et al. (1997) who examined associations between the frequency of negative social interactions, personality traits including perfectionism and depression in a university student sample. In the total sample it was found that higher depression scores were associated with *socially prescribed perfectionism* and perceptions of an increased frequency of negative social interactions. The results of this study indicated that the frequency of perceived negative social interactions accounted for unique variance in depression scores above that predicted by personality traits, but did not interact with personality traits to predict unique variance in depression scores.

However, Flett et al. (1997) also note that to some extent the association between *socially prescribed perfectionism* and the frequency of negative social interactions may be based on the individual's subjective perceptions of negative interactions. Their investigation did not allow them to determine whether reports of negative interactions were related to actual life experiences or related differences in cognitive appraisal. They argue that negative social interactions have a substantial negative impact on emotional responses and thought processes especially if the negative social interactions involve conflict with a significant other. Other researchers have attempted to examine more directly the relationship between psychological distress and behaviours in interpersonal relationships.

3.3 Negative Evaluation Concerns Dimensions of Perfectionism, Relationship Behaviours and Psychological Distress

Studies of couples in intimate relationships have also indicated that dimensions of perfectionism are negatively related to an ability to function within the relationship. A study by Habke, Hewitt, Fehr, Callendar and Flett (1997:as cited in Habke & Flynn, 2002) also examined the effects of perfectionism on relationship behaviour in couples. The wording of items in the perfectionism dimensions of *socially prescribed perfectionism* and *other-oriented perfectionism* were reworked specifically to examine perfectionism in relationship to one's spouse. Analyses were conducted separately for males and females. Higher *socially prescribed perfectionism* scores in females were associated with poorer relationship adjustment and lower ratings on scales relating to affection, cohesion and satisfaction, with similar but not identical results for males. Higher *socially prescribed perfectionism* scores for males also uniquely predicted more negative behaviours in their wives and a reduction in positive behaviours. In a later investigation of aspects of perfectionism and sexual satisfaction in married couples, Habke, Hewitt and Flett (1999) found *socially prescribed perfectionism* related negatively to sexual satisfaction in general and sexual satisfaction with their partner for both males and females.

In an investigation of perfectionism, marital satisfaction and contributing factors to sexual dysfunction in men with erectile dysfunction and their partners (DiBartolo & Barlow, 1996) correlation analysis showed that total MPS-F scores for women (r = .70) but not men (r = .11) were negatively associated with their own and their partners' scores

on a measure of relationship adjustment. DiBartolo and Barlow suggest these data provide some evidence that women's but not men's perfectionistic tendencies affect both their own and their spouses marital satisfaction. Whereas overall levels of perfectionism in males with erectile dysfunction do not adversely affect marital satisfaction.

Similarly, when Haring, Hewitt and Flett (2003) examined associations between perfectionism, marital coping and marital functioning in a community sample, *socially prescribed perfectionism* was associated with maladaptive marital coping and poorer marital adjustment for both self and partner. In regard to behaviours, results indicated that for both males and females the perception that their partner held unrealistic expectations of them was associated with their own increased use of conflictual coping strategies as well as with increased conflictual coping strategies by their partner. *Socially prescribed perfectionism* also predicted increased avoidance, self-interest, introspective self-blame and decreased positive approach strategies in females. The authors concluded that their results and those of others relating to interpersonal cognitions about the nature of relationships of individuals high in interpersonal dimensions of perfectionism underline the importance of these dimensions of perfectionism when investigating interpersonal relationships.

3.4 Standards and Achievement Dimensions of Perfectionism, Interpersonal Functioning, and Psychological Distress

In response to suggestions that the research generated by existing measures of perfectionism has been biased towards more pathologically oriented conceptualisations of

perfectionism that may not adequately take into account more positive aspects of perfectionism, Slaney and Ashby (1996) investigated a group of participants described by themselves or others as perfectionists. Using an interview-based methodology, Slaney and Ashby examined a range of aspects of perfectionism including the ways in which perfectionists perceived that their perfectionism affected their lives.

Responses from participants indicated that there was almost unanimous agreement that perfectionism affected their academic and working lives and that women particularly perceived their perfectionism affected their relationships. The most frequent reasons given by women for this perception were that they expected others to meet their standards and were disappointed when this did not happen. As noted by Slaney and Ashby, this response appears consistent with the perfectionism dimension of *other-oriented perfectionism.*

Other research investigating perfectionism and interpersonal behaviour more directly, shows mixed results with regard to the levels of distress experienced by individuals high in *standards and achievement* dimensions of perfectionism. For example Flett, Hewitt and De Rosa (1996) did not find that *other-oriented* or *self-oriented perfectionism* were associated with poorer psychosocial adjustment. On the contrary, their results indicated that *self-oriented* and *other-oriented perfectionism* may be associated with increased positive perceptions of social skills and some adaptive interpersonal behaviour such as increased assertiveness, greater emotional sensitivity and emotional expressiveness.

However, such a conclusion is somewhat at odds with the contentions of Hewitt and Flett (2002) that *other-oriented perfectionism* may directly contribute to stress (and thus vulnerability to psychopathology) by leading to interpersonal conflict and other interpersonal problems. Hewitt and Flett propose that because *other-oriented perfectionists* are highly focused on the shortcomings of others, interpersonal difficulties will be created if their tendency to be critical or openly disappointed with others is expressed.

The latter argument put forward by Hewitt and Flett (2002) is consistent with the findings of Hill, Zrull and Turlington (1997) that *other-oriented perfectionism* was associated with little interpersonal distress for either males or females but was associated with more socially distant, arrogant and domineering interpersonal traits. It was suggested that individuals high in *other-oriented perfectionism* may have little insight into the consequences of their interpersonal behaviours for others and that they may believe they have good interpersonal relationships.

These results are also consistent with the findings of Hewitt and Flett (1991b) that *other-oriented perfectionism* is associated with other-oriented blame, authoritarianism, narcissistic authority, and entitlement. Similarly Hill, McIntire and Bacharach (1997) found that *other-oriented perfectionism* was inversely associated with *agreeableness* and the profile of results showed a tendency to compete rather than cooperate, assert one's position when in conflict, express anger when necessary, as well as self-confident, self-

centered, and narcissistic qualities, and low levels of modesty, suggesting an overall propensity towards interpersonal conflict.

Hill Zrull and Turlington (1997) also found a range of interpersonal problems were associated with *self-oriented perfectionism* including a tendency towards overly nurturant behaviours for females and emotionally distant, domineering and mistrustful orientation for males. *Self-oriented perfectionism* was associated with little interpersonal distress for both males and females. Moreover, higher levels of *self-oriented perfectionism* provided some adaptive interpersonal characteristics such as self-assurance and assertiveness for both males and females with more nurturing and extrovert qualities for females. However, it was concluded that overall, all three MPS-H dimensions were substantially related to negative traits.

Evidence of more positive traits associated with *self-oriented perfectionism* were also found by Hill, McIntire, & Bacharach (1997). *Self-oriented perfectionism* was found to be strongly correlated with *conscientiousness* (achievement striving and dutifulness) but showed a negative association with *agreeableness. Self-oriented perfectionism* was, however, also modestly associated with *neuroticism*, (anger, hostility and inversely with vulnerability).

In their review of literature relating to perfectionism and interpersonal behaviour already noted in this chapter, Habke and Flynn (2002) suggest that the profile of results with regard to *other-oriented perfectionism* found by Hill, McIntyre and Bacharach (1997)

indicates that *other-oriented-perfectionists* experience high levels of achievement striving and are interpersonally hostile. In contrast Habke and Flynn note that *self-oriented perfectionism*, (theoretically an *intra*personal dimension of perfectionism) also showed a modest negative association with *agreeableness* (an *inter*personal factor) suggesting that although *self-oriented perfectionists* may focus on their own goals, their methods of achieving these goals (i.e. their behaviour) may be maladaptive in an interpersonal context.

Alden et al. (1994) found that socially anxious and dysphoric individuals did not show higher mean scores on *self-oriented perfectionism* than non-socially anxious and dysphoric individuals. Moreover socially anxious individuals reported lower personal standards for social behaviour than non-anxious individuals. Further analyses indicated that the best predictors of increased scores for *self-oriented perfectionism* were a combination of self-efficacy, the level at which they rated their personal standard for success and the importance of meeting the personal standard. Alden et al. concluded that overall perfectionists may not set higher goals than others in relation to social behaviour, but they may set goals that exceed their ability and place more importance on meeting these standards than non-perfectionists.

As discussed earlier in this chapter, Campbell and Di Paula (2002) have proposed that the dimensions of *socially prescribed* and *self-oriented perfectionism* are each comprised of two separate facets that are differentially associated with adaptive and maladaptive outcomes for the individual. With regard to *self-oriented perfectionism*, Campbell and Di

Paula (2002) found that consistent with previous research *self-oriented perfectionism* was associated with conscientiousness (Hill, McIntyre & Bacharach, 1997). When associations between conscientiousness and the two facets of *self-oriented perfectionism* were examined further a different pattern emerged. *Perfectionistic striving* (one actively strives for perfection) was associated only with traits indicating positive adjustment whereas the importance of being perfect (the belief that it is important to be perfect) showed negative or no associations.

Perfectionistic striving was associated with lower levels of anxiety and depression and increased self-esteem, greater clarity of self-concept and goal stability, increased extraversion, positive affect, conscientiousness and ability to initiate and sustain goal directed behaviour. Perfectionistic striving was also associated with an increase in effortful goal pursuit, satisfaction with goal progress but not goal abandonment and rumination. The *self-oriented perfectionism* facet of the *importance of being perfect* was also associated with increased conscientiousness and an increased ability to sustain goal directed behaviour (but to a lesser extent than perfectionistic striving) but was negatively associated with self-esteem and the ability to change goal directed behaviour when failing.

Campbell and Di Paula (2002) concluded that overall, standard setting per se may have very little to do with the negative outcomes frequently associated with perfectionism. They propose that negative outcomes may have more to do with low self-efficacy and

beliefs that standards are not likely to be achieved, but more so with beliefs about conditional acceptance.

3.5 Standards and Achievement Dimensions of Perfectionism, Relationship Behaviours and Psychological Distress

In order to examine whether perfectionistic relationship expectations could account for the negative interpersonal behaviours demonstrated by depressed women, Wiebe and McCabe (2002) developed the *Relationship Perfectionism Scale.* The instrument was designed to tap two factors; *Self Directed Relationship Perfectionism* to reflect a tendency towards rigid or excessive expectations for oneself and *Other Directed Relationship Perfectionism* reflecting a tendency towards rigid or excessive expectations for others in regard to social interactions or relationships.

Using a dsyphoric and non-dysphoric undergraduate female population, Wiebe and McCabe (2002) examined whether relationship perfectionism was related to depression, and if so, whether this relationship mediated a relationship between depression and aversive interpersonal behaviours. It was found that increased *self-directed relationship* expectations appeared to be related to both depression and anxiety symptoms whereas increased *other-directed relationship* expectations were related only to depression symptoms.

Wiebe and McCabe (2002) speculated that the former finding in regard to *self-directed* expectations may reflect the likelihood that excessive expectations for the self would be

more likely to involve some level of fear of acting below one's own standards and would thus activate symptoms of anxiety. It was thought that anxiety would not be activated in the context of *other-directed* expectations in which the mistakes of others are the focus of concern rather than one's own performance.

Furthermore Wiebe and McCabe (2002) found that higher levels of *other-directed* expectations did partially account for greater interpersonal hostility in their sample of dysphoric women. These studies suggest that high standards for the self and others can affect levels of distress within interpersonal contexts but also appear to increase the generation of hostile or conflictual behaviours.

In their investigation of the effects of perfectionism on relationship behaviour, Habke, Hewitt, Fehr, Callandar and Flett (1997: cited in Habke & Flynn, 2002) found *self-oriented perfectionism* to be a positive predictor of marital satisfaction for both males and females. Habke et al. speculated that individuals with high expectations for one self attributed failure to themselves and not to their relationship and might also engage in constructive attempts to rectify any problems although evidence of an increase in positive behaviours was only found for males. *Other-oriented perfectionism* was not found to have an important role in marital adjustment. However, other investigators have found *other-oriented perfectionism* related negatively to sexual satisfaction in general and sexual satisfaction with their partner for both males and females (Habke et al., 1999). Flett et al. (1996) found *self-oriented perfectionism* to be associated with positive self perceptions of problem solving ability. Similarly Flett, Russo et al (1994) found *self-*

oriented perfectionism to be associated with more active coping behaviours. However, *self-oriented perfectionism* was also associated with a form of emotional coping involving reduced self-acceptance.

3.6 Concluding Comments

The review of literature set out in this chapter has identified a range of interpersonal traits and behaviours associated with different dimensions of perfectionism. *Negative evaluation concerns* dimensions such as *socially prescribed perfectionism* have been shown to be consistently associated with increased interpersonal distress and a range of maladaptive behaviours including increased conflict and avoidance.

In contrast theories of perfectionism state that *standards and achievement* dimensions of perfectionism such as *personal standards, self-oriented perfectionism*, and *other-oriented perfectionism* have some adaptive or positive aspects. This contention is supported by findings showing that the dimensions of *self-oriented* and *other-oriented perfectionism* are associated with increased perceptions of positive interpersonal functioning, more active coping orientations, and reduced interpersonal distress. However, these dimensions of perfectionism also appear to be associated with a less constructive and maladaptive behaviour orientation in some interpersonal contexts that increases the experience of distress.

It is apparent from the literature reviewed in this chapter that there is little research available in regard to associations between interpersonal functioning and perfectionism

measures other than the MPS-H. The majority of research investigating perfectionism and interpersonal traits and behaviours has utilised the MPS-H, presumably because it is designed to tap into the social contexts that might activate perfectionistic beliefs and behaviours. However, given positive associations between *negative evaluation concerns* dimensions of perfectionism such as *concern over mistakes* in relation to measures of psychological distress and the consequences for one self in making a mistake, other dimensions of perfectionism may also be implicated in deficits in interpersonal functioning that may increase vulnerability to distress and psychopathology.

Finally, the review provided in this chapter has shown that much of the information relating to the investigation of interpersonal behaviours and perfectionism is limited to global measures of behaviour that do not allow a more direct examination of specific daily behaviours across a range of interpersonal contexts. A more direct examination of daily interpersonal interactions may increase understanding of the interpersonal behaviour of high trait perfectionists. Furthermore, the literature available does not provide a comparison of differences in perceptions and attributions related to specific interactions across individuals high in different perfectionism measures. Research is required to clarify the nature of the interpersonal perceptions and attributions of individuals high in different dimensions of perfectionism and the extent to which these individuals experience distress in relation to actual interpersonal interactions.

The review provided in this chapter illustrates a limitation in the perfectionism literature in that there is a need to investigate multiple aspects of interpersonal functioning. There

is a requirement to investigate interpersonal behaviours in a more "real time" daily context that includes the extent to which the individual experiences interpersonal distress relating to specific interactions. A diary methodology that investigates multiple aspects of interpersonal functioning may help to provide an expanded view of the experience of perfectionism and identify differences in the interpersonal functioning for those high in different dimensions of perfectionism.

CHAPTER 4

Aims of the Investigation and Issues of Analysis

4.1 Overview

The literature reviewed in Chapter 1 discussed changes in the conceptualisation of perfectionism from a unidimensional to a multidimensional focus and the development of new measures of perfectionism to reflect these changes. It was argued that perfectionism can be understood as comprising two more over-arching domains of perfectionism that have predominantly negative or more neutral or positive psychological and behavioural outcomes for individuals with high trait perfectionism. The different dimensions of perfectionism characterised as more negative in nature are conceptualised within this thesis under the label of *negative evaluation concerns.* The dimensions of perfectionism characterised as more positive or neutral in nature are clustered under the label of *standards and achievement.* These broad conceptualisations provide the structure within which the results of the investigations conducted in this thesis are discussed.

The literature reviewed in Chapter 2 focused on the associations between perfectionism and psychopathology, particularly anxiety and depression. This review argued that specific dimensions of perfectionism are highly implicated in the onset and maintenance of symptoms of anxiety and depression. Chapter 2 also briefly reviewed the ways in which anxiety and depression have been found to be implicated in maladaptive attributions and behaviours in relation to interpersonal functioning.

Chapter 3 examined the relationship between perfectionism and interpersonal functioning. It was suggested that perceptions of negative interpersonal interactions contribute significantly to the experience of daily distress (Bolger et al., 1989) and that high trait perfectionists may perceive they experience more negative interpersonal interactions (Flett et al., 1997). It was also evident from the literature reviewed, that dependent on the type of perfectionism involved, individuals may respond to unpleasant interpersonal situations by avoidance, increased conflict behaviour, or by employing a more problem-solving and constructive approach (Dunkley et al., 2000; Hill, Zrull & Turlington, 1997).

Moreover, it was suggested that individuals may experience an increase or decrease in distress depending on their perceptions of control and satisfaction (Dunkley et al., 2000; Flett, Hewitt, Blankstein & O'Brien, 1991). However, assumptions about perceived levels of control and satisfaction and interpersonal distress have not been directly examined within the context of actual interpersonal experiences. In addition there is little information about the extent to which high trait perfectionists are influenced or motivated by various aspects of perfectionism such as the need to maintain high standards or the desire to avoid the potential criticism or disapproval of others in specific interpersonal contexts.

An investigative approach examining not only differences in behaviour in regard to interpersonal interactions but perceived level of distress may clarify whether these differences exist and give some indications of where they lie. An investigation of

differences in interpretation of the social behaviour of others in relation to different forms of perfectionism may further clarify the relationship between dimensions of perfectionism and interpersonal behaviour and psychological distress.

4.2 Aims of the Investigation

The *first research aim* is to examine associations between dimensions of perfectionism and sample characteristics. A further aim is to examine the extent to which different dimensions of perfectionism predict scores on measures of psychological distress and subjective well-being. Results from this investigation will provide clarity about the nature of these associations and will inform discussion about the results of studies within the thesis. These aims will be achieved through Study 1.

The *second aim* of this investigation is to identify the extent to which different dimensions of perfectionism are associated with perceptions of more frequent negative interpersonal interactions and measures of interpersonal rejection sensitivity. This will be achieved through Study 2.

The *third aim* is to examine whether there are differences in the ways in which high trait perfectionists perceive social information and make attributions about the interpersonal behaviours and responses of others. This aim is achieved in Studies 3 and 4. Study 3 examines differences in the ways in which high trait perfectionists may interpret social information relating to facial expression. Study 4 investigates the ways in which high

trait perfectionists may make attributions about the nature of the interpersonal behaviour and responses of others using a vignette methodology.

The *fourth aim* of this investigation is to directly examine self-reported interaction behaviours, perfectionistic motivations and levels of interpersonal distress in relation to unpleasant interpersonal interactions. This is achieved through Study 5 utilising a diary methodology. The use of an event-contingent diary (based on reporting of interpersonal interactions perceived by the individual as unpleasant) may highlight periods of interpersonal distress or discomfort that provide a more direct measure of subjective levels of distress at the time of an interaction.

The *fifth aim* of this investigation is to draw conclusions about the relative contributions of different dimensions of perfectionism in relation to interpersonal behaviours, attributions and levels of distress and the extent to which the findings of these investigations support current theories of perfectionism.

4.3 Analysis Strategy

Several issues were considered relating to statistical analysis. First, a large number of variables were examined across the studies involving multiple comparisons. There was thus a need to control for Type 1 errors. Secondly there was the need to consider sample size relative to statistical power for particular analyses.

As each dimension of perfectionism is treated as a separate variable with large numbers of dependent variables for comparison there is an increased risk of Type 1 errors occurring. On this basis an alpha level of $p = .01$ was set in order to reduce this risk. However, the need to control for Type 1 errors was balanced against the issue of statistical power for analyses. According to the estimations given by Cohen (1992), the sample sizes of the studies undertaken indicate that with an alpha level of $p = .01$ it is unlikely that a small population effect size will be detected. For this reason results of $p <$ .05 are reported as trends. Reporting results of $p < .05$ not only allows greater flexibility in detecting smaller effects but also allows consideration of overall patterns of findings that would not be evident with the stricter .01 level.

Diary-centric Versus Person-centric Focus for Analysis

A further issue of statistical analysis is raised in Study 5 in which multiple aspects of self-reported interactions are investigated. Each participant submitting data for this part of the investigation may have submitted between one to five separate diary entries relating to interpersonal interactions they experienced. The use of diary-based data present statistical difficulties when separate diary entries are used as the unit of analysis. This is due to the potential violation of statistical assumptions of analysis of variance and linear and multiple regression involving unequal slopes, intercepts, and variances between subjects' data series as well as autocorrelation of data points. These features of diary data may substantially bias hypothesis testing in an unpredictable manner (as discussed in Vittengl & Holt, 1998).

Vittengl and Holt (1998) suggest that although participant data may be corrected by individual centering to correct for unequal intercepts, other potential violations are difficult to detect and correct for especially when there are relatively few observations per participant. A "conservative but robust" solution is to use the participant as the unit of analysis by aggregating data. In the person-centric strategy the participant's mean score is calculated across all observations and used as the unit of analysis.

A diary-centric approach would allow each diary entry for a given variable to be considered in analyses, whereas a person-centric approach would ensure that for each comparison made, each participant would be equally represented. Both analytic approaches were trialed and each generated a similar patterns of results. However, a decision was made to report results from the person-centric analysis for the following reasons. Firstly, although the diary-centric approach ($N > 700$) yielded increased numbers of significant results and appeared to capture smaller effects, the effect sizes of these results were frequently extremely small (e.g., $\eta^2=.008$). Secondly, a person-centric approach allowed inferences to be made about individuals with high and low scores on dimensions of perfectionism rather than inferences about interactions. Thirdly, a person-centric analysis strategy was more consistent with the other investigations presented. Finally, consistent with previously published material relating to diary material, the person-centric strategy creates more stable estimates of statistical parameters and presents no particular threats to statistical assumptions at the cost of reduced statistical power (Vittengl & Holt, 1998).

Controlling for the Effects of Anxiety and Depression .

As discussed earlier in Chapter 2, consideration was also given to the potential effects of anxiety and depression on the findings of investigations conducted in this thesis. It is acknowledged that by controlling for anxiety and depression, the indirect effects of perfectionism through these forms of psychological distress may be lost. Any results obtained may also be underestimating the effects of perfectionism on the individual as there is good evidence that different forms of perfectionism are highly implicated in both depression and anxiety. However, controlling for the potential effects of these forms of psychopathology provides a conservative approach that allows greater confidence in identifying any additional effects found as being specific to the effects of perfectionism.

Given the large data set and large number of comparisons made, a comment is also warranted in regard to the specific analysis strategy pursued in Studies 2, 3, 4, and 5 and the way in which data are presented in relation to these investigations. For all univariate analsysis comparisons for data from Studies 2, 3, 4, and 5 the following strategy was pursued. In order to investigate differences for dependent variables between individuals with high and low scores on dimensions of perfectionism, participants were assigned to a low or high group for each dimension of perfectionism based on the median score. Groups were formed on the basis of a median split providing a simplifying process for anticipated complex relationships between variables. ANOVAS were then conducted for low and high participant groups for each dimension of perfectionism for each dependent variable. If the ANOVA yielded a significant result or a trend was obtained, an ANCOVA was conducted. For ANCOVA analysis total DASS-Depression and DASS-

Anxiety scores were entered as covariates in order to control for the potential effects of these forms of psychopathology. If a trend or a significant result was retained in the ANCOVA, the results are presented.

4.4 Presentation of Results

The large data set and large number of comparisons conducted also raise issues regarding the most effective manner of presentation. The need to provide sufficient detail is balanced against the need for a presentation that will most effectively allow an overview of the different comparisons conducted and the patterns that emerge. To this end, tables presented for Studies 2, 3, 4 and 5 have been constructed with a view towards placing the optimal amount of information within tables in order to avoid referring the reader to separate means tables that would be unwieldy and difficult to follow within the body of the thesis. In order to achieve an adequate level of information, tables for these studies are presented in the following manner. First only trends or significant results are reported within the text or presented within tables. Secondly where there are three or fewer results for a comparison, results are reported within the text. Four or more results are presented in table form. Thirdly, within tables, unadjusted Means and Standard Deviations are placed immediately to the left of the associated inferential statistic for each comparison made.

Finally inferential statistics are centered in the column immediately to the right of the Means and standard deviations for each analysis and the following information is presented in ascending order: a) F tests with level of significance, b) df_2, and c) η^2 are

presented for all results reported, where the ANCOVA for a comparison yielded a significant result, both the η_2^1 (based on unadjusted means) and d) η_2^2 (based on adjusted means) are reported to allow a comparison of changes in effect size after inclusion of covariates (*df* is not shown because it is always 1, being based on the contrast between the high and low groups). Figure 1 illustrates the way in which these data have been set out in Studies 2 to 5 (Chapters 6 to 9).

			F	← (a) *F* test and significance
Perfectionism		*M*	df_e	← (b) degrees of freedom - error
group		*(SD)*	η_1^2	← (c) η_1^2 unadjusted means
			η_2^2	← (d) η_2^2 adjusted means
High	M→	25.31	25.62**	← (a) *F* test and significance
	(SD)→	(5.89)	(163)	← (b) degrees of freedom$_2$
			.14	← (c) η_1^2 unadjusted means
Low	M→	20.85	.03	← (d) η_2^2 adjusted means
	(SD)→	(5.42)		

Figure 1. Illustration of Presentation of Results in Tables

CHAPTER 5

Study 1: Participant Characteristics, Measures of Psychological Distress and Subjective Well-being, and Associations with Measures of Perfectionism.

5.1 Rationale

The previous chapters have reviewed the literature in regard to associations between various dimensions of perfectionism, personality traits, behaviour orientations, and symptoms of anxiety and depression. Associations between dimensions of perfectionism and different measures of anxiety and depression have been widely investigated. However, some of the findings related to *self-oriented perfectionism, personal standards*, and *other-oriented perfectionism* have been somewhat inconsistent in relation to associations between these dimensions and measures of psychological distress or whether these dimensions provide any increase in positive psychological outcomes for the individual (Chang & Sanna, 2001; Enns & Cox, 1999; Flett, Hewitt et al., 1995). Other dimensions of perfectionism such as *socially prescribed perfectionism* and *concern over mistakes* have been more consistently linked to psychological distress (Flett, Hewitt, Blankstein & Pickering, 1998).

Perfectionism has been associated with increased work stress in teachers and career mothers (*socially prescribed perfectionism* and *negative perfectionism*; Flett, Hewitt et al., 1995; Mitchelson & Burns, 1998), but not absenteeism (Flett, Hewitt et al, 1995), and somatic health concerns (Saboonchi & Lundh, 2003). There is also evidence to suggest that the experience of perfectionism may become less with age (Chang, 2000).

There has been considerable investigation of links between dimensions of perfectionism and suicidal intent and ideation indicating that perfectionism, can be a unique contributor to increased risk for suicide behaviour (Boergers, Spirito & Donaldson, 1998; Chang, 1998; Dean et al., 1996, Hewitt, Flett & Weber, 1994; Hewitt et al., 1997; Hunter & O'Connor, 2003). Investigations of suicidal behaviour and perfectionism to date have relied heavily on the MPS-H. There are few data available in regard to associations between history of suicide attempts and other measures of perfectionism. Additionally other behaviours such as self-mutilation associated with suicide risk (Esposito et al., 2003) that have also been linked to perfectionism have not received any attention in the perfectionism literature (Favazza & Rosenthal, 1993).

Study 1 is therefore an exploratory study that seeks to investigate possible associations between a range of different measures of perfectionism and participant characteristics in order to isolate characteristics that may be differentially associated with perfectionism. In order to clarify the relationship between dimensions of perfectionism and measures of psychological distress in the current sample, Study 1 will also assess associations between perfectionism and symptoms of *anxiety, depression* and a measure of *subjective well-being*. Mature age students and non-student adults as well as younger students were sought to participate in this study to enable a comparison between older and younger adults.

In relation to the findings presented in the preceding chapters, it is expected that *negative evaluation concerns* dimensions of perfectionism will show positive associations with

measures of anxiety and depression and an inverse relationship with subjective well-being. It is also expected that *standards and achievement* dimensions will be positively associated with increased levels of psychological distress but these associations will be weaker than for *negative evaluation concerns* perfectionism dimensions. *Standards and achievement* dimensions of perfectionism are not expected to positively correlate with subjective well-being. It is expected that levels of perfectionism and psychological distress will decrease with age, and that *negative evaluation concerns* dimensions of perfectionism will be positively associated with the reported presence of medical and mental illness and a history of suicide attempts.

5.2 Method

Participants

The participants for Study 1 were undergraduate students attending courses at the University of Tasmania across two campuses situated 200 km apart and a small number of non-student family members and friends of students (n = 27). A total of 371 participants of both sexes (males, n = 74; females, n = 297) ranged in ages from under 19 years to 70 years and over. Students of all ages were actively encouraged to participate in the study.

The majority of participants were 19 years or under (n = 182) the next largest age groups being 20-29 (n = 83) and 30-39 (n = 45). The remaining participants were over 40 years of age (n = 60). Of those engaged in study, the majority were full time students (n = 295). The remainder were part-time (n = 45). Half of the participants described

themselves as single (n = 186) while just over 22% described themselves as single but in a significant relationship (n = 82). The remainder of the participants were in a married/defacto relationship (n = 73) or were separated/divorced (n = 26) or widowed (n = 1). Just over a quarter of participants had children (n = 92). Fifty six percent of participants (n = 208) reported that they were undertaking some sort of paid work. Over 80% of those engaged in work, reported working 15 hours or less per week.

Thirty-one participants reported that they suffered from a diagnosed mental illness (8.4%). Of these, 19 reported receiving medications for their illness and 13 reported being engaged in some sort to therapeutic intervention. Mental illnesses reported included anxiety disorders (n = 4) and depression (n = 12), bipolar disorder (n = 1), comorbid anxiety and depression (n = 5) eating disorders (n = 5), and personality disorders (n = 1). Three participants did not identify the nature of their mental illness. Fifty-eight participants reported suffering from a medical illness and of these, 50 reported they were currently receiving medication for their illness. Participants were not asked to identify the nature of their medical illness. Only nine participants reported current problems with substance use, and of these two specified this as smoking-related. No others reported the nature of their substance use problems.

Over 12% of participants (n = 46) reported having made a suicide attempt in the past and of these 20 participants indicated that they had made more than one attempt on their life. Nearly 23% (n = 84) of participants indicated that they had engaged in some form of

deliberate self-mutilation during their lifetime with 34 respondents indicating they had self-mutilated at some time in the previous 12 months.

Participants were recruited by placing notices on student notice boards around the university campuses or announcements before and following lectures at which students were invited to leave their names and contact details. All individuals who placed their names on a contact list were briefly interviewed by the researcher by phone or in person about the nature of the study, the approximate time it would take, and provided with contact details in case further information or assistance was needed with any part of the research requirements.

Participants signed a document of Informed Consent and were then given a package containing a detailed Participant Information Sheet, an instruction sheet for completion of the questionnaires (See Appendix A1) and all questionnaires for Study 1. They were also invited to take extra packages for family and friends who may not be attending courses at the university. This was not intended to provide information in regard to family concordance (Chang, 2000), merely a wider recruiting pool. If a family member or friend elected to complete the material they were invited to contact the researcher and were then provided with the same overview of the research and contact information as on-campus students.

All participants were offered the opportunity to discuss their response profiles in regard to questionnaire materials should they wish to do so. Participants were instructed not to

put their names on any material provided to them in the research participation package in order to maintain confidentiality. All materials within a research package were given a four digit number that the participant could choose or could elect for the researcher to provide on a pre-labeled package. Participants were requested to complete all questionnaire materials at one time. All material was returned to the researcher in a sealed envelope. First year psychology students who returned materials to the researcher were given 1.5 hours credit towards course participation requirements. All student and non-student participants could choose to enter their names in a draw to win one of two sets of two movie tickets (one for each campus) at the end of each teaching year at the university. Data were collected over a two year period.

Instruments

General Information Questionnaire.

A general information questionnaire was designed specifically for Study 1. The purpose of the questionnaire was to gather general demographic information such as age group and marital status, as well as a limited indication of current medical and mental health and employment status. The questionnaire also elicited information about behaviours such as days off work or school because of stress or illness, or a history of self-mutilative behaviour or suicide attempts. A copy of this questionnaire is provided in Appendix A2.

Perfectionism

Multidimensional Perfectionism Scale (MPS-F; Frost et al., 1990).

The MPS-F is a 35-item questionnaire designed to measure dimensions of perfectionism and consists of six scales. *Personal Standards* (PS), reflects a tendency to set very high standards while placing excessive importance on these standards for self evaluation. *Concern over mistakes* (CM) reflects the perfectionist's over concern about making mistakes in performance situations. This dimension measures a tendency to react negatively to mistakes and equate mistakes with personal failure and fears that one will lose the respect of others following perceived failure. *Doubts about actions* (DA) is suggested to reflect the perfectionist's sense of doubt about the quality of their actions or beliefs. It is suggested that this dimension is not about the recognition or evaluation of specific mistakes but rather the sense that a task is not completed satisfactorily. *Parental expectations* (PE) reflects a tendency to perceive one's parents as having very high expectations, and *parental criticism* (PC) reflects a tendency to perceive one's parents as being overly critical.

The *organisation* scale (OR) is suggested to measure the tendency of perfectionists to emphasise precision, order and organisation. Although the MPS-F measures individual subscales, a total perfectionism score can be generated using five of the subscale scores. The organisation subscale score is omitted from the calculation of the total score because of low correlation with the other subscales (Frost et al, 1990).

Respondents rate their agreement with a statement on a five point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores on each of the scales reflect greater levels on that dimension of perfectionism.

Frost et al. (1990) report adequate internal consistency. Chronbach Alpha Coefficients for the MPS-F perfectionism dimensions range from .77 to .93. The reliability of the full scale score was reported as .90. The MPS-F also shows good construct validity. The MPS-F is reported to correlate well with other measures of perfectionism particularly the Burns' Perfectionism Scale $r = .85$ (Burns, 1980; Frost et al., 1990).

The Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991b).

The MPS-H measures three dimensions of perfectionism. The *self-oriented perfectionism* (SOP) scale reflects the more traditional concept of perfectionism: the tendency to set high standards for oneself as well as to evaluate one's own behaviour stringently. *Other-oriented Perfectionism* (OOP) is proposed to reflect a tendency to set unrealistically high expectations for the behaviour of others and is an outwardly directed form of SOP. *Socially prescribed perfectionism* (SPP) is suggested to reflect the perception of individuals that others have imposed high standards for them; are engaging in stringent evaluation of them, and are exerting pressure on them to be perfect.

Respondents rate their agreement with a statement on a seven point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on each of the scales represent greater levels of perfectionism. Good internal consistency is reported for this measure.

Chronbach Alpha Coefficients for the three scales reported are .86 (*self-oriented perfectionism*), .82 (*other-oriented perfectionism*), and .87 (*socially prescribed perfectionism.* Test retest reliability is reported as .88 (*self-oriented perfectionism*), .85 *other-oriented perfectionism*), and .75 (*socially prescribed perfectionism*; Hewitt & Flett, 1991b).

The Positive and Negative Perfectionism Scale (PANPS; Terry-Short et al., 1995) .

The PANPS measures two dimensions of perfectionism. *Positive perfectionism* (PosP) is proposed to tap behaviours and cognitions directed towards higher level goals in order to obtain positive consequences. *Negative perfectionism* (NegP) is proposed to tap behaviours and cognitions directed towards higher level goals in order to avoid or escape from negative consequences constituted. The PANPS draws on the MPS-H dimensions of *self-oriented* and *socially prescribed perfectionism* with additional questions formulated to specifically measure *positive* and *negative perfectionism.*

Respondents rate their agreement with a statement on a five point scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*). Higher scores on each of the scales represent greater levels of perfectionism. Chronbach alpha coefficients of .87 (*positive perfectionism*) and .89 (*negative perfectionism*) indicate good internal consistency (Mitchelson & Burns, 1998). See also Haase and Prapavessis (2004). Terry-Short et al. (1995) reported evidence for construct validity of the scale, demonstrating that the PANPS scores identified 86% of an eating disorder group.

The Pefectionism Cognitions Inventory (PCI; Flett, Hewitt, Blankstein & Gray, 1998). The PCI is a 25-item self-report measure of individual differences in the frequency of automatic perfectionism related thoughts. The content of the PCI focuses primarily on cognitions related to the self in regard to the need to be perfect. Participants rate their responses to PCI items on a scale of 0 (*not at all*) to 4 (*all of the time*). A higher total score on this measure indicates an increased frequency of automatic perfectionism related thoughts. The PCI is reported to have good internal consistency (Chronbach alpha .96), scale validity (correlation with *Attitudes Towards Self Scale* r = .55), and test re-test reliability (r = .67; Flett, Hewitt, Blankstein & Gray, 1998).

Psychological distress

The Depression Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1993) .

The DASS is a 42-item self-report measure assessing dysphoric mood (*Depression* scale, DASS-D), symptoms of fear and autonomic arousal (*Anxiety* scale, DASS-A) and symptoms of general agitation and arousal (*Stress* scale, DASS-S). The DASS-D scale measures the sub-scales of *dysphoria, devaluation of life, self-deprecation, lack of interest and involvement, anhedonia* and *inertia.* The DASS-A scale measures the sub-scales of *autonomic arousal, skeletal musculature effects, situational anxiety*, and *subjective experience of anxious affect.* The DASS-S scale measures the sub-scales of *difficulty relaxing, nervous arousal, easily upset agitated, irritable over-reactive* and *impatient.*

Each item is scored on a four-point scale ranging from 0 (*Did not apply to me at all*) to 3 (*Applied to me very much or most of the time*). Higher scores on each scale indicate greater levels of psychological distress on the given scale. The DASS is reported to have good internal consistency. Alpha coefficients are reported as .91 (*depression scale*), .81 (*anxiety scale*), and .89 (*stress scale*). The DASS was also reported to have adequate validity. Correlations of the DASS *depression* and *anxiety* scales with the *Beck Depression Inventory* (BDI; Beck & Steer, 1987) and *Beck Anxiety Inventory* (BAI, Beck & Steer, 1990) were reported as $r = .74$ and $r = .81$ respectively. (Lovibond & Lovibond, 1995). See also Brown, Chorpita, Korotitsch and Barlow (1997) for additional psychometric data.

Subjective well-being

Short Happiness and Affect Research Protocol (SHARP; Stones et al., 1996).

The SHARP contains the twelve items from the Memorial University of Newfoundland Scale of Happiness (MUNSH; Kozma & Stones, 1980). The content of these items is balanced over the positive and negative and short term (affective) and long term (dispositional) components of well-being. Validity measures for SHARP are comparable to MUNSH and correlate highly with the MUNSH ($r = .95$) which is considered an accurate measure of subjective well-being and therefore SHARP closely approximates its' parent measure. Scores derived from the scale range from -6 indicating the most negative outcomes relating to subjective well-being to +6 indicating the most positive outcomes.

5.3 Results

Analysis

Prior to analysis data were screened for univariate outliers by converting data to z scores and eliminating cases $z > 3.29$. Data were then checked for multivariate outliers using mahalanobis distance analysis following Tabachnick and Fidell (2001).

Means and Standard Deviations

Means and standard deviations were calculated for scores for all dimensions of perfectionism, the SHARP, and the DASS *anxiety* and *depression* scales. These results are shown in Table 2.

Table 2

Total Sample Means and Standard Deviations for Dimensions of Perfectionism, DASS Depression and Anxiety Scales and SHARP for N = 371 Respondents

Measure of perfectionism	NEC dimensions	*M*	(SD)
PANPS	NegP	57.15	(14.80)
MPS-F	CM	22.26	(07.82)
	DA	11.73	(03.52)
	PE	12.61	(04.76)
	PC	09.32	(03.98)
MPS-H	SPP	50.06	(15.74)
PCI	PCI	43.00	(20.20)
	SA dimensions		
PANPS	PosP	71.90	(10.31)
MPS-F	PS	21.85	(05.25)
	OR	22.57	(04.60)
MPS-H	SOP	62.53	(17.67)
	OOP	50.70	(13.15)

Table 2 (continued)

Psychological distress and subjective well-being	*M*	(SD)
SHARP	02.25	(03.27)
DASS-D	09.49	(09.56)
DASS-A	06.62	(07.28)

Note. Dimensions/domains of perfectionism and DASS scales: NEC = negative evaluation concerns; SA = standards and achievement; CM = concern over mistakes; DA = doubts about actions; PS = personal standards; OR = organisation; PE = parental expectations; PC = parental criticism; SOP = self-oriented perfectionism; SPP = socially prescribed perfectionism; OOP = other-oriented perfectionism; PosP = positive perfectionism; NegP = negative perfectionism; DASS-D = DASS Depression; DASS-A = DASS Anxiety

Between Groups Comparisons

Analyses were then conducted to examine differences between groups for sex, age and measures of perfectionism as well as anxiety, depression and subjective well-being. Independent measures *t* tests showed males ($M = 55.50$, $SD = 12.85$) scored significantly higher than females ($M = 49.61$, $SD = 13.15$) for *other oriented perfectionism* $t(355) = 3.41$, $p < .01$ and *positive perfectionism* $t(361) = 2.27$, $p < .05$ (males $M = 74.36$, $SD = 9.30$; females $M = 71.29$, $SD = 10.48$). There were no other significant differences between males and females for measures of perfectionism. Nor were there gender differences for measures of anxiety, depression and subjective well-being.

Participants were then placed in a either a "student" or "mature" age group (see also Chang, 2000). The student group comprised all participants under 30 years of age who were not married and did not have children ($N = 244$). Participants under the age of 30 years who were married or had children were placed in the mature group ($N = 125$) with the remaining participants. Independent t tests were then conducted to examine differences between age groups.

An examination of means showed that the student group scored more highly than the mature group on all dimensions of perfectionism with the exception of *organisation* and *parental criticism,* however these differences only reached significance for *parental criticism* and *positive perfectionism.* The results of these analyses showed that the student group ($M = 8.64$, $SD = 3.63$) showed a significantly lower mean score for *parental criticism* than the mature group ($M = 10.61$, $SD = 4.35$), $t(367) = 4.60$, $p < .01$. In contrast the results for *positive perfectionism* showed a significantly higher mean score for the student group ($M = 73.08$, $SD = 9.79$) than for the mature group ($M = 69.56$, $SD = 10.94$), $t(362) = 3.12$, $p < .01$.

An examination of means between the student and mature age groups in relation to *anxiety, depression* and *subjective well-being* showed that the student group scored more highly than the mature group on measures of *anxiety* and *depression* but showed lower scores on the measure of *subjective well-being.* However, these results only reached significance *depression* and *anxiety.* Results for DASS Depression showed a significantly higher mean score for the student group ($M = 10.61$, $SD = 9.76$) than for the

mature group (M = 7.06, SD = 8.69), $t(322) = 3.16$, $p < .01$. Results for DASS Anxiety also showed a significantly higher mean score for the student group (M = 7.40, SD = 7.51) than for the mature group (M = 4.91, SD = 6.42), $t(325) = 2.95$, $p < .01$.

These results suggest that as individuals grow older, perfectionism of most types tends to reduce with the notable exception of *parental criticism*. It appears counter intuitive that concerns about *parental criticism* would increase with age rather than decrease. However this may be a function of the younger participants being more concerned about the importance of the opinion of peers rather than parents.

It is also noteworthy that increasing age is significantly associated with decreased scores on the measure of *positive perfectionism*. This suggests that the need for positive reinforcement in response to achievement may become less important with increased age. An examination of means shows that scores for *anxiety* and *depression* decrease as age increases and that scores for the SHARP increase with age suggesting a greater sense of well-being as age increases.

Correlation Analysis

Correlation analysis showed a weak positive association between *negative perfectionism* and the presence of a medical illness $r = .11$, $p < .05$ ($M_{\text{illness}} = 60.98$, $SD_{\text{illness}} = 14.14$; $M_{\text{no illness}} = 56.55$, $SD_{\text{no illness}} = 14.78$). All other correlation results are presented in Table 3.

Table 3

Correlations Between Dimensions of Perfectionism and Participant Characteristics for N = 371 Respondents

Domain/ dimension of perfectionism	Participant characteristics				
NEC	Abs ill	Ment ill	Abs stress	Self-mutil	Sui att
PANPS					
NegP	.09	.18**	.22**	.23**	.13*
MPS-F					
CM	.10*	.19**	.24**	.17**	.15**
DA	.13*	.13*	.27**	.24**	.13*
PE	-.05	.00	.06	.13*	.10*
PC	.04	.11*	.15	.20**	.20**
MPS-H					
SPP	.11*	.11*	.19**	.19*	.13*
PCI	.17*	.13*	.21*	.15**	.15**

Table 3 (continued)

Domain/ dimension of perfectionism	Participant characteristics				
SA	Abs ill	Ment ill	Abs stress	Self-mutil	Sui att
PANPS					
PosP	-.02	-.04	.07	.02	-.07
MPS-F					
PS	-.04	.14*	.12*	.07	.08
OR	-.07	.02	-.01	.07	-.03
MPS-H					
SOP	.03	.11*	.14*	.07	.01
OOP	.05	.09	.06	.07	.03

Note. Domain/dimensions of perfectionism: NEC = negative evaluation concerns; SA = standards and achievement;CM = concern over mistakes; DA = doubts about actions; PS = personal standards; OR = organisation; PE = parental expectations; PC = parental criticism; SOP = self-oriented perfectionism; SPP = socially prescribed perfectionism; OOP = other-oriented perfectionism; PosP = positive perfectionism; NegP = negative perfectionism

Med ill = Medical illness, Abs ill = Absent due to illness, Ment ill = Mental Illness, Abs str = Absent due to stress, Self –mutil = self-mutilation, Sui att = Suicide attempt

*$p < .05$, **$p < .01$

The results presented in Table 3 indicate that although there appears to be very little correlation between the presence of a medical illness and dimensions of perfectionism, taking a sick day does show weak associations with a range of *negative evaluation concerns* dimensions of perfectionism.

Although Flett, Hewitt et al. (1995) found that perfectionism was associated with increased work stress but not absenteeism, the findings of the current study indicate that there is a positive association between absenteeism from school or work because of stress and a range of *negative evaluation concerns* perfectionism dimensions, most notably *concern over mistakes* and *doubts about actions*. There are also weaker associations in the same direction between specific *standards and achievement* dimensions. The stronger and more consistent results for positive associations between *negative evaluation concerns* dimensions of perfectionism and the presence of mental illness and a history of suicide attempts are consistent with previous literature (Antony et al., 1998; Chang, 1998; Dean et al., 1996; Flett, Hewitt et al., 1994; Enns & Cox, 1997; Hewitt & Flett, 1991b; Hewitt et al., 1994; Hewitt, Flett, Ediger et al., 1998). The results in regard to self-mutilation indicate that there are small but significant positive associations between a range of *negative evaluation concerns* dimensions of perfectionism and this variable. It is notable that there are no associations between *standards and achievement* dimensions with self-mutilation.

Further correlation analysis was then conducted to examine associations between participant characteristics and measures of *anxiety, depression* and *subjective well-being.*

These results are shown in Table 4. The presence of medical and mental illness, taking sick or stress days, or having a history of self-mutilation or suicide attempts is associated with increased scores on measures of *depression* and *anxiety* and reduced scores on the SHARP measure of *subjective well-being*.

Table 4

Correlations Between Participant Characteristics and Anxiety, Depression and SHARP for N = 371 Respondents

	Med ill	Abs ill	Ment ill	Abs str	Self-mutil	Sui att
DASS-Dep	.16*	.20**	.22**	.34**	.29**	.27**
DASS-Anx	.20**	.21**	.17**	.35**	.34**	.23**
SHARP	-.11*	-.13*	-.23**	-.31**	-.30**	-.17*

Note. DASS-Dep = DASS Depression Scale; DASS-Anx = DASS Anxiety Scale
Med ill = Medical illness, Abs ill = Absent due to illness, Ment ill = Mental Illness, Abs str = Absent due to stress, Self –mutil = self-mutilation, Sui att = Suicide attempt
*$p < .05$, **$p < .01$

Correlation analysis was then conducted to examine associations between all dimensions of perfectionism and DASS-Depression scale and subscale scores. These results are shown in Table 5. It can be seen in Table 5 that as expected *negative evaluation*

concerns dimensions of perfectionism show the strongest pattern of positive associations between dimensions of perfectionism and total DASS-Depression and depression subscale scores particularly *self-deprecation, anhedonia,* and *dysphoria.* Also as expected, *standards and achievement* dimensions show a range of significant but somewhat weaker positive associations with DASS-Depression scale and sub-scale scores although *anhedonia* appears to be a relatively stronger feature of depression symptoms for these dimensions. It is also of interest to note that none of the *standards and achievement* dimensions shows an inverse relationship to *depression* scores. *Positive perfectionism, other-oriented perfectionism*, and *organisation* show relatively weaker trends towards positive associations in contrast to the other *standards and achievement* related dimensions.

Table 5

Correlations between Dimensions of Perfectionism and DASS Depression Scale and Sub-scales for N = 371 Respondents

Perfectionism dimensions	DASS Depression scale and sub-scales							
NEC	Dysph	Hope-lessness	Deval	Self-Dep	Lack Interest	Anhed	Inertia	DASS -Dep
PANPS								
NegP	.40**	.39**	.40**	.51**	.44**	.44**	.33**	.50**
MPS-F								
CM	.36**	.34**	.37**	.49**	.42**	.40**	.32**	.47**
DA	.37**	.32**	.37**	.47**	.43**	.39**	.41**	.48**
PE	.12*	.11*	.09	.20**	.15**	.20**	.14*	.18**
PC	.19**	.16**	.19**	.24**	.18**	.26**	.20**	.24**
MPS-H								
SPP	.33**	.30**	.28**	.41**	.32**	.36**	.26**	.38**
PCI	.43**	.38**	.38**	.48**	.42**	.42**	.33**	.48**

Table 5 (continued)

Perfectionism dimensions	DASS Depression scale and sub-scales							
SA	Dysph	Hope-lessness	Deval	Self-Dep	Lack Interest	Anhed	Inertia	DASS -Dep
PANPS								
PosP	.09	.05	.06	.10	.12*	.12*	.13*	.13*
MPS-F								
PS	.22**	.21**	.23**	.23**	.26**	.28**	.15**	.26**
OR	.12*	.11	.11*	.05	.16*	.15*	.00	.11*
MPS-F								
SOP	.22**	.19**	.21**	.23**	.23**	.26**	.22**	.27**
OOP	.01	.01	.06	.12*	.13*	.07	.04	.07

Note. DASS Depresssion subscales: Dysph = Dyshphoria; Deval = Devaluation; Self-Dep = Self-Deprecation; Lack Int = Lack of Interest; DASS-Dep (Depression Total Scale Score)
Domains/dimensions of perfectionism: NEC = negative evaluation concerns; SA = standards and achievement; CM = concern over mistakes; DA = doubts about actions; PS = personal standards; OR = organisation; PE = parental expectations; PC = parental criticism; SOP = self-oriented perfectionism; SPP = socially prescribed perfectionism; OOP = other-oriented perfectionism; PosP = positive perfectionism; NegP = negative perfectionism
*p = <.05, **p = < .01

Further correlation analysis was then conducted to examine associations between all dimensions of perfectionism and DASS-Anxiety scale and subscale scores. It can be seen in Table 6 that the same dimensions of perfectionism as for *depression* show the strongest

associations with *anxiety* subscales and total DASS-Anxiety scores. Results reveal that *negative perfectionism* shows the strongest association with DASS-Anxiety scales. Overall *negative evaluation concerns* dimensions of perfectionism show the greatest magnitude of association with *situational anxiety* and to a lesser extent with other *anxiety* subscales. As expected *standards and achievement* dimensions of perfectionism show weaker but positive associations with *anxiety* scales. It is also of note that *other-oriented perfectionism* shows a significant association with *situational anxiety* and *organisation* shows no associations with any *anxiety* scale.

Results for the SHARP show the *negative evaluation concerns* dimensions of perfectionism showing the strongest positive associations with *anxiety* and *depression* also show the strongest negative associations with this measure. These results suggest that as levels of these dimensions of perfectionism increase, perceptions of *subjective well-being* become less. *Positive perfectionism*, *organisation* and *other-oriented perfectionism* show no significant association with *subjective well-being*. It is noted that none of the *standards and achievement* dimensions show a positive relationship with the SHARP measure of subjective well-being. These results are presented in Table 6. Means and standard deviations for all participant characteristic groups and perfectionism, *anxiety, depression* and *subjective well-being* are shown in Tables B1-B9 in Appendix B1.

Table 6

Correlations between Dimensions of Perfectionism and DASS Anxiety Sub-scales and SHARP for N = 371 Respondents

Perfectionism dimensions	DASS Anxiety scale and sub-scales					
NEC	Arousal	Skeletal	Sit	Subj	DASS -A	SHARP
PANPS						
NegP	.35**	.34**	.50**	.40**	.47**	-.46**
MPS-F						
CM	.31**	.29**	.51**	.35**	.44**	-.41**
DA	.37**	.26**	.52**	.38**	.46**	-.44**
PE	.14**	.13*	.14*	.05	.13*	-.13*
PC	.17**	.14*	.15**	.07	.14*	-.19**
MPS-H						
SPP	.27**	.28**	.37**	.30**	.35**	-.37**
PCI	.34**	.30**	.49**	.40**	.45**	-.45**

Table 6 (continued)

Perfectionism dimensions	DASS Anxiety scale and sub-scales					
SA	Arousal	Skeletal	Sit	Subj	DASS -A	SHARP
PANPS						
PosP	.18**	.13*	.17**	.13*	.20**	-.08
MPS-F						
PS	.21**	.19**	.27**	.24**	.27**	-.22**
OR	.05	.05	.06	.09	.09	-.07
MPS-H						
SOP	.19**	.12*	.25**	.22**	.25**	-.24**
OOP	.09	.12*	.16**	.04	.12*	-.01

Note. DASS Anxiety subscales; Arousal = autonomic arousal; Skeletal = skeletal musculature effects; Sit = situational anxiety; Subj = subjective experience of anxious affect, DASS-A = DASS Anxiety Total Scale Domain/dimensions of perfectionism: NEC = negative evaluation concerns; SA = standards and achievement; CM = concern over mistakes; DA = doubts about actions; PS = personal standards; OR = organisation; PE = parental expectations; PC = parental criticism; SOP = self-oriented perfectionism; SPP = socially prescribed perfectionism; OOP = other-oriented perfectionism; PosP = positive perfectionism; NegP = negative perfectionism

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

Stepwise Regression Analysis

Finally a series of stepwise regression analyses were conducted to examine the predictive value of dimensions of perfectionism to symptoms of *anxiety* and *depression.* As there was a significant difference found between age groups for *anxiety* All dimensions of perfectionism were entered as predictor variables in a stepwise analysis with DASS-Depression, DASS-Anxiety, and SHARP entered separately as dependent variables for each group analysis.

Stepwise regression analysis results for the prediction of *depression* scores revealed that *negative perfectionism* scores have the greatest predictive value for *depression* scores for both the student and mature age groups. PCI scores also made small significant contributions to *depression* scores for both groups as did *doubts about actions* for the student group only. In contrast *positive perfectionism* showed an inverse contribution for the student group only whereas *self-oriented perfectionism* showed a small inverse contribution to *depression* scores for the mature group. These results are shown in Table 7.

Table 7

Summary of Stepwise Regression Analysis for Dimensions of Perfectionism Predicting Symptoms of DASS-Depression for the Student and Mature Age Groups

Student (N = 244)				Mature (N = 125)			
Variable	B (SEB)	β	ΔR^2	Variable	B (SEB)	β	ΔR^2
Step 1			.29**	Step 1			.19**
NegP	.35(.04)	.54**		NegP	.24 (.05)	.43**	
Step 2			.05**	Step 2			.06**
NegP	.25 (.05)	.36**		NegP	.38 (.07)	.66**	
DA	.80 (.21)	.28**		SOP	-.17 (.06)	-.34**	
Step 3			.01*	Step 3			.04*
NegP	.18 (.06)	.27**		NegP	.297(.073)	.52**	
DA	.72 (.21)	.25**		SOP	-.214(.062)	-.41**	
PCI	.08 (.04)	.16*		PCI	.125(.051)	.29*	
Step 4			.02*				
NegP	.23 (.06)	.35**					
DA	.71 (.21)	.25**					
PCI	.11 (.04)	.23**					
PosP	-.06 (.02)	-.19*					
Total Variance Explained			37.00%	Total Variance Explained			29.00%

Note. Perfectionism Dimensions: NegP = negative perfectionism; DA = doubts about actions; PosP = positive perfectionism; SOP = self-oriented perfectionism

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

Stepwise regression for the prediction of *anxiety* scores revealed a much smaller range of predictor variables as unique contributors in contrast to *depression.* It is of note that no *standards and achievement* form of perfectionism contributed significantly to *anxiety* scores and that for the mature age group the PCI was the single predictor variable. These results are shown in Table 8.

Table 8

Summary of Stepwise Regression Analysis for Dimensions of Perfectionism Predicting Symptoms ofDASS-Anxiety for the Student and Mature Age Groups

Student (N = 244)				Mature (N = 125)			
Variable	B (SEB)	β	ΔR^2	Variable	B (SEB)	β	ΔR^2
Step 1			.27**	Step 1			.17**
DA	1.15(.13)	.55**		PCI	.13 (.03)	.42**	
Step 2			.06**				
DA	.77 (.16)	.33**					
NegP	.16 (.04)	.31**					
Total Variance Explained			33.00%	Total Variance Explained			17.00%

Note. Perfectionism Dimensions: DA = doubts about actions; NegP = negative perfectionism

*$p < .05$, **$p < .01$

Stepwise regression for the measure of *subjective well-being* (SHARP) for the student group revealed that consistent with the analyses for *depression* and *anxiety, negative perfectionism* and *doubts about actions* remain unique contributors. However, in the prediction of perceptions of *subjective well-being* these variables show an inverse relationship rather than a positive one. *Other-oriented perfectionism* provided the only positive association with SHARP scores suggesting that an external focus for high standards is associated with increased perceptions of *subjective well-being*. Analysis for the mature age group showed that PCI scores were also a significant predictor but showing an inverse relationship with *subjective well-being* as opposed to the positive relationship with measures of psychological distress. These results are shown in Table 9.

Table 9

Summary of Stepwise Regression Analysis for Dimensions of Perfectionism Predicting Subjective Well-being (SHARP) for the Student and Mature Age Groups

Student (N = 244)				Mature (N = 125)			
Variable	B (SEB)	β	ΔR^2	Variable	B (SEB)	β	ΔR^2
Step 1			.25**	Step 1			.21**
NegP	-.13 (.01)	-.50**		PCI	-.07 (.01)	-.46**	
Step 2			.04**	Step 2			.04*
NegP	-.13 (.01)	-.60**		PCI	-.05 (.01)	-.31**	
OOP	.06 (.02)	.23**		DA	-.21 (.08)	-.25*	
Step 3			.04**				
NegP	-.10 (.02)	-.45**					
OOP	.06 (.02)	.22**					
DA	-.23 (.06)	-.25**					
Total Variance Explained			33.00%	Total Variance Explained			25.00%

Note. Dimensions of Perfectionism: DA = doubts about actions; NegP = negative perfectionism; OOP = other-oriented perfectionism

*$p < .05$, **$p < .01$

5.4 Discussion

The aims of Study 1 were to examine associations between different forms of perfectionism and sample characteristics and the extent to which different dimensions of perfectionism predicted scores on measures of *anxiety*, *depression* and *subjective well-*

being. The following discussion is structured to first address associations between perfectionism and participant characteristics and then to discuss associations between perfectionism and *anxiety, depression* and *subjective well-being*.

Associations Between Perfectionism and Sample Characteristics

It was expected that perfectionism would be associated with a range of sample characteristics and behaviours. Consistent with the results of Hewitt and Flett (1991b) males showed higher scores on the dimension of *other-oriented perfectionism*. In addition it was found that males showed higher scores on the dimension of *positive perfectionism*. There were no other differences for sex for any dimension of perfectionism or for *anxiety*, *depression* and *subjective well-being*.

There is no previous literature that examines whether engaging in paid work in a student sample is associated with measures of perfectionism. The weak association found between *other-oriented perfectionism* and engaging in paid work may be related to sex differences. The current investigation failed to find any association between dimensions of perfectionism and the reported presence of a medical illness with the exception of *negative perfectionism*. However, consistent with findings that dimensions of perfectionism are associated with somatic health concerns, a range of *negative evaluation concerns* dimensions of perfectionism showed small associations with absenteeism due to illness. Previous research has found that *other-oriented perfectionism* (a *standards and achievement* dimension) was associated with seeking medical treatment (Saboonchi & Lundh, 2003). In the current study, *other-oriented perfectionism* was not associated with

either the presence of a medical illness or absenteeism relating to the presence of an illness. This difference of findings could be due to the fact that participants in the present study were simply required to report whether they currently suffered from a medical illness and had taken a day off due to illness and not whether they were actively seeking treatment for the illness.

Consistent with previous literature the presence of a diagnosed mental illness was associated with increased levels of perfectionism although these associations were relatively weak in the current study (Antony et al., 1998; Bieling, Alden & Wallace, 1994; Enns & Cox, 1997, 1999; Flett, Hewitt, Ediger et al., 1998; Juster et al., 1996; Rheaume et al., 1995). In regard to stress, the results of the current study show that there is a significant (although small) association between a range of *negative evaluation concerns* dimensions of perfectionism and absenteeism for reasons of stress. This result is consistent with previous findings that *negative evaluation concerns* dimensions such as *socially prescribed perfectionism* and *negative perfectionism* are associated with aspects of work related stress (Flett, Hewitt et al., 1995; Mitchelson & Burns, 1997). The results of the current investigation also show small associations between *self-oriented perfectionism* and *personal standards* and absenteeism due to stress.

While the current study did not investigate the specific sources of stress experienced, participants were asked to report whether they had had a day off work or study in the last month due to stress. Previous research has indicated that although perfectionism is associated with the physical and emotional manifestations of stress it is not associated

with absenteeism (Mitchelson & Burns, 1997). It is possible that those who are high in *negative evaluation concerns* dimensions of perfectionism are more sensitive to the effects of stress and more likely to take a day off as a consequence. Alternatively, given that individuals high in some *negative evaluation concerns* dimensions of perfectionism are characterised as more likely to engage in avoidance behaviour, their concerns about the potential for perceived criticism or negative evaluation from others may mean that they are reluctant to face these difficulties when already feeling stressed. However, the relatively weaker associations found between *self-oriented perfectionism,* and *personal standards* and absenteeism due to stress also suggest that individuals with high standards for themselves are also somewhat vulnerable to perceptions of stress and may react by staying away from a perceived source of stress.

Consistent with expectations, a history of a suicide attempt was associated with *socially prescribed perfectionism* in the current study (Dean et al., 1996; Hewitt et al., 1997) but *self-oriented perfectionism* was not (Hewitt et al., 1994). However the association between perfectionism and *socially prescribed perfectionism* in the current study was relatively weak.

It is of interest that the dimension of perfectionism most strongly associated with a history of suicide attempts in the current study is that of *parental criticism.* This finding could be a result of the young age of the majority of the sample. However, an examination of means shows that it is the mature age group with higher scores on the *parental criticism* dimension.

Hewitt et al. (1994) and Hewitt et al. (1997) have previously proposed that *socially-prescribed perfectionism* may be particularly relevant in adolescent suicide attempts because of heightened concerns in adolescents in relation to social acceptance and public failure. In addition *socially- prescribed perfectionism* may entail a form of hopelessness, in that individuals are not able to control the expectations of others (Hewitt et al., 1997). On the basis of the current results it could be speculated that for older adults increased perceptions of *parental criticism* may also serve to contribute to hopelessness or a sense of failure that one is not able to live up to the expectations of parents. The fact that in the current study the dimension of *parental criticism* along with other dimensions from the MPS-F, PANPS, and PCI all show equal or stronger associations with a history of suicide attempt than *socially prescribed perfectionism* underlines the need to examine behaviours such as suicide attempt using a range of measures of perfectionism.

It is also of interest that the same dimensions of perfectionism that are associated with a history of a suicide attempt are also associated with a history of self-mutilation. No causal explanations for these results can be made on the basis of the current investigation. However, it is possible that high levels of *negative evaluation concerns* dimensions of perfectionism contribute to the increased psychological stress suggested to precipitate episodes of self-mutilation (Brain et al., 1998; Esposito et al., 2003; Favazza, 1989; Favazza & Simeon, 1995).

Increases in psychological distress may be a function of any or all of the four stress mechanisms of *stress generation, stress anticipation, stress perpetuation*, and *stress enhancement* suggested to be involved in the generation of psychopathology as a result of high levels of perfectionism proposed by Hewitt and Flett (2002). Although self-mutilation has gained no attention within the perfectionism literature, the current findings that a range of *negative evaluation concerns* dimensions of perfectionism are more strongly associated with a history of self-mutilation than suicide attempts, suggests that examination the nature of these associations is a subject worthy of future research.

Associations Between Participant Characteristics, Depression, Anxiety and Subjective Well-being

Participant characteristics were also differentially associated with symptoms of *anxiety, depression* and *subjective well-being*. The mature age group showed lower *anxiety* and *depression* scores and increased *subjective well-being* scores than the student group although significant differences were only found between age groups for *anxiety* and *depression*. The presence of a medical or mental illness, absenteeism due to illness or stress and a history of suicide attempt or self-mutilation were all associated with increased scores for *depression* and *anxiety* and reduced *subjective well-being*.

The findings relating to associations between participant characteristics and both perfectionism and psychological distress and subjective well-being, appear consistent with the conclusions of Chang (2000). Chang concluded that although the nature of

associations between these variables show a similar profile in older and younger adults, there are differences in how strongly they are represented across age groups.

Perfectionism, Depression, Anxiety and Subjective well-being

Dimensions of perfectionism from both the *negative evaluation concerns* and *standards and achievement* domains were positively associated with a wide range of symptoms relating to *depression* and *anxiety*. Consistent with previous findings relating to the MPS-H, the results of the current study show that of the three MPS-H dimensions, *socially prescribed perfectionism* is most strongly related to *depression*, with weaker or no associations between *self-oriented* and *other-oriented perfectionism* respectively (Chang & Sanna, 2001; Enns & Cox, 1997; Flett et al., 1997; Frost et al., 1993; Hewitt & Flett, 1991a, 1991b, 1993). Examination of associations between *socially prescribed perfectionism* and *depression* subscale scores show that in the current sample *socially prescribed perfectionism* is most closely associated with feelings of lack of self-worth, lack of positive feelings and enjoyment, and low mood. However, when compared with dimensions of perfectionism from other perfectionism measures, it is clear that other *negative evaluation concerns* dimensions show considerably stronger associations with *depression* than *socially prescribed perfectionism.*

Concern over mistakes has previously been found to have consistently medium to large associations with *depression* symptoms (Enns & Cox, 1997; Frost et al., 1993; Lynde-Stevenson & Hearne, 1999) and this finding is replicated in the current study. In the current study *concern over mistakes*, *doubts about actions*, *negative perfectionism* and

the PCI show considerably stronger associations with depression than *socially prescribed perfectionism.* However, in common with *socially prescribed perfectionism* these dimensions are most strongly associated with the sub-scale of *low self-worth.* These results provide support for the contention that specific *negative evaluation concerns* dimensions of perfectionism are linked directly or indirectly to depression through feelings of low self-worth (Flett et al., 2003; Preusser et al, 1994; Rice et al., 1998) although causal explanations cannot be provided on the basis of the current investigation.

In addition, the pattern of results found for some *negative evaluation concerns* dimensions with regard to *anxiety, depression* and *subjective well-being* could be considered within the framework suggested by Campbell and Di Paula (2002). Campbell and Di Paula argued that *socially prescribed perfectionism* reflects two distinct facets; those of *conditional acceptance* (being loved and accepted by others is contingent on high achievement) and *others high standards* (the belief that others hold high standards for the self). Campbell and Di Paula reported that associations with maladaptive traits and behaviours appeared to derive from the conditional acceptance facet of *socially prescribed perfectionism.*

When examining the item content of dimensions of perfectionism that comprise the domain of *negative evaluation concerns* within this thesis, a number of these dimensions could be argued to reflect the concept of conditional acceptance. *Socially prescribed perfectionism*, *negative perfectionism, concern over mistakes*, *parental expectations* and

parental criticism could all be argued to contain items that reflect the idea that the respect or affection of others may be contingent on achieving high standards in some context.

Other than *socially prescribed perfectionism*, the item content of *negative perfectionism* and *concern over mistakes* appears to most overtly capture this idea of the contingent nature of the care and respect of others. These two dimensions contain items that directly state the idea that either the respect or approval of others is contingent on either not failing or maintaining high standards. These two dimensions are also among the perfectionism dimensions most closely associated with both increased levels of *anxiety* and *depression* and *reduced subjective well-being* in the current investigation. Of these, *negative perfectionism* uniquely predicts *anxiety* and *depression* scores in younger and older adults and *anxiety* scores to a small degree in older adults. These findings could suggest that *negative perfectionism* and perhaps *concern over mistakes* capture this idea of conditional acceptance and underline its' importance in consideration of vulnerability to psychological distress.

Alternatively these results could be viewed as supporting the argument of Terry-Short et al. (1995) and Slade and Owens (1998). These researchers have suggested that *negative perfectionism* captures the consequences of perfectionism for the individual in that the individual is reinforced in their perfectionistic behaviour, not by feelings of personal reward for success, but by avoiding potential failure, criticism, disapproval or the loss of respect or care of others rendering them more vulnerable to distress.

It is of note that all of the *negative evaluation concerns* dimensions of perfectionism show the strongest associations with the *depression* subscale of *self-deprecation,* particularly *negative perfectionism.* The self-deprecation subscale reflects feelings of personal worthlessness. Thoughts of personal worthlessness would appear to be particularly destructive in combination with the idea that one has to maintain high standards in order to avoid failure and thus retain the respect or affection of others. These results could provide some explanation of the mechanisms by which individuals high in *negative evaluative concerns* dimensions of perfectionism are particularly vulnerable to depression.

The conclusions of Flett, Hewitt, Blankstein and Gray (1998) that an increased frequency of automatic perfectionistic cognitions is more strongly associated with *anxiety* relative to *depression* have only mixed support from the results of the current study. Not only did the findings of the current study show slightly stronger associations between the PCI and *depression* compared to *anxiety*, the results also showed that PCI scores were associated with the DASS-Depression, *low mood* subscale suggesting a reduction in positive affect. In addition the results of the current investigation show that PCI scores provided unique additional variance (although small) to *depression* scores for both the student and mature age groups but PCI scores were not a significant predictor for *anxiety* for the student group.

These latter results are in contrast to the finding in the current study that PCI scores were the only significant predictor of *anxiety* scores for the mature age group. This finding

suggests that more frequent perfectionistic thoughts in older individuals are highly involved in the experience of *anxiety*. This idea has additional support when placed within the context of the results in relation to *subjective well-being* for the mature age group. These results showed that more frequent perfectionism cognitions were the strongest negative predictor of *subjective well-being*. These findings suggest the need for further investigation of the possible changes in the frequency of perfectionistic thoughts with age and the relationship between symptoms of psychological distress, perfectionism and age.

The results for *anxiety* in relation to the student group are also of interest. Unlike the mature age group whose levels of *anxiety* were primarily predicted by the frequency of perfectionistic thoughts, anxiety in younger adults was primarily predicted by *doubts about actions*. This dimension of perfectionism captures feelings that despite ones best efforts, a task has not been done satisfactorily or that the quality of one's actions is not adequate in some way. An examination of the associations between *negative evaluation concerns* dimensions and *anxiety* subscales shows that all of these dimensions are most strongly associated with the DASS-Anxiety subscale of *situational anxiety* and to a lesser extent the *subjective experience of anxious affect*. Situational anxiety reflects fears that in specific situations one will panic or "be thrown" when confronted with anxiety provoking tasks. The subjective experience of anxious affect subscale reflects feelings of panic, terror and fear.

Negative perfectionism, which also uniquely predicted *anxiety* scores in the younger adult age group and *concern over mistakes* also showed strong associations with these subscales in the current study. These results suggest that global fears that one's actions are somehow not satisfactory, combined with the desire to avoid potential criticism or disapproval of others and fears about making mistakes, render the individual more vulnerable to fears that in some way they will not achieve tasks adequately because they will panic or "be thrown" by aspects of the task and subsequently experience feelings of terror and fear that further contribute to their experience of anxiety.

Consistent with the findings of Flett et al. (1989) and Flett, Hewitt et al. (1994) *socially prescribed perfectionism* was associated with *anxiety* symptoms in the current study. However, as for *depression* scores, *negative perfectionism* and PCI scores as well as other dimensions of perfectionism such as *doubts about actions* were more strongly associated with *anxiety* symptoms than *socially prescribed* or *self-oriented perfectionism.* The results of the current study also show that these two latter dimensions of perfectionism do not provide any unique predictive value to *anxiety* scores for either age group. Additionally, consistent with Flett, Hewitt et al., 1994, the findings that dimensions of perfectionism are associated with state components of *anxiety* are supported by the relatively strong associations between different dimensions of perfectionism and *situational anxiety* in the current study.

Consistent with the findings of Enns and Cox (1999) and Flett, Hewitt, Ediger et al. (1998), *self-oriented perfectionism* showed a positive association with symptoms of

depression and *anxiety* (Flett, Hewitt et al., 1994; Flett et al., 1989) albeit to a lesser extent than *socially prescribed perfectionism. Personal standards,* and *self-oriented perfectionism* showed similar profiles of association with *depression* symptoms and were most strongly associated with *anhedonia* rather than *low self worth* as was the case for *negative evaluation concerns* dimensions of perfectionism. *Positive perfectionism, organisation* and *other-oriented perfectionism* all showed relatively negligible associations with depression symptoms in comparison to the other three *standards and achievement* dimensions of perfectionism.

It could be concluded from these results that individuals high in dimensions of perfectionism relating to the need to maintain high personal standards are more vulnerable to depression symptoms than those who are focused on their perfectionistic standards for others, the desire to maintain organisation or those who strive for perfection but feel rewarded for effort and success. These results could also be seen as support for the contentions of Campbell and Di Paula (2002) that differences in whether the individual has high concerns about *the importance of being perfect* (beliefs that it is important to be perfect) as opposed to *perfectionistic striving* (actively striving for perfection) will be reflected in the extent to which the individual experiences different forms of psychological distress.

Leaving aside consideration of *other-oriented perfectionism* which is not involved in the measurement of high standards for oneself, the results mirror the conclusions of Campbell and Di Paula (2002) that perfectionistic striving is more associated with

positive adjustment. In the case of the current investigation it could be argued that *positive perfectionism* particularly fits the conceptualisation of perfectionistic striving rather than the importance of being perfect which could be reflected in *personal standards,* and *self-oriented perfectionism.* This being the case, it could be speculated that the results of the current investigation provide support for the idea that individuals who place importance on their need to maintain perfection will be more vulnerable to depression.

However, the argument that perfectionistic striving is less involved in psychopathology does not hold up as well when considering *anxiety.* Although the same distinction can be drawn, *positive perfectionism* was positively and significantly associated with all subscales of *anxiety* in the current study albeit to a lesser degree than *personal standards,* and *self-oriented perfectionism.* Both of these latter dimensions of perfectionism were significantly associated with all aspects of *anxiety. Other-oriented perfectionism* was associated only with the subscales of *skeletal musculature effects* and *situational anxiety* to a small degree, whereas *organisation* was not significantly associated with any *anxiety* subscale. These results could be taken as offering support for the idea that those who actively strive for perfection may be less vulnerable to anxiety than those high in *negative evaluation concerns* dimensions of perfectionism but may be more vulnerable to anxiety where the desire to pursue perfection is particularly salient.

Consideration of the stepwise regression analyses conducted in this study help to provide some clarity to the overall picture. *Depression* scores for the student group appear to be

significantly predicted by a complex range of perfectionism dimensions. The dimensions of *doubts about actions* and *negative perfectionism* are also significant predictors of *anxiety* scores for this group. Scores for *subjective well-being* for the student group appear to be the result of a reduction in these two dimensions of perfectionism rather than an increase in levels of *standards and achievement*-related dimensions with the exception of *other-oriented perfectionism.*

A similar pattern emerges for the mature age group. PCI scores were the only significant predictor of *anxiety* scores for the mature group and the inverse predictive relationship between PCI scores and *subjective well being* for the mature group suggest that it is the reduction of the frequency of perfectionistic thoughts that increase perceptions of *subjective well-being.* It is also of interest to note that there are no positive predictive relationships between *standards and achievement* related dimensions of perfectionism and *subjective well-being* that indicate that these dimensions provide any positive benefit for individuals. Rather regression analysis results suggest that it is an absence of or decrease in *negative evaluation concerns* dimensions of perfectionism that primarily increase perceptions of well-being and an increase in levels of *negative evaluation concerns* dimensions of perfectionism that increases psychological distress in both age groups.

The results of the current study in relation to *positive* and *negative perfectionism* could also be interpreted as suggesting that the perceived consequences of perfectionism for the individual may in fact be a distinguishing factor in relation to the impact of perfectionism

for the individual. The results of the regression analyses could also be interpreted as offering support for the conclusions of Bieling et al. (2004) that dimensions comparable with the *standards and achievement* dimensions examined in this study to not contribute much unique variance to psychopathology variables that is not already explained by *negative evaluation concerns* dimensions.

Overall, the results of the current study support a model of vulnerability to psychological distress that incorporates perfectionistic beliefs about the contingent nature of the respect or affection of others, the desire to avoid potentially aversive consequences as a result of failing to achieve perfectionistic goals, global doubts about the quality of one's actions and increased rumination about one's inability to meet perfectionistic standards. This set of perfectionistic beliefs then renders the perfectionistic individual particularly vulnerable to beliefs of personal worthlessness and increased levels of situational anxiety.

CHAPTER 6

Study 2: Perfectionism and the Frequency of Negative Interpersonal Interactions and Differences in Interpersonal Rejection Sensitivity

6.1 Rationale

Hewitt and Flett (1991b) have suggested that traditional unidimensional conceptualisations of perfectionism fail to address the interpersonal situations in which perfectionism might be activated. Evidence reviewed in Chapter 3 suggested that individuals high in *socially prescribed perfectionism* perceive that they are involved in more frequent negative social interactions relative to those low in perfectionism (Flett et al., 1997). Dunkley et al. (2000) have found that individuals high in *evaluative concerns* (comprising *socially prescribed perfectionism, doubts about actions* and *concern over mistakes*) experience daily stressors with increased frequency and intensity and engage in increased avoidant coping that further compounds their experience of distress. There is also evidence that interpersonal distress is further associated with anxiety and depression. However, this relationship may be mediated by variables such as self-efficacy and self-worth (Flett, Besser, Davis, & Hewitt, 2003; Preusser et al., 1994).

Research investigating vulnerability factors in relation to symptoms of anxiety and depression has established that symptoms of depression and anxiety are associated with increased interpersonal rejection sensitivity (Boyce et al., 1993, 1990; Harb et al., 2002). Descriptions of characteristics of individuals with high levels of interpersonal rejection

sensitivity are in many ways consistent with those used to describe characteristics ascribed to individuals high in *negative evaluation concerns* dimensions of perfectionism.

Individuals high in interpersonal rejection sensitivity are suggested to be more sensitive to social feedback and exhibit increased vigilance about the reactions of others in relation to the self. They are also described as having increased concern about the behaviour and statements of others and fear of perceived or actual criticism of others (Harb et al., 2002). Although this characterisation of individuals high in interpersonal rejection sensitivity does not link increased rejection sensitivity to beliefs about high standards imposed on oneself by others, it is consistent with dimensions of perfectionism such as *socially prescribed perfectionism* as well as *negative perfectionism* and *concern over mistakes*. In addition interpersonal rejection sensitivity is associated with an increased sense of personal inadequacy and a tendency towards more frequent misinterpretation of the interpersonal behaviour of others. This is thought to result in the experience of discomfort around other people and increased avoidance and non-assertive behaviour (Harb et al, 2002).

Non-assertive and avoidant behaviours are also associated with *socially prescribed perfectionism* (Flett, Hewitt, Blankstein et al., 1996; Flett, Hewitt & DeRosa, 1996; Hewitt & Flett, 1991b; Hill, Zrull & Turlington, 1997). Indeed Habke and Flynn (2002) cite findings from a study by Flett, Velyvis, and Hewitt (2001) showing that individuals high in *socially prescribed perfectionism* but not *self-oriented* or *other-oriented perfectionism* are more likely to have high levels of interpersonal rejection sensitivity.

There is mixed evidence to suggest that *standards and achievement* dimensions of perfectionism provide any benefits to the individual (Ashby & Rice, 2002; Bieling et al., 2003, 2004; Rice et al., 1998). Researchers have found that although individuals high in specific *standards and achievement* dimensions such as *self-oriented* and *other-oriented perfectionism* may engage in maladaptive interpersonal behaviour such as increased conflict, these dimensions are also associated with perceptions of increased social skills, increased assertiveness and less interpersonal distress than individuals high in dimensions such as *socially-prescribed perfectionism* (Flett, Hewitt & DeRosa, 1994; Hill, McIntyre & Bacharach, 1997; Hill, Zrull & Turlington, 1997). An investigation of associations between a range of different dimensions of perfectionism and interpersonal rejection sensitivity may further identify differences in the ways in which high trait perfectionists represent themselves and others differently in interpersonal contexts.

In order to achieve the *second aim* set out in Chapter 4, this study examines whether individuals with high levels of perfectionism estimate that they are involved in an increased number of unpleasant interpersonal interactions and experience greater levels of interpersonal rejection sensitivity relative to individuals low in perfectionism across different dimensions of perfectionism. It is expected that individuals high in *negative evaluation concerns* dimensions but not *standards and achievement* dimensions will estimate increased unpleasant interpersonal interactions relative to individuals with low scores on these dimensions. It is also expected that individuals high in *negative evaluation concerns* dimensions but not *standards and achievement* dimensions will experience greater levels of interpersonal rejection sensitivity.

6.2 Method

Participants for Study 2 were drawn from Study 1. As considerably fewer mature age students completed materials for Study 2, there were insufficient numbers to form comparison groups. Additionally as the results of Study 1 showed that specific dimensions of perfectionism may change with age and family situation, the mature-age group was removed from the current analysis and all further analyses to provide a more homogenous data set. The final data set was comprised of 165 participants (Males N=32, Females N=133) from the from the student group used in Study 1.

In order to determine whether individuals high in trait perfectionism perceived they were involved in higher numbers of unpleasant interactions, participants were asked to estimate the number of unpleasant interactions they had experienced within the last 48 hours and to write down their estimate. Specifically, participants were asked to include in their estimate any unpleasant interaction in which they perceived some level of unpleasant tension or discomfort when interacting with others. Estimates were entered for analysis numerically without further coding. Participants also completed the *Interpersonal Sensitivity Measure* (IPSM, Boyce & Parker, 1989; Harb et al., 2002).

Measures

The *Interpersonal Sensitivity Measure (IPSM; Boyce & Parker, 1989).*

The *Interpersonal Sensitivity Measure* (*IPSM*; Boyce & Parker, 1989) is a 36-item measure designed by Boyce and Parker to assess excessive sensitivity to the interpersonal behaviour and social feedback of others, and perceptions of, or actual negative feedback

from others. Harb et al. (2002) investigated the psychometric properties of the IPSM and undertook an exploratory factor analysis of the data and proposed a 3 factor model.

The 29-item Harb et al. (2002) model is used in this investigation. This model comprises *interpersonal worry and dependency*, *low self-esteem*, and *unassertive interpersonal behaviour*. *Interpersonal worry and dependency* reflects worry about interpersonal issues, the importance of the opinion and feedback of others, and fear of the responses of others. The second factor *low self-esteem* contains items relating to having a low opinion of one-self, feelings of being disliked by others, the expectation of criticism by others and anxiety when saying goodbye or in close relationships. The third factor *unassertive interpersonal behaviour* reflects a lack of assertive expression of opinions and feelings (especially anger), and worries about pleasing other people. Each item is scored on a four point scale ranging from 1 (*Very like*) to 4 (*Very unlike*). Lower scores on each scale indicate greater levels of interpersonal rejection sensitivity. This measure is reported to have adequate validity and internal consistency (Harb et al. 2002).

Harb et al. (2002) report adequate internal consistency for the three scales with Chronbach alpha coefficients of .88 (*interpersonal worry and dependency*), .80 (*low self-esteem*), and .79 (*unassertive interpersonal behaviour*). Adequate convergent validity is also reported. Zero-order correlations with the *Brief Fear of Negative Evaluation Scale (B-FNE*; Leary, 1983), *Social Interaction Anxiety Scale* and the *Social Phobia Scale (SIAS & SPS*; Mattick & Clark, 1998) were reported as $r = .71$, .70 and .46 respectively.

6.3 Results

Correlation Analysis

Correlation analysis was conducted to examine associations between dimensions of perfectionism and estimates of the experience of negative interpersonal interactions in the preceding 48 hours. *Negative perfectionism* and *concern over mistakes* showed the strongest positive correlation with estimates of negative interpersonal interactions with smaller effects found for other *negative evaluation concerns* dimensions of perfectionism. These results suggest that high scores on a range of *negative evaluation concerns* dimensions increase perceptions that one is exposed to unpleasant interpersonal interactions relative to those low in perfectionism. These results are shown in Table 10.

Table 10

Correlations Between Estimates of Negative Interpersonal Interactions and Perfectionism

NEC dimensions						
PANPS	MPS-F				MPS-H	PCI
NegP	CM	DA	PE	PC	SPP	PCI
.27**	.30**	.19*	-.03	.00	.23**	.17*

SA dimensions				
PANPS	MPS-F		MPS-H	
PosP	PS	OR	SOP	OOP
.10	.10	.10	.15	.11

Note. Based on the responses of 165 participants

Domains/dimensions of perfectionism : NEC = negative evaluation concerns; SA = standards and achievement;CM = concern over mistakes; DA = doubts about actions; PS = personal standards; PE = parental expectations; PC = parental criticism; OR = organisation; SOP = self-oriented perfectionism; OOP = other-oriented perfectionism; SPP = socially prescribed perfectionism; NegP = negative perfectionism; PosP = positive perfectionism

*$p < .05$, **$p < .01$

Univariate Analysis

Interpersonal worry and dependency.

In order to examine whether there were differences between groups with high and low perfectionism scores in relation to interpersonal rejection sensitivity (IPSM), univariate analysis was conducted consistent with the analysis strategy described in Chapter 4. Results reveal that consistent with expectations, individuals with high levels on *negative evaluation concerns* dimensions of perfectionism experience increased levels of *interpersonal worry and dependency*. It is of note that individuals high in *self-oriented perfectionism* also showed increased levels of *interpersonal worry and dependency* relative to low perfectionists albeit to a lesser degree.

The greatest differences found between high and low perfectionism groups for scores for *interpersonal worry and dependency* were found for *concern over mistakes* and *negative perfectionism.* These results are also consistent with the results of the previous analysis indicating that these two dimensions have greatest association with increased perceptions of unpleasant interpersonal experiences. Differences between high and low perfectionism groups remained significant after controlling for *anxiety* and *depression* although effect sizes were reduced in some cases. Lower scores on this scale indicate greater levels of *interpersonal worry and dependency.* These results are presented in Table 11.

Table 11

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Groups for IPSM Interpersonal Worry and Dependency Scale Scores

NEC dimensions							
	Group	M (SD)	F (df_e) η_1^2 η_2^2		Group	M (SD)	F (df_e) η_1^2 η_2^2
PANPS				MPS-F			
NegP	Low	25.96 (5.67)	54.71** (163) .25 .15	CM	Low	26.10 (5.50)	61.38** (163) .27 .14
	High	19.83 (4.85)			High	19.78 (4.83)	
MPS-H							
SPP	Low	24.87 (6.18)	18.18** (163) .10 .04	DA	Low	25.26 (5.59)	35.63** (163) .18 .10
	High	20.97 (5.35)			High	20.12 (5.40)	
PCI							
PCI	Low	25.31 (5.89)	25.62** (163) .14 .03	PC	Low	24.06 (6.14)	6.42** (163) .04 .04
	High	20.85 (5.42)			High	21.70 (5.74)	
SA dimensions							
MPS-H							
SOP	Low	24.95 (5.92)	18.41** (163) .10 .04				
	High	21.04 (5.65)					

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 is shown when anxiety and depression were both non-significant as covariates

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Lower scores on this scale indicate greater levels of *interpersonal worry and dependency*

Perfectionism domain/dimension and group n: NEC = negative evaluation concerns; SA = standards and achievement; PCI; low $n = 78$, high $n = 87$; CM = concern over mistakes; low $n = 83$, high $n = 82$; DA = doubts about actions; low $n = 91$, high $n = 74$; PC = parental criticism; low $n = 88$, high $n = 77$; SOP = self-oriented perfectionism; low $n = 79$, high $n = 82$; SPP = socially prescribed perfectionism; low $n = 82$, high $n = 79$; NegP = negative perfectionism; low $n = 82$, high $n = 80$

$^*p < .05$. $^{**}p < .01$

Low self-esteem

Results for the *IPSM* scale of *low self-esteem* also showed a very similar pattern of results to *interpersonal worry and dependency*. As expected individuals with high scores on a range of *negative evaluation concerns* dimensions of perfectionism showed greater levels of *low self-esteem*. The dimensions of *concern over mistakes* and *negative perfectionism* showed the greatest differences in scores between high and low perfectionism groups for the *low self-esteem* scale. Contrary to expectations *other oriented-perfectionism* also showed a significant difference between high and low groups on this scale in the same direction. Differences between high and low perfectionism groups remained significant after controlling for *anxiety* and *depression* although effect sizes were reduced in some cases. Lower scores on this scale indicate greater levels of *low self-esteem*. These results are presented in Table 12.

Table 12

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Groups for IPSM Low Self-Esteem Scale Scores

NEC dimensions								
	Group	M (SD)	F (df_e) η_1^2 η_2^2		Group	M (SD)	F (df_e) η_1^2 η_2^2
PANPS				MPS-F			
NegP	Low	32.00 (3.98)	47.85** (163) .23 .14	CM	Low	31.94 (4.32)	47.14** (163) .22 .11
	High	27.39 (4.49)			High	27.41 (4.14)	
MPS-H							
SPP	Low	31.43 (4.57)	25.00** (163) .14 .07	DA	Low	31.37 (4.14)	29.35** (163) .15 .08
	High	27.87 (4.44)			High	27.62 (4.75)	
PCI							
PCI	Low	31.51 (4.47)	24.44** (163) .13 .03	PE	Low	30.93 (4.52)	11.54* (163) .07 .06
	High	28.06 (4.49)			High	28.47 (4.77)	
				PC	Low	30.84 (4.76)	11.56** (163) .07 .07
					High	28.38 (4.51)	

Table 12 (continued)

		SA dimensions	
	Group	M (SD)	F (df_e) η_1^2 η_2^2
MPS-H			
OOP	Low	30.85 (4.25)	10.37** (163) .06
	High	28.47 (5.12)	.06

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 is shown when anxiety and depression were both non-significant as covariates

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Lower scores on this scale indicate greater levels of *low self-esteem*

Perfectionism domain/dimension and group n: NEC = negative evaluation concerns; SA = standards and achievement; PCI; low $n = 78$, high $n = 87$; CM = concern over mistakes; low $n = 83$, high $n = 82$; DA = doubts about actions; low $n = 91$, high $n = 74$; PC = parental criticism; low $n = 88$, high $n = 77$; SOP = self-oriented perfectionism; low $n = 79$, high $n = 82$; OOP = other-oriented perfectionism; low $n = 82$, high n = 79; SPP = socially prescribed perfectionism; low $n = 82$, high $n = 79$: NegP = negative perfectionism; low $n = 82$, high $n = 80$

*$p < .05$. **$p < .01$

Unassertive Interpersonal Behaviour

Finally analysis was undertaken to examine differences between high and low perfectionism groups in relation to the IPSM sub-scale of *unassertive interpersonal behaviour.* As expected individuals in the high groups across a range of *negative evaluation concerns* dimensions of perfectionism showed increased levels of *unassertive*

interpersonal behaviour. There were no differences between high and low perfectionism groups for any *standards and achievement* dimension of perfectionism for this sub-scale. Lower scores on this scale indicate greater levels of *unassertive interpersonal behaviour*. Differences between high and low perfectionism groups remained significant after controlling for *anxiety* and *depression* although effect sizes were reduced in some cases. These results are shown in Table 13. Means and standard deviations for all IPSM comparisons are shown in Table B10 in Appendix B2.

Table 13.

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Groups for IPSM Unassertive Interpersonal Behaviour Scale Scores

NEC dimensions							
	Group	M (SD)	F (df_e) η_1^2 η_2^2		Group	M (SD)	F (df_e) η_1^2 η_2^2
PANPS				MPS-F			
NegP	Low	18.93 (4.16)	13.22** (160) .08	CM	Low	19.12 (4.29)	18.18** (163) .10
	High	16.65 (3.80)			High	16.51 (3.52)	.06
MPS-H							
SPP	Low	18.62 (4.32)	6.59* (159) .04	DA	Low	18.52 (4.19)	5.87* (163) .03
	High	16.97 (3.76)			High	16.97 (3.91)	

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 is shown when anxiety and depression were both non-significant as covariates

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Lower scores on this scale indicate greater levels of *unassertive interpersonal behaviour*

Perfectionism domains/dimension and group *n*: NEC = negative evaluation concerns; CM = concern over mistakes; low $n = 83$, high $n = 82$; DA = doubts about actions; low $n = 91$, high $n = 74$; SPP = socially prescribed perfectionism; low $n = 82$, high $n = 79$: NegP = negative perfectionism; low $n = 82$, high $n = 80$

$^*p < .05$. $^{**}p < .01$

6.4 Discussion

The aim of the current study was to examine whether individuals with high levels of perfectionism estimated that they were involved in more frequent negative interactions with others and experienced greater levels of interpersonal rejection sensitivity relative to individuals low in perfectionism (Flett et al., 1997; Flett, Velyvis & Hewitt, 2001). Overall, the results of this investigation showed that individuals high in *negative evaluation concerns* dimensions (most particularly those high in *concern over mistakes* and *negative perfectionism*), perceived they were involved in more frequent negative interactions with others.

Individuals high in *negative evaluation concerns* dimensions also experienced greater levels of interpersonal rejection sensitivity in relation to factors such as *interpersonal worry and dependency* and *low self esteem.* Individuals with high in *self-oriented perfectionism* also showed increased levels of *interpersonal worry and dependency* and individuals high in *other-oriented perfectionism* showed increased levels of *low self-esteem.* Only those high in *negative evaluation concerns* dimensions showed increased levels of *unassertive interpersonal behaviour.*

The findings of the current study that individuals high in a number of *negative evaluation concerns* dimensions of perfectionism perceive that they are involved in more frequent negative interpersonal interactions is consistent with the findings of Flett et al. (1997). Flett et al. used only the MPS-H in their investigation and found that of the three MPS-H dimensions, only *socially prescribed perfectionism* showed a significant positive

association with perceptions of more frequent negative interpersonal interactions. The results of the current study showed that *concern over mistakes* from the MPS-F (Frost et al., 1990) and *negative perfectionism* from the PANPS (Terry-Short et al., 1995) both had stronger positive associations with estimates of the frequency of negative interpersonal interactions than *socially prescribed perfectionism.* This finding suggests that concern over making mistakes and fear of failure and the desire to avoid or escape aversive consequences may be more important in perceptions of negative interpersonal experiences than beliefs that others hold high standards for one self. However, these assumptions are speculative in nature and require further research to clarify.

Other results of the current investigation were also consistent with previous findings in the perfectionism literature (Alden et al.; 1994, Flett, Hewitt & DeRosa, 1996; Hill, Zrull & Turlington, 1997; Hill, McIntyre & Bacharach, 1997). Alden et al. found that socially anxious and dysphoric individuals did not view the social expectations of others as more demanding but did evaluate their own social behaviour more frequently. The results of the current study found greater effect sizes for high and low groups for *concern over mistakes* and *negative perfectionism* in relation to the *interpersonal worry and dependency* scale of the IPSM relative to *socially prescribed perfectionism.* This finding suggests that it may be self-focused perfectionistic concern over mistakes and the desire to avoid potential criticism and disapproval of others more so than beliefs that others hold excessively high standards oneself that is involved in worry about interpersonal issues and concerns about the opinions and feedback of others (Campbell & Di Paula, 2002;

Frost et al., 1990, 1997). However, it is likely that this type of interpersonal distress is a complex interplay of many aspects of perfectionism.

The results of the current study in regard to the IPSM scale of *low self esteem* are consistent with the previous findings of Flett, Hewitt and DeRosa (1996) that individuals with higher levels of *socially prescribed perfectionism* have lower levels of social self-esteem. However, as for the findings of the current study in relation to *interpersonal worry and dependency,* relatively stronger effect sizes were found for *concern over mistakes* and *negative perfectionism.* These results offer further support for the idea that it is self-focused concern about making mistakes and the desire to avoid potentially aversive outcomes such as the disapproval or criticism of others that may be involved in the association between low social self-esteem and distress to a greater extent than beliefs that others have high expectations for one-self.

The findings in relation to the *unassertive interpersonal behaviour* scale of the IPSM are also consistent with previous research (Flett, Hewitt & DeRosa, 1996; Hewitt & Flett, 1991b; Haring et al., 2003; Hill, Zrull & Turlington, 1997). These results offer some support for the contention that individuals high in specific *negative evaluation concerns* dimensions of perfectionism have difficulty behaving assertively in interpersonal situations.

Of the *standards and achievement* dimensions of perfectionism only individuals high in *self-oriented perfectionism* showed increased levels of *interpersonal worry and*

dependency. It is interesting to note that individuals high in this dimensions also showed the strongest associations with estimates of negative interpersonal interactions of the *standards and achievement* dimensions although this association did not reach significance. It is possible that these results indicate that increased levels of *interpersonal worry and concern* are particularly involved in perceptions of more frequent negative interpersonal interactions, however, such a conclusion is speculative and requires further investigation.

The findings of the current study revealing that both *self-oriented* and *other-oriented perfectionism* are implicated in some aspects of interpersonal rejection sensitivity are inconsistent with the previous findings of Flett, Velyvis and Hewitt (2001) reported in Hewitt and Flett (2002). Flett, Velyvis and Hewitt did not find any association between interpersonal rejection sensitivity and either of these dimensions of perfectionism. The different findings in the current study could be the result of the use of the reduced factor structure in the current study (Harb et al., 2002).

In regard to *self-oriented perfectionism*, a further explanation might be found in the research of Hill, Zrull and Turlington (1997). This team of investigators found that females high in *self-oriented perfectionism* engaged in overly nurturant behaviour. Given that the majority of participants in the current study were females, the increased levels of *interpersonal worry and dependency* may be a function of this tendency to engage in overly nurturant behaviour perhaps as a result of their desire to gain positive feedback from others. It was not possible to test this idea as not only were there insufficient males

to enable the formation of high and low perfectionism groups of males for comparison, but nurturing behaviour was not specifically addressed within the investigations of this thesis.

The result regarding individuals high in *other-oriented perfectionism* showing increased levels of *low self-esteem* is also of interest. Individuals high in *other-oriented perfectionism* are characterised as being focused on their high standards for others rather than being concerned about expectations of others for themselves. However, there is some indication that individuals high in this dimension may have a fragile sense of self-esteem in that their self-esteem may be conditional on feedback and support received from others (Flett et al., 2003). It is possible the interpersonally focused measure of self-esteem used in the current study captures a perceived lack of feedback and support from others that is salient to individuals high in *other-oriented perfectionism.*

The results of the current study are also consistent with the conclusions of Rice et al. (1998) who failed to find any evidence that there were beneficial effects of high levels of *standards and achievement* related dimensions of perfectionism in relation to self-esteem. In the current study no high perfectionism group, including those from the *standards and achievement* domain, showed improved self-esteem relative to low perfectionists. This result suggests that high levels of perfectionism including in relation to dimensions that might be characterised as more beneficial to the individual did not improve self-esteem levels relative to low perfectionists.

It is also of interest that no high perfectionism group from the *standards and achievement* domain showed increased levels of *unassertive interpersonal behaviour.* This finding suggests that individuals high in all of the *standards and achievement* dimensions measured did not perceive themselves as having greater difficulty in the expression of opinions or feelings of anger and worries about pleasing others relative to low perfectionists. However, no high group for any *standards and achievement* dimension of perfectionism showed significantly lower levels of *unassertive interpersonal behaviour* relative to those low in perfectionism. These results suggest that individuals high in *standards and achievement* dimensions do not perceive the same deficits in assertive behaviour as their high *negative evaluation concerns* counterparts but nor do they experience particular benefits relative to low perfectionists.

Taken together the results of the current investigation suggest that dimensions of perfectionism such as *negative perfectionism, concern over mistakes, socially prescribed perfectionism* and to a lesser extent, *doubts about actions* and the frequency of perfectionistic cognitions (PCI) may be involved in perceptions of more frequent negative interpersonal interactions. This increase in perceptions of more negative interpersonal interactions may occur through mechanisms such as increased interpersonal worry and dependency in which the individual is particularly sensitive to the opinions and feedback of others as well as through low self-esteem including beliefs that one is disliked by others and expectations of criticism from others. Perceptions of more frequent negative interpersonal interactions may also occur as a result of deficits in assertive behaviour that render the individual less able to express feelings.

CHAPTER 7

Study 3: Interpreting Social Information: Facial Expressions

7.1 Rationale

In order to meet the *third aim* of the investigations pursued in this thesis, Study 3 examined differences in the ways in which high trait perfectionists interpret social information such as facial expression. The results of Study 2 presented in Chapter 6 and findings by Flett et al. (1997), indicate that individuals high in specific *negative evaluation concerns* dimensions of perfectionism perceive themselves to be involved in more frequent negative interpersonal interactions. Findings from the Study 2 and those of Flett, Velyvis and Hewitt (2001) also suggest that individuals high in specific *negative evaluation concerns* dimensions of perfectionism are more sensitive to aspects of interpersonal rejection relative to low perfectionists. Hewitt and Flett (2002) have suggested that increased levels of interpersonal rejection sensitivity and increased *socially prescribed perfectionism* increase the likelihood that individuals will respond to ambiguous feedback as though it were negative, thus experiencing relatively benign situations as stressful.

Researchers have also proposed that high trait perfectionism relating to *negative evaluation concerns* dimensions of perfectionism may result in differences in attributions and perceptions about the nature of interpersonal behaviour and that individuals high in these dimensions of perfectionism may focus on the negative aspects of a situation. More recently it has also been suggested that individuals with high trait perfectionism may

have more negative representations of themselves and others and that these negative representations may be activated in times of stress (Shahar et al., 2004; Zuroff & Blatt, 2002). However, the nature of these more negative representations of self and others remains unclear.

This being the case, there are a number of aspects of interpersonal behaviour that may be implicated in increased perceptions of negative social interactions such as the facial expression of interaction partners. Although facial expression has been identified as having an important role in the interpretation of social messages (Ekman, 1993; Montepare & Dobish, 2003) there is no information available concerning perceptions of facial expression in relation to high trait perfectionism.

Results from the investigation reported in Chapter 6 show that individuals high in *negative evaluation concerns* dimensions of perfectionism, particularly *negative perfectionism, concern over mistakes*, and *socially prescribed perfectionism* perceive that they experience an increased frequency of negative interpersonal interactions and that they experience greater levels of interpersonal rejection sensitivity. These results suggest that individuals high in *negative evaluation concerns* dimensions of perfectionism will be particularly sensitive to interpersonal information. Individuals who have high levels of concern about meeting perceived standards imposed on them by others, a desire to avoid aversive consequences for behaviour such as the scrutiny or criticism of others or concern over making mistakes may be more concerned about whether they will be exposed to the

displeasure or criticism of others. Thus these individuals may more readily interpret facial expressions as angry in order to avoid another's displeasure.

On these bases it is expected that individuals high in *negative evaluation concerns* dimensions of perfectionism will more frequently categorise *neutral* or *ambiguous* expressions as *angry* rather than *sad* or *neutral* and that they will interpret these facial expressions as showing a more *negative mood* than those low in perfectionism or high in *standards and achievement* dimensions. As individuals high in *self-oriented perfectionism* also showed greater levels of *interpersonal worry and dependency* relative to low perfectionists it is expected that individuals high in this dimension may also be more negative in their categorisation of facial expressions and attributions about the mood shown.

7.2 Method

Validation of Experimental Materials

A facial expression task was designed by the researcher for this investigation. A set of eight pictures of facial expressions was selected to include *angry, sad, happy* and *neutral* expressions (Ekman & Friesen, 1976). Two further facial expressions were also selected that were more difficult to categorise or interpret clearly. This set of eight pictures of facial expression was presented to a group of raters ($N = 20$). Raters were instructed to assign each facial expression to a single category from a response set of *angry, sad, happy, neutral* or *other.* Raters were post-graduate university students and family and friends of the researcher. Six faces were selected from these 8 faces on the basis of either

highest or lowest conformity of assigned facial expression category. Rater procedure and results are shown in Appendix A3.

Four of the final six faces chosen represented expression categories of *angry, sad, happy*, or *neutral* with a high level of agreement in ratings among raters. The two remaining faces chosen for inclusion in the current investigation had the lowest level of agreement among raters. Raters categorised the latter two faces as either *sad* or *'other'*, or *angry*, *sad* or *'other'*. These two latter facial expressions and the neutral expression may provide more *ambiguous* facial expressions that are open to different interpretation.

Participants and Procedure

Participants were those drawn from Study 1 who participated in Study 2 (See Section 6.2). These participants were then provided with these final six images of facial expression presented in random order. Each was image was copied onto a separate A4 sized page with three questions to be answered about each facial expression placed on the top of the page as shown in Appendix A4. Participants were firstly asked to assign the face presented to a category of facial expression from a forced choice response set of angry, happy, sad, or neutral for each face shown. Participants were then asked to rate the extent to which the face showed the emotion they had selected denoting expression clarity (a measure of how decisive the participant was in their categorisation), and then to provide a rating of the negative or positive mood of the face shown denoting mood. An information and instruction sheet was provided that showed sample responses to assist correct completion of material.

7.3 Results

Chi Square Analysis: Categorisation of Facial Expression

Participants were assigned to a high or low perfectionism group for each perfectionism dimension at the median score as for Study 2. Chi-square analysis was undertaken to examine whether differences existed between observed and expected frequencies for high and low perfectionism groups in the categorisation of facial expressions. It was expected that the high groups for *negative evaluation concerns* dimensions of perfectionism would show a tendency towards categorising *neutral* facial expressions as angry more frequently than those low in perfectionism. No significant differences were found between high and low perfectionism groups for *negative evaluation concerns* dimensions of perfectionism.

It was expected that the high *self-oriented perfectionism* group might also categorise facial expressions more negatively relative to low perfectionists, however, no significant differences were found. Unexpectedly significant differences were found between the high and low *organisation* groups but not in the expected direction. The high *organisation* group showed a trend towards a decreased frequency of categorising the *neutral* face as *neutral* (high = 89%, low = 98%) and an increased tendency to categorise this expression as *happy* (high = 10.1%, low = 1.2%) when compared to the low organisation group $x^2(1, N = 161) = 5.95, p < .01$.

It is of interest that the only difference found between high and low perfectionism groups for the categorisation of facial expressions occurred within the *standards and*

achievement domain and not *negative evaluation concerns* as predicted. However, the results for *organisation* were not strong and are not reflected in a similar result for any other *standards and achievement* dimension.

Means and Standard Deviations for Ratings of Expression Clarity and Mood

Means and standard deviations were then calculated for ratings of expression *clarity* and *mood*. These results are shown in Table 14.

Table 14

Means and Standard Deviations for Ratings of Facial Expression Clarity and Mood

Facial Expression	M (SD)	Facial Expression	M (SD)
Sad		Angry/sad	
Clarity	3.06 (1.02)	Clarity	3.47 (1.01)
Mood	4.27 (1.50)	Mood	3.29 (1.49)
Angry		Neutral	
Clarity	4.52 (0.73)	Clarity	3.41 (1.06)
Mood	2.21 (1.57)	Mood	6.28 (1.17)
Happy		Sad/other	
Clarity	4.41 (0.61)	Clarity	3.74 (0.87)
Mood	9.84 (1.35)	Mood	3.42 (1.51)

Note. Based on the responses of Total Sample N=165, Males N=32, Females N=135
Lower scores represent ratings of less clarity and more negative mood

Analysis of Variance Between High and Low Groups Within Perfectionism Dimensions for Ratings of Expression Clarity and Mood

Univariate analyses were then conducted to examine possible differences between high and low perfectionism groups for ratings of expression *clarity* and *mood.* Results showed that there were significant differences between high and low groups in ratings of expression clarity for the PCI and *self-oriented perfectionism* for the *happy* facial expression, and *personal standards,* and *self-oriented perfectionism* for the *neutral*

expression. In all cases where trends or significant differences were found between high and low perfectionism groups, the high group were less definite in their ratings of expression *clarity* (i.e. less definite about the extent to which the face showed their chosen category of expression). Contrary to expectations results showed no significant differences between high and low perfectionism groups for ratings of perceived *mood*. These results are shown in Table 15 Means and standard deviations for all comparisons are shown in Tables B11 - B16 in Appendix B3.

Table 15

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Group Ratings of Expression Clarity.

		Facial Expression			
		Happy		Neutral	
NEC dimensions	Group	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2
PCI	Low	4.54 (0.57)	6.82** (162) .04	3.62 (0.94)	5.99* (163) .03
	High	4.29 (0.63)		3.22 (1.12)	
SA dimensions					
MPS-F PS	Low			3.64 (1.02)	9.36** (163) .05
	High			3.15 1.05)	
MPS-H SOP	Low	4.54 (0.55)	7.31** (158) .04	3.67 (0.91)	7.80** (159) .05
	High	4.29 (0.65)		3.21 (1.12)	

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 values are shown as anxiety and depression were both non-significant as covariates in all analyses

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Domain/dimension and group *n*: NEC = negative evaluation concerns; SA = standards and achievement; PCI: low $n = 78$, high $n = 87$; PS = personal standards: low $n = 88$, high $n = 77$; SOP = self-oriented perfectionism: low $n = 79$, high $n = 82$; low $n = 76$, high $n = 85$

$^*p < .05$. $^{**}p < .01$

7.4 Discussion

The aim of Study 3 was to examine whether differences exist in the way high trait perfectionists interpret social information relating to facial expressions. Predictions that individuals high in *negative evaluations concerns* dimensions and *self-oriented perfectionism* would be more likely to categorise neutral or ambiguous facial expression more negatively were not supported. However, contrary to expectations individuals high in *organisation* showed an increased tendency to categorise a *neutral* facial expression as happy. Individuals high in *personal standards* and *self-oriented perfectionism* also showed less confidence in their categorisation of facial expressions as did individuals with high PCI scores relative to low perfectionists.

Contrary to predictions there were no differences found between high and low groups for any dimension of perfectionism in relation to ratings of negative or positive mood of the facial expressions shown. This latter result suggests that individuals high in any dimension of perfectionism are not more likely to rate angry, sad, neutral, ambiguous or happy facial expressions as expressing more positive or negative mood than those low in perfectionism.

It could be concluded on the bases of these results that individuals high in *negative evaluation concerns* dimensions of perfectionism are not more likely to interpret facial expressions more negatively than their low perfectionism counterparts in interpersonal situations. However, the interpretation of facial expression is a complex process (Ekman, 1993: Montepare & Dobish, 2003) and it may be that photographs of faces do not provide an adequate context for any differential interpretation of facial expressions. Additional social information cues such as body posture or a situational context may elicit differences between groups.

It is of interest however, that results relating to expression *clarity* (the confidence of participants in regard to their assignment of a facial expression category) are related to *standards and achievement* dimensions of perfectionism with the exception of the PCI. As expected, most differences occurred for the neutral-face or the angry/sad-face for which it was considered to be more likely that different interpretations could be placed on the mood or expression of the face shown. It was expected that those high in *negative evaluation concerns* dimensions of perfectionism would be less confident or definite in their ratings with regard to neutral or ambiguous facial expressions than those high in *standards and achievement* dimensions. In all cases the high perfectionism groups rated clarity of expression lower than those low in perfectionism.

There are a number of possible explanations. On the one hand, individuals high in these dimensions may be less confident about what expression is actually being shown. Perfectionism theory suggests this explanation is unlikely as those high in *standards and*

achievement dimensions of perfectionism are characterised as more confident about their decision making relative to individuals high in dimensions such as *concern over mistakes* or *doubts about actions.* An alternative explanation is that individuals high in *standards and achievement* dimensions of perfectionism relating to maintaining personal standards are somewhat less likely to make definite assumptions about the nature of a facial expression relative to individuals low in perfectionism.

In the previous investigations reported in this thesis, increased PCI scores were associated with increased levels of psychological distress, perceptions of more frequent negative interpersonal experiences and aspects of *interpersonal rejection sensitivity.* However, this *negative evaluation concerns* dimension of perfectionism although associated with distress does not contain items relating to fears about the consequences of mistakes or beliefs about the need to maintain perfect behaviour in order to maintain the affection or respect of others. Much of the item content of the PCI focuses on intrapersonal cognitions about the need to maintain one's own high standards, thus this dimension of perfectionism may act in the same way as dimensions of perfectionism relating to high personal standards in this context.

Although the results of this investigation did not show a clear pattern of differences between high and low perfectionism groups, the finding that the majority of differences between perfectionists and non-perfectionists and different types of high trait perfectionists occurred for confidence ratings for the *neutral* face suggests that there may be differences in the confidence levels of highly perfectionistic individuals in regard to

facial expressions that require further investigation. In addition, there is no evidence on the basis of the results of the current study that individuals high in *negative evaluation concerns* dimensions of perfectionism are more likely to react to ambiguous feedback as though it were negative (Hewitt & Flett, 2002) in relation to the interpretation of facial expressions.

CHAPTER 8

Study 4: Interpreting Social Information: Attributions in Regard to the Interpersonal Behaviour and Emotional Responses of Others

8.1 Rationale

As indicated in Chapter 6, perfectionism research (Flett et al., 1997) and findings reported in preceding chapters indicate that individuals high in specific *negative evaluation concerns* dimensions of perfectionism tend to perceive themselves as being involved in more negative interactions than those low in perfectionism. The findings of the current investigation also showed that individuals high in *negative evaluation concerns* dimensions of perfectionism experience greater levels of interpersonal rejection sensitivity; including increased concerns about the opinion and feedback of others, low self-esteem, feelings of being disliked by others, expectations of criticism and difficulties being assertive in interpersonal contexts. In addition specific *standards and achievement* dimensions showed increased level of *interpersonal worry and dependency* or *low self-esteem.*

Other research has found that individuals high in *socially prescribed perfectionism* have an increased tendency to make external attributions for outcomes in interpersonal contexts and to place blame on others for their difficulties (Flett, Hewitt, Blankstein & Pickering, 1998). These results are consistent with the idea that high trait perfectionists have more negative representations of themselves and others and may have an increased tendency to interpret ambiguous social feedback as negative (Hewitt & Flett, 2002; Shahar et al., 2004). However, contrary to expectation, an investigation of the

interpretation of facial expressions reported in Chapter 7 failed to find evidence that high trait perfectionists interpret mood more negatively than their low perfectionism counterparts in relation to facial expression.

Therefore in fulfillment of the *third aim* stated in Chapter 4 this investigation examines whether high trait perfectionists make different attributions about the behaviour and feelings of others in interpersonal interactions using a vignette methodology. On the bases of the research findings described in Chapters 3, 5 and 6, it was expected that individuals high in *negative evaluation concerns* dimensions of perfectionism would make more negative attributions about the behaviour of individuals described in the vignettes. More specifically it is expected that individuals high in *negative evaluation concerns* dimensions will rate the behaviour described in *neutral* and *unfriendly* vignettes as *less friendly, less accepting* and *less warm* than their low perfectionism and high *standards and achievement* counterparts.

It is also expected that individuals high in *negative evaluation concerns* dimensions will attribute more negative emotional responses to the person who was the object of the behaviours described in the vignettes. It is expected that individuals high in *negative evaluation concerns* dimensions will rate feelings as *more anxious, more angry* and *more sad* than individuals low in perfectionism or high in *standards and achievement* dimensions of perfectionism. It is not expected that differences will be found between high and low *standards and achievement* dimension groups in relation to these variables.

8.2 Method

Participants

Participants were those who participated in Studies 2 and 3. Participants were provided with a set of three vignettes specifically designed for this investigation that described a *neutral, friendly* or *unfriendly* interaction.

Validation of Experimental Materials

Three vignettes depicting a *neutral, friendly* or *unfriendly* dyadic interaction were provided to a group of raters ($N = 20$) who had previously rated materials for the facial expression task. Raters were requested to read each of three vignettes and categorise the vignette as best fitting a *neutral, friendly* or *unfriendly* interaction category. They were then requested to rate the extent to which they thought the behaviour of Character B was *friendly, neutral* or *unfriendly* on a 7-point likert scale. Raters showed a high level of agreement for categorisation of vignette material. Procedure and results for the rater categorisations and ratings of *friendliness/unfriendliness* are shown in Appendix A5.

Experimental Procedure

Participants were asked to read three vignettes that described a brief interaction between two individuals. Each of the three vignettes describes Character A making an approach to Character B in exactly the same manner but eliciting either a *neutral, friendly* or *unfriendly* response from Character B. The vignettes were presented in random order so that each person received all of the three types of *neutral, friendly*, or *unfriendly* response vignettes. Each vignette contained either an interaction between two males or two females. Distribution of male or female character vignettes was random.

The participant was asked to rate the behaviour of Character B, creating three behavior-related dependent variables for the bi-dimensional scales *friendly/unfriendly, accepting/rejecting,* and *warm/cold.* The participant was then asked to rate the feelings of Character A following the interaction described, creating three affect related dependent variables on the bi-dimensional scales of *happy/sad, angry/pleased and anxious/calm.*

Participants were asked to provide a rating for each dependent variable by circling the choice that they thought best matched the behaviour or feelings of the character. Scores were anchored with 1 corresponding to an extreme rating of the first descriptor of the pair (e.g. *Very Friendly*) and a score of 7 indicating the strongest rating at the end of the scale (e.g. *Very Unfriendly*) and a neutral midpoint of 4. An information and instruction sheet was provided that showed sample responses to assist correct completion of material. Examples of participant task instructions and all vignettes are shown in Appendix A6.

8.3 Results

Means and Standard Deviations.

Means and standard deviations were calculated for ratings of feelings and behaviour of vignette characters for each vignette. These results are shown in Table 16.

Table 16

Means and Standard Deviations for Ratings of Neutral, Friendly or Unfriendly Vignette Responses by Character B and Feelings Induced in Character A

Scale	Neutral	Friendly	Unfriendly
	M (SD)	*M* (SD)	*M* (SD)
Friendly/unfriendly	3.07 (1.37)	2.06 (1.23)	5.41 (1.30)
Accepting/rejecting	3.56 (1.54)	2.16 (1.11)	5.73 (1.03)
Warm/cold	3.45 (1.35)	2.06 (1.08)	5.73 (0.99)
Happy/sad	3.63 (1.45)	2.13 (1.01)	4.91 (1.53)
Angry/pleased	4.36 (1.15)	5.77 (1.16)	3.27 (1.20)
Anxious/calm	4.35 (1.51)	5.46 (1.57)	3.16 (1.34)

Note. Based on the responses of Total Sample $N = 165$, Males $n = 32$, Females $n = 163$
For the first four scales a lower score reflects a greater level of positive affect and for last two scales a higher score reflects a greater level of positive affect

Analysis of Variance for High and Low Perfectionism Groups Comparisons

Neutral vignette.

Comparisons between high and low perfectionism groups for ratings of behaviour and feelings were partially consistent with predictions. Results of univariate analyses showed no significant differences at the $p = .01$ level. There were trends towards significance for differences between high and low groups for specific *negative evaluation concerns* dimensions of perfectionism. These high perfectionism groups rated feelings as *less calm, less happy* and *less pleased.* Only the high *negative perfectionism* group rated behaviour as *less friendly.* None of the differences showed strong effect sizes. However,

ratings for the *calm/anxious* scale suggest a consistent pattern of differences in that individuals high in *negative evaluation concerns* dimensions rated the feelings of the object of the neutral behaviour as *less calm* than their low perfectionism counterparts. These results are shown in Table 17. There were no significant differences found between high and low groups for *concern over mistakes, parental expectations or parental criticism* or for any *standards and achievement* dimensions. No differences were found between high and low groups for any dimension of perfectionism in relation to the *accepting/rejecting* and *warm/cold* scales.

Table 17

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Group Ratings of Attributions of Behaviour and Affective Response

		Neutral vignette							
		Behaviour		Feelings					
		Friendly unfriendly		Happy sad		Angry pleased		Anxious calm	
NEC	Group	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2
PANPS NegP	Low	2.84 (1.34)	5.38* (157) .03					4.58 (1.56)	4.40* (156) .03
	High	3.34 (1.37)						4.08 (1.44)	
MPS-F DA	Low			3.39 (1.40)	5.73* (160) .03				
	High			3.93 (1.47)					
MPS-H SPP	Low					4.53 (1.19)	4.14* (155) .03	4.59 (1.55)	4.78* (155) .03
	High					4.16 (1.07)		4.06 (1.43)	
PCI	Low							4.60 (1.54)	4.25* (159) .03
	High							4.12 (1.46)	

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 values are shown as anxiety and depression were both non-significant as covariates in all analyses

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Lower scores for the friendly/unfriendly and happy/sad scales indicate more positive affect whereas higher scores for the angry/pleased and anxious/calm indicate more positive affect

Domain/dimension and group *n*: NEC = negative evaluation concerns; PCI: low $n = 76$, high $n = 85$; DA = doubts about actions: low $n = 91$, high $n = 71$; SPP = socially prescribed perfectionism: low $n = 80$, high $n = 77$; NegP = negative perfectionism: low $n = 82$, high $n = 77$

$^*p < .05$. $^{**}p < .01$

Friendly vignette.

Univariate analysis between the high and low perfectionism groups for ratings of attributions for the *friendly* response vignette revealed that there were consistently more negative ratings of behaviour and feelings among those high in *negative evaluation concerns* dimensions of perfectionism relative to low perfectionists. This was particularly evident for *concern over mistakes* and *socially prescribed perfectionism.* High groups for these dimensions rated the behaviour of Character B as *less warm*, and the feelings of Character A as *less calm* and *less pleased* relative to low perfectionists. The high groups for *concern over mistakes* and *socially prescribed perfectionism* also rated the feelings of Character A as *less happy* than their low perfectionism counterparts. There were no significant differences found between high and low groups for *doubts about actions, organisation, other-oriented perfectionism,* and *positive perfectionism.* Results are shown in Table18. There were no significant results for any dimension of perfectionism for the *accepting/rejecting* scale.

Table 18

Descriptive and Inferential Statistics for Unadjusted Means and Effect Sizes Before Covariate Adjustment (η^2_1) and Where Applicable After Adjustment for Anxiety and Depression (η^2_2) for Trends and Statistically Significant Comparisons Between High and Low Perfectionism Groups for Ratings of Attributions for Behaviours and Affective Response

		Behaviour				Feelings					
		Friendly unfriendly		Warm cold		Happy sad		Angry pleased		Anxious calm	
NEC	Group	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2
PAN PS NegP	Low	1.83 (1.04)	5.34* (157) .03								
	High	2.28 (1.40)									
MPS -F CM	Low			1.88 (0.98)	4.81* (159) .03	1.94 (1.09)	5.54* (159) .03	6.00 (1.09)	6.86** (160) .04	5.74 (1.58)	5.29* (159) .03
	High			2.25 (1.15)		2.31 (1.09)		5.53 (1.18)		5.18 (1.51)	
MPS -H SPP	Low			1.84 (1.02)	6.75** (155) .04	1.89 (0.91)	9.24** (155) .06	5.96 (1.16)	4.51* (156) .03	5.69 (1.56)	4.20* (155) .03
	High			2.28 (1.11)		2.38 (1.08)		5.57 (1.15)		5.18 (1.57)	
PCI	Low			1.87 (0.89)	4.57* (159) .03					5.73 (1.56)	4.28* (159) .03
	High			2.23 (1.20)						5.22 (1.54)	

Table 18 (cont)

		Behaviour				Feelings					
		Friendly unfriendly		Warm cold		Happy sad		Angry pleased		Anxious calm	
SA	Group	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2	M (SD)	F (df_e) η_1^2 η_2^2
MPS -F PS	Low									5.69 (1.51)	4.02* (159) .02
	High									5.20 (1.59)	
MPS -H SOP	Low	1.84 (1.06)	3.97* (156) .02								
	High	2.21 (1.28)									

Note. All comparisons shown were statistically significant before covariance adjustment and also after adjustment in cases where anxiety and depression made a significant contribution when entered as covariates

No η^2_2 values are shown as anxiety and depression were both non-significant as covariates in all analyses

In all F tests, $df_1 = 1$ as there are two perfectionism groups

Lower scores for the friendly/unfriendly, warm/cold and happy/sad scales indicate more positive affect whereas higher scores for the angry/pleased and anxious/calm indicate more positive affect

Domain/dimension and group *n*: NEC = negative evaluation concerns; SA = standards and achievement; PCI: low *n* = 76, high *n* = 85; CM = concern over mistakes: low *n* = 82, high *n* = 79; PS = personal standards: low *n* = 87, high *n* = 75; SOP = self-oriented perfectionism: low *n* = 78, high *n* = 80; SPP = socially prescribed perfectionism: low *n* = 80, high *n* = 77; NegP = negative perfectionism: low *n* = 82, high *n* = 7

*$p < .05$. **$p < .01$

Unfriendly vignette

The high *negative perfectionism* group (M = 2.86, SD = 1.22) $F(1,157) = 7.54$, $p < .01$ (η^2=.05) rated feelings as significantly more anxious than the low *negative perfectionism* group (M = 3.44, SD = 1.42). There were no significant differences between high and low groups for any other dimension of perfectionism. Means and standard deviations for all vignette comparisons are shown in Tables B17-B25 in Appendix B4.

8.4 Discussion

The aim of the Study 4 was to investigate whether differences exist between perfectionists and non-perfectionists in their attributions of the behaviour and feelings of others in interpersonal contexts. In the results described above a number of patterns emerged that are of interest. Results will be discussed for each vignette beginning with the *neutral* vignette.

The *neutral* vignette was designed to show Character B responding to the approach of Character A in a *neutral* or *ambiguous* manner that would not elicit especially negative or positive attributions about the behaviour or feelings of either interaction character. The results indicate that even when behaviour is relatively *neutral*, those high in *negative evaluation concerns* dimensions of perfectionism show an increased tendency to attribute more negative emotional responses to the person who was the object of the behaviour. More specifically, the results showed that Character A, who was the object of the *neutral* behaviour was rated as feeling *less calm*.

These findings are consistent with the idea proposed by Hewitt and Flett (2002) that individuals high in *socially prescribed perfectionism* will be more likely to interpret ambiguous social feedback as more negative than those low in perfectionism. However, the results of the current study suggest that individuals high in a range of *negative evaluation concerns* dimensions of perfectionism will not only have more negative responses to *neutral* behaviour but are also more likely to interpret friendly behaviour as more negative.

In relation to the friendly vignette, individuals high in *socially prescribed perfectionism* and *concern over mistakes* showed an almost identical profile of differences relative to low perfectionists. Not only did individuals high in these dimensions rate friendly behaviour as less warm, they also rated the feelings of the object of the behaviour as less happy, less pleased and less calm relative to low perfectionists.

In contrast, individuals high in *negative perfectionism* and *self-oriented perfectionism* showed differences relative to low perfectionists only by rating behaviour as less friendly. However, individuals high in these latter dimensions of perfectionism who rated behaviour as less friendly showed no differences relative to low perfectionists about the feelings of the person who was the object of the behaviour.

The results discussed above could be interpreted as offering support for the idea that individuals with high levels of *negative perfectionism* will make more global attributions about the nature of behaviour (i.e. friendliness) perhaps as a result of the desire to avoid potential criticism or disapproval. However, individuals high in *self-oriented*

perfectionism also made a more global rating about friendliness rather than specific aspects of the behaviour.

Individuals high in *socially prescribed perfectionism*, and *concerns over mistakes* were the only groups to show differences relating to the interpersonal warmth of behaviour or the affective responses of the person receiving the friendly behaviour relative to low perfectionists. It may be that these more negative attributions about the nature of the behaviour and feelings of others are made on the basis of beliefs about how they would feel personally in response to this behaviour. If this is the case then these results could be viewed as providing support for the findings of Flett, Hewitt, Blankstein et al. (1996) and Dunkley et al. (2000) that individuals high in specific *negative evaluation concerns* dimensions are more likely to respond to perceived difficulties with greater levels of emotional distress. However, as the vignettes depicted neutral or friendly behaviour, perhaps the findings of the current investigation provide greater support for the idea that individuals high in these dimensions of perfectionism have a greater tendency to interpret normal daily events as stressors and self-generate stress to a greater extent than low perfectionists and over react to perceived slights (Dunkley et al., 2000, Hewitt & Flett, 2002).

Another possible explanation for the finding that individuals high in perfectionism may interpret not only neutral but also friendly behaviour as more negative in the current study can be found in an examination of the overall means for ratings on the *friendly/unfriendly* scale shown in Table 15. The overall means for the *friendly/unfriendly* scale shows that participants rated the behaviour in the neutral

vignette as falling between the "*a little friendly – neutral*" score range. However, the mean score falls closer to the "*a little friendly*" score point whereas the mean score for the *friendly* vignette fell into the "*a little friendly – quite friendly*" range closer to the "*quite friendly*" score point. Thus it may be that the neutral vignette was not sufficiently neutral but tended more towards friendly. If this were the case it would provide support for the idea that individuals high in *negative evaluation concerns* dimensions of perfectionism are more likely to interpret friendly behaviour in a more negative manner. It may also be that individuals high in *negative evaluation concerns* dimensions of perfectionism do tend to perceive both neutral and friendly behaviour more negatively than those low in perfectionism. However, further research is required to clarify these conjectures.

The results for the *unfriendly* vignette in contrast suggest that high trait perfectionists of any sort are not more likely than low perfectionists to perceive unfriendly behaviour as more negative. Although the results suggest that individuals high in *negative perfectionism* may experience *more anxiety* relative to low perfectionists when confronted with unfriendly behaviour. The fact that only one difference was found between high and low groups for any dimension of perfectionism suggests that most individuals regardless of the type or level of perfectionism, interpret unfriendly behaviour in the same way. It may be that unfriendly behaviour activates similarly negative feelings for all individuals regardless of their levels of perfectionism and that unfriendly behaviour is less open to variations in interpretation but may increase levels of distress for *negative perfectionists*.

It is also of note that there were very few differences evident between high and low groups for *standards and achievement* dimensions of perfectionism. Although as noted earlier high *self-oriented perfectionists* rated friendly behaviour as less friendly, they did not make more negative attributions about the feelings of the personal who was the object of the behaviour relative to low perfectionists. The only other difference found between high and low groups was that high *personal standards* perfectionists attributed less calm feelings to the person who was the object of *friendly* behaviour relative to low perfectionists. Overall there were no clear patterns of differences between high and low groups for *standards and achievement* dimensions of perfectionism in relation to any vignette.

These results (or absence of them) relating to *standards and achievement* dimensions could be interpreted as providing support for the idea that *standards and achievement* dimensions are not associated with poorer psychosocial adjustment (Flett, Hewitt & DeRosa, 1996). Alternatively these results could be viewed as offering support for the idea that high levels of *standards and achievement* dimensions of perfectionism do not confer any benefits for the individual in terms of more positive attributions about the interpersonal behaviour and feelings of others.

Overall the results of this investigation suggest that perfectionism does not influence high trait perfectionists to interpret overtly negative behaviour as more negative. Rather, it reduces perceptions of friendly behaviour and predisposes these individuals to interpret neutral and friendly behaviour in a more negative manner. The results for the *neutral* vignette suggest that where there is latitude for interpretation (in that behaviour is not

overtly unfriendly) individuals high in specific *negative evaluation concerns* dimensions of perfectionism will tend to make more negative attributions about the feelings of others.

The results for the *friendly* vignette suggest that even in situations in which behaviour is more friendly, high trait perfectionists will also have an increased tendency to make negative attributions about the behaviour and feelings of others. These findings provide support for the notion that individuals high in specific *negative evaluation concerns* dimensions of perfectionism have more negative representations of others (Shahar et al., 2004; Zuroff & Blatt, 2002). These results could also be interpreted as offering support for the notion that perfectionists experience daily stressors more frequently and with greater intensity through the mechanism of self-generated stress (Dunkley et al., 2000; Hewitt & Flett, 2002).

In addition, the results of the current study might offer some explanation for the findings reported in Study 2. In Study 2 it was found that individuals high in *concerns over mistakes* and other *negative evaluation concerns* dimensions of perfectionism perceived themselves to be involved in more frequent negative interpersonal interactions. The results of the current study could be interpreted as providing support for the idea that perceptions of more frequent involvement in negative interpersonal experiences are due to a greater tendency to interpret *neutral* and *friendly* behaviour as negative and to respond with more emotional distress.

Furthermore, although the results of this study offer support for the idea that *negative evaluations concerns* dimensions of perfectionism are implicated in more negative

attributions about the behaviour and feelings of others, there is not good evidence to support the idea that *standards and achievement* dimensions offer benefits to the individual in terms of more positive attributions with regard to the interpersonal behaviour and feelings of others.