

PERFECTIONISM AND SPECIFIC SYMPTOM CLUSTERS OF DEPRESSION

by

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Abstract

The present study aims to clarify relationships between aspects of perfectionism and specific symptom clusters of depression. More specifically, this study examines whether trait perfectionism dimensions (self-oriented, other-oriented, and socially prescribed perfectionism) and/or perfectionistic cognitions tend to be associated with certain types of depressive symptoms. A heterogeneous clinical sample of 75 individuals (39 males, 36 females) completed the Multidimensional Perfectionism Scale (MPS), the Beck Depression Inventory (BDI), and the Minnesota Multiphasic Personality Inventory (MMPI). Additionally, a subclinical sample comprised of 225 individuals (71 males, 154 females) completed the MPS, the Perfectionism Cognitions Inventory (PCI), and the short form of the Multiscore Depression Inventory (SMDI). Our results reveal that socially prescribed perfectionism was significantly associated with depression in both samples. Specifically, this dimension was most strongly related to cognitive and affective depression symptoms, but also to somatic and behavioural symptoms. Additionally, regression analyses indicated that socially prescribed perfectionism was uniquely related to symptoms of low self-esteem, irritability, and hopelessness. Perfectionistic cognitions were also significantly associated with overall levels of depression and with cognitive and affective symptomatology. Furthermore, regression analyses revealed that perfectionistic thinking was uniquely related to symptoms of low self-esteem, guilt, pessimism, irritability, and sad mood. Taken together, these findings reveal that both socially prescribed perfectionism and perfectionistic thinking are relevant to depressive outcomes and are associated primarily with cognitive and affective symptomatology. The results of this study highlight the importance of attempts to further understand the role of perfectionism in depression and of studying multiple facets of depressive phenomena.

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Introduction

Emerging interest in the construct of perfectionism and its relation to psychopathology can be traced back several decades (Burns, 1980; Hamachek, 1978; Hollender, 1965). Early theorists and researchers viewed perfectionism as a unidimensional construct involving unrealistic expectations and critical evaluations directed at the self (e.g., Burns, 1980). Although perfectionism oriented toward the self is a key component of the construct, perfectionism is currently conceptualized as a multidimensional personality style comprised of intrapersonal and interpersonal components (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991a).

One conceptualization of perfectionism that has guided much of the research in the area is that of Hewitt & Flett (1991a) who view perfectionism as a stable trait characterized by the need to be perfect. These researchers proposed the existence of three dimensions of trait perfectionism: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. The self-oriented dimension is intrapersonal in nature and involves requiring perfection of the self. That is, self-oriented perfectionists stringently evaluate and censor their performance, constantly striving to achieve perfection and avoid failure. In other-oriented perfectionism, an interpersonal dimension, the requirement of perfection is imposed on significant others in the perfectionist's life. That is, other-oriented perfectionists expect others to be perfect and stringently evaluate their performance. The second interpersonal dimension is socially prescribed perfectionism, which involves the belief that significant others impose unrealistic expectations on the self. That is, socially prescribed perfectionists believe that others evaluate their performance critically and exert pressure on them to be perfect.

Recent years witnessed rising research interest in trait perfectionism and a wealth of studies that demonstrated its association with several forms of psychopathology, including

clinical depression, suicidal behaviour, anxiety, eating disorders, personality disorders, and relationship problems (see Flett & Hewitt, in press, for a review). In addition to highlighting the importance of perfectionism in maladjustment, this research led to the most recent conceptualization of perfectionism as not only involving personality traits, but also characteristic thought patterns. Flett, Hewitt, Blankstein, & Gray (1998) suggested that perfectionistic individuals tend to engage in frequent automatic thoughts regarding their efforts to attain high standards. The content of such thoughts may reflect 'should' statements (e.g., "I should be doing more"), social comparisons (e.g., "I have to be the best"), or rumination over mistakes (e.g., "I should never make the same mistake twice"), among other things. These cognitions are thought to arise from an awareness of and concern with the discrepancy between one's current performance and one's ideal performance (Hewitt & Genest, 1990). Recent research found that the experience of frequent perfectionistic thoughts accounts for unique variance in maladjustment, over and above that accounted for by measures of trait perfectionism and other measures of negative automatic thoughts (Flett et al., 1998). Thus, it appears that both trait perfectionism and the frequency of automatic perfectionistic thoughts have important implications for adjustment.

Perfectionism and Depression

One of the most well researched relationships in perfectionism research to date is that between perfectionism and depression (e.g. Hewitt & Dyck, 1986; Hewitt & Flett, 1990, 1991a, 1991b, 1993; Hewitt, Flett, Ediger, Norton, & Flynn, 1998). Much of this research attempted to improve our understanding of the relationship between these two constructs and to determine whether perfectionism is a vulnerability factor for depression. Considering that as many as 25% of women and 12% of men suffer from major depression in their lifetimes, that as many as 50-60% of those who experience one episode of depression will experience another, and that as

many as 15% of severely depressed individuals will commit suicide (American Psychiatric Association, 1994), identification of potential vulnerability factors for depression is essential. Such factors may shed light on individual susceptibility to the onset of depression, to severe symptomatology, and to depression that recurs or persists over time. Additionally, specific depressive symptom profiles may be predicted as we learn more about the role of personality factors in depression (Hirschfeld & Cross, 1987).

Over the years, numerous studies have found associations between trait perfectionism and depression in both clinical (Enns & Cox, 1999; Hewitt & Flett, 1991a, 1991b) and subclinical samples (Hewitt & Dyck, 1986; Hewitt & Flett, 1991a; Saddler & Sacks, 1993). This research revealed that the self-oriented and socially prescribed perfectionism dimensions are most relevant to the experience of depression (Arthur & Hayward, 1997; Enns & Cox, 1999; Hayward & Arthur, 1998; Hewitt & Flett, 1991a, 1991b; Saddler & Sacks, 1993) and that these dimensions seem to be differentially related to depression. Specifically, socially prescribed perfectionism appears to be directly related to the severity of depressive symptoms in both clinical (Enns & Cox, 1999; Hewitt & Flett, 1991b; Hewitt, Flett, & Endler, 1995) and subclinical samples (Arthur & Hayward, 1997; Flett, Hewitt, Blankstein & O'Brien, 1991; Flett, Hewitt, Garshowitz, & Martin, 1997; Hayward & Arthur, 1998). In fact, several studies have found that socially prescribed perfectionism predicts unique variance in depression scores beyond other perfectionism dimensions and other personality variables (Flett et al., 1991, 1997; Hewitt & Flett, 1993).

Research has also examined the possibility that socially prescribed perfectionism serves as a vulnerability factor that when combined with stress, leads to depression. It has also been proposed that interpersonal stress is most likely to interact with socially prescribed perfectionism to predict depression because this type of stress threatens the individual's need

for approval and validation from others (Hewitt & Flett, 1993). Support for this proposition was obtained by Hewitt & Flett (1993) who found that socially prescribed perfectionism interacted only with interpersonal stress to predict depression in a sample of unipolar depressed patients. However, this finding was not replicated in a heterogeneous sample of psychiatric patients (Hewitt & Flett, 1993) or in a sample of male college students (Joiner & Schmidt, 1995). Considering that socially prescribed perfectionism can lead to depression in the absence of stress (Arthur & Hayward, 1997; Hewitt & Flett, 1991b) and that congruent stressors do not appear to interact consistently with this dimension to predict depression, socially prescribed perfectionism is best conceptualized as a concomitant of depression rather than a specific vulnerability factor.

Compared to the relationship between socially prescribed perfectionism and depression, the link between self-oriented perfectionism and depression is less direct, but perhaps more specific. To illustrate, self-oriented perfectionism tends to be correlated with depression in some studies (Enns & Cox, 1999; Hewitt & Flett, 1991a, 1993) but not in others (Flett, et al., 1991; Flett et al., 1997; Hewitt & Flett, 1991b). However, as with the socially prescribed dimension, self-oriented perfectionism has been proposed to be a specific vulnerability factor for depression. Rather than interacting with interpersonal stress, self-oriented perfectionism is thought to be most likely to lead to depression when combined with self-related or achievement stress because it threatens the individual's need to meet high personal expectations (Hewitt & Flett, 1993). A number of studies have yielded results in support of this proposition. For instance, in both a unipolar depressed sample and a heterogeneous clinical sample, Hewitt & Flett (1993) found that self-oriented perfectionism interacted only with achievement stress to predict depression. Additionally, Hewitt, Flett, & Ediger (1996) extended these results with their finding that self-oriented perfectionism interacted only with achievement stress to predict

depression over time in a heterogeneous depressed sample. Taken together, these findings suggest that self-oriented perfectionism is a specific vulnerability factor that requires the presence of achievement-related stress to lead to depression.

The tendency to engage in high frequencies of perfectionistic thinking has also been linked to higher levels of depressive symptoms. In fact, Flett et al. (1998) found that the frequency of automatic thoughts with perfectionistic content accounted for unique variance in depression scores over and above that accounted for by existing measures of negative automatic thoughts and by trait perfectionism dimensions. Thus, as with trait perfectionism, perfectionistic thoughts appear to have important implications for depressive outcomes.

The majority of the research reviewed thus far has focused on relationships between aspects of perfectionism and the severity of depression, typically indicated by higher scores on depression inventories. Although it is important to study the severity of depressive symptomatology, an examination of other aspects of the depressive experience may further clarify the role of perfectionism in depression. For instance, as suggested by Hirschfeld & Cross (1987), perhaps personality factors can predict specific depressive symptom profiles. To illustrate, perhaps self-oriented and socially prescribed perfectionists who suffer from depression tend to experience certain types of symptoms. To our knowledge, very few studies have examined the nature of the depression perfectionistic individuals tend to experience. In one recent study, Hewitt and colleagues (1998) tested the ability of perfectionism dimensions to uniquely predict chronic depression symptoms. A heterogeneous clinical sample completed measures of perfectionism and measures assessing the presence and severity of chronic unipolar and bipolar depression symptoms. Regression analyses indicated that only self-oriented perfectionism was uniquely related to chronic unipolar symptoms, whereas, both socially prescribed and other-oriented perfectionism were uniquely associated with chronic

bipolar symptoms. These findings add interesting information to previous results regarding current depression severity and suggest that trait perfectionism also has significant implications for chronic depression. Furthermore, this study highlights the importance of studying multiple facets of depressive phenomena in order to fully understand the role of personality variables in depression. In a related vein, the current study aims to extend existing knowledge further by examining links between aspects of perfectionism and specific symptom clusters of depression in both a heterogeneous clinical sample and a subclinical sample. Additionally, relationships between perfectionistic thoughts and clusters of depression symptoms will be investigated in the subclinical sample.

Symptom Clusters of Depression

Over the years, various researchers of depressive phenomena have delineated different subtypes or symptom clusters thought to comprise depression. One conceptualization is that of Blatt (1974) in which he proposes that there are two personality configurations relevant to depression: a dependent personality configuration (also referred to as anaclitic) and a self-critical personality configuration (also referred to as introjective). According to Blatt & Shichman (1983), personality development consists of two fundamental developmental lines: an anaclitic line, which leads to the establishment of satisfying interpersonal relationships, and an introjective line, which leads to the establishment of a positive self-concept or identity. Psychopathology involves exaggerations of the tasks of each of these two developmental lines. That is, psychopathology in the dependent configuration involves distorted, exaggerated attempts to maintain satisfying interpersonal relationships and focuses on concerns about those relationships as well as receiving care and validation from significant others. In contrast, psychopathology in the self-critical configuration involves distorted, exaggerated attempts to establish a satisfactory self-concept and focuses on issues of self-definition, self-worth, and

identity. Regarding depression, dependent and self-critical individuals are expected to experience specific depressive symptoms related to the tasks of their respective developmental line (Blatt & Shichman, 1983). Specifically, dependent depression is characterized symptoms such as helplessness, loneliness, sadness, frustration, and wishes to be cared for. In contrast, self-critical depression is characterized by symptoms such as worthlessness, guilt, sense of failure, self-criticism, and self-blame.

Beck (1983) has proposed another conceptualization of personality types important to depression, a view that shares much in common with that of Blatt (1974). Based on his efforts to identify personality attributes that lead to depression, Beck (1983) proposed the existence of two relevant personality types. The sociotropic personality type, which is similar to Blatt's dependent personality, characterizes individuals who seek close, positive interactions with others and value acceptance, admiration, and validation. In contrast, the autonomous personality type, which is similar to Blatt's self-critical personality, describes individuals who seek independence and self-definition and value autonomy and the attainment of personal goals. Beck (1983) maintains that the sociotropic type of depression is precipitated by a perceived disruption in social connection and is characterized by the theme of deprivation. Consequently, when depressed, sociotropic individuals are expected to experience symptoms such as loneliness, labile mood, dependency, tearfulness, sadness, and concern about their attractiveness to others. In contrast, the autonomous type of depression is thought to be precipitated by factors that undermine the person's efforts to achieve independence and self-definition and is characterized by the theme of defeat or failure. Thus, when depressed, autonomous individuals are expected to experience symptoms such as self-criticism, self-blame, depressed mood, irritability, pessimism, social withdrawal, and concern about personal effectiveness (Beck, 1983).

Several studies have found higher levels of dependency/sociotropy and self-criticism/autonomy to be positively associated with depression (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Fairbrother & Moretti, 1998; Franche & Dobson, 1992; Klein, Harding, Taylor, & Dickstein, 1988; Moore & Blackburn, 1994). However, support for specific sociotropic/dependent and autonomous/self-critical sets of depression symptoms is mixed at present (Blatt et al., 1982; Klein et al., 1988; Persons, Miranda, & Perloff, 1991; Robins, Block, & Peselow, 1989; Robins & Luten, 1991). For instance, in a sample of depressed inpatients, Robins & Luten (1991) found that sociotropy and autonomy were both related to the particular depression symptoms predicted by Beck's (1983) model. Specifically, sociotropy was significantly associated with crying, labile mood, and loneliness. In contrast, autonomy was significantly related to loss of interest in people, self-blame, irritability, and concern about inability to function. Furthermore, sociotropy and autonomy were significantly more highly related to their own expected sets of depression symptoms than to each others' expected set of symptoms. In contrast, partial support for Beck's model was found in other studies (e.g. Persons et al., 1991; Robins, Block, & Peselow, 1989), in which the predicted relationships with depression symptoms were found for one personality configuration but not the other. For instance, Persons et al. (1991) found that autonomy was associated with feelings of failure, self-hate, self-blame, loss of interest in people, and hopelessness, however, sociotropy was not significantly related to the symptoms proposed by Beck (1983). In yet another study, little support was obtained for Blatt's (1974) model as dependency and self-criticism were each related to only one of the expected depression symptoms (Klein et al., 1988). Specifically, dependency was significantly related to crying and self-criticism was associated with loss of interest.

An examination of one of the most commonly used measures of depressive symptomatology also highlights possible symptom clusters relevant to depression. For instance, the 21 items of the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) are thought to assess cognitive, affective, and somatic depression symptoms. In fact, the items on the BDI were shown via principal components analysis to reflect three symptom clusters of depression: cognitive distortions, cognitive-affective symptoms, and somatic complaints (Enns, Cox, Parker, & Guertin, 1998; Steer, Beck, Riskind, & Brown, 1987). The cognitive distortion cluster includes symptoms such as sense of failure and self-dislike, the cognitive-affective cluster includes symptoms such as pessimism and sadness, and the somatic complaints cluster includes symptoms such as insomnia and somatic preoccupation (Steer et al., 1987). Recent research has demonstrated the utility of examining relationships between BDI subtypes, in addition to BDI total scores, and other variables of interest (e.g. Enns et al., 1998; Enns & Cox, 1999)

It is apparent from the brief review above that research focused on the phenomenon of depression has long been trying to find meaningful differences among the many types of depressive experiences. As discussed by Costello (1993), before we can understand syndromes of depression, we need to focus our research on efforts to better understand depressive symptoms. It is hoped that such research will expand current knowledge of the various manifestations of depression, including typical symptomatology, course, severity, treatment, and potential risk factors.

Perfectionism and Specific Symptom Clusters of Depression

Insight from perfectionism theory

Perfectionism theory suggests a number of predictions for potential findings in the current study (see Flett & Hewitt, in press, for reviews). To illustrate, self-oriented and socially

prescribed perfectionists constantly strive to achieve perfection, evaluate themselves critically, and base their sense of self-worth on their performance in important endeavors. As the expectations they strive to meet are impossibly high, perfectionists will often fail to meet them. Consequently, they are likely to experience self-dislike or self-disappointment, a sense of failure, negative self-accusations, decreased self-esteem, and even pessimism about the future (Hewitt & Flett, 1991a). It can be seen that these are all cognitive symptoms of depression frequently assessed in depression inventories. An important difference between self-oriented and socially prescribed perfectionists is the source of the high expectations they strive to meet. That is, self-oriented perfectionists establish and strive to meet their own unrealistic expectations, whereas, socially prescribed perfectionists strive to meet the perceived high standards of important others. For the socially prescribed perfectionist, this external locus of control may lead to feelings of helplessness, pessimism (Hewitt & Flett, 1991a), and ultimately depression (Burger, 1984) when they do not succeed at meeting others' expectations. Another important difference is the socially prescribed perfectionist's desire to receive approval and avoid negative evaluation from others, social characteristics that are not shared to the same extent by the self-oriented perfectionist. Accordingly, criticism and negative feedback are likely to damage the socially prescribed perfectionist's sense of self-worth, which is based primarily on meeting others' standards and receiving their validation.

Additionally, as self-oriented and socially prescribed perfectionists have so much invested in achieving perfection in different areas, it would not be surprising if they experienced sadness and irritability, both affective symptoms of depression, when unable to make the grade. Furthermore, given the perfectionist's drive to perform perfectly in valued areas of life and the energy devoted to such areas at the expense of others, fatigue, insomnia, loss of appetite, loss of libido (somatic depression symptoms), and social withdrawal (a

behavioural symptom of depression) may occur. Alternatively, for those perfectionists who dread starting new and important tasks for fear of failing, work difficulty (a somatic or motivational symptom of depression) may be experienced. It is clear from this examination of the defining characteristics of self-oriented and socially prescribed perfectionists that those who become depressed are likely to experience a wide range of depression symptoms.

In contrast, an examination of the characteristics of other-oriented perfectionists does not suggest an association with depressive outcomes. To illustrate, the other-oriented perfectionist has high expectations, but imposes them on significant others rather than on him/herself. Consequently, the failure of others to meet those standards is not expected to lead to alterations in self-esteem or self-worth for the perfectionist, although such outcomes might be expected for the target of the unrealistic standards. Although the other-oriented perfectionist may experience frustration or irritability when others are unable to meet high standards, this dimension of perfectionism is more likely to lead to interpersonal rather than intrapersonal difficulties (Hewitt & Flett, 1991a).

As for perfectionistic thinking, predictions for findings in the current study may also be generated from theory (Flett et al., 1998). The thoughts of individuals who engage in a great deal of perfectionistic thinking are characterized by ruminations about the attainment of high standards. These persons are thought to be concerned about the perceived discrepancy between their ideal and current performance (Hewitt & Genest, 1990), which they are likely to be constantly aware of given the ruminative nature of perfectionistic thoughts. This irresolvable discrepancy is likely to result in frustration, irritability, sadness, and pessimism for the perfectionist who cannot rid it from his/her thoughts. Moreover, constant preoccupation with these thoughts may result in difficulty concentrating on other matters. Thus, as with self-

oriented and socially prescribed perfectionism, it appears that perfectionistic thinking is likely to be associated with several types of depressive symptomatology.

Insight from prior perfectionism research

Although the nature of the current study is relatively new in perfectionism research, an indication of possible outcomes that are in line with those from perfectionism theory can be gleaned from a few prior studies. One very recent study comes close to the nature of the current investigation and has important implications for possible findings. As part of a larger study of perfectionism and depression severity in a sample of clinically depressed outpatients, Enns & Cox (1999) examined associations between MPS perfectionism dimensions and the three BDI symptom subscales outlined by Steer and colleagues (1987): cognitive distortions, cognitive-affective symptoms, and somatic complaints. All three trait dimensions of perfectionism were associated with BDI total scores, although the socially prescribed dimension evidenced a much stronger relationship with depression. When analyzed at the subscale level, socially prescribed and other-oriented perfectionism were associated with the cognitive distortions and cognitive-affective subscales of the BDI, whereas, self-oriented perfectionism was associated only with the cognitive distortions subscale. After controlling for the effects of neuroticism and extraversion, socially prescribed perfectionism remained significantly associated with total depression and the cognitive distortions subscale, however, self-oriented perfectionism was no longer significantly related to depression. Interestingly, other-oriented perfectionism remained significantly correlated with the cognitive distortions subscale, however, this correlation was considerably smaller than that involving socially prescribed perfectionism. Taken together, these findings suggest that socially prescribed perfectionism is the dimension most strongly related to depression and is likely to be associated primarily with cognitive, but also with affective depression symptoms. Additionally, this study

suggests that none of the trait dimensions are likely to be associated with somatic symptoms of depression. As Enns & Cox (1999) did not find consistent results in their regression analyses, and thus did not report them, the extent to which their correlations were influenced by scale overlap is not clear. Thus, the present study shall address this issue with regression analyses to determine whether certain aspects of perfectionism are uniquely related to specific depression symptoms.

In a sample of depressed inpatients, Hewitt & Flett (1991a) found a number of associations between both self-oriented and socially prescribed perfectionism and symptoms often assessed in depression inventories. Specifically, self-oriented perfectionism was associated with self-criticism and self-blame. Socially prescribed perfectionism was similarly associated with self-criticism and self-blame and was also associated with overgeneralization of failure. The authors also examined relationships between trait perfectionism and various negative emotions, finding that the self-oriented dimension was associated with guilt and self-disappointment. Another study examined the extent to which perfectionism and psychosomatic symptoms were related and found that socially prescribed perfectionism was positively associated with physical symptom report (Martin, Flett, Hewitt, Krames, & Szanto, 1996). Taken together, the results of these two studies suggest that socially prescribed perfectionists are likely to experience cognitive and somatic symptoms when depressed, whereas, self-oriented perfectionists are likely to experience cognitive and affective symptoms of depression.

Although very little research regarding perfectionistic cognitions and depression currently exists, one recent study provides some insight into possible findings in the present study. Flett and colleagues (1998) discovered a positive association between the frequency of perfectionistic thoughts and measures of both self-criticism and the tendency to persevere after failure, both of which are cognitive characteristics of depressed individuals (Beck, 1963).

Additionally, in the same study, the frequency of perfectionistic cognitions was positively correlated with somatic difficulties and negative affect. Thus, rather than suggesting an association between perfectionistic thoughts and one specific symptom cluster of depression, these results suggest that individuals who engage in high frequencies of perfectionistic thinking may experience a broad range of depression symptoms, including cognitive, somatic, and affective symptoms.

Insight from research with similar concepts

Research with concepts similar to perfectionism may also suggest potential associations with specific symptoms of depression in the present study. For instance, the personality characteristics of self-criticism and dependency (Blatt, 1974) or autonomy and sociotropy (Beck, 1983) discussed earlier are similar in nature to dimensions of perfectionism. In fact, prior research found that both self-oriented and socially prescribed perfectionism were associated with both self-criticism and autonomy (Hewitt & Flett, 1993). An examination of the nature of these four constructs allows insight into this relationship. To review, self-critical or autonomous individuals are concerned with self-worth and self-definition and require high levels of accomplishment in order to feel worthwhile. Dependent or sociotropic individuals are concerned primarily with interpersonal relationships and obtaining the approval and admiration of others and they define self-worth based on the quality of their interpersonal relations (Beck, 1983; Blatt & Schichman, 1983). It can be seen that many of the characteristics of self-critical/autonomous persons are similar to those of self-oriented and socially prescribed perfectionists, particularly self-oriented individuals. To illustrate, individuals who score highly on self-oriented or socially prescribed perfectionism strive to meet high expectations, judge themselves stringently, and base their self-worth on quality of performance (Hewitt & Flett, 1991a). Additionally, socially prescribed perfectionists embody some of the same

characteristics as dependent/sociotropic individuals as they seek approval and validation from others and are highly sensitive to criticism and negative feedback (Hewitt & Flett, 1991a; 1993). Although these concepts do not overlap completely, their similarities suggest that self-oriented and socially prescribed perfectionism may be associated with similar depressive symptoms as self-criticism/autonomy and the socially prescribed dimension may also be associated with similar symptoms as dependency/sociotropy. If this were the case, then both perfectionism dimensions would be expected to be associated with cognitive, affective, and behavioural symptoms of depression.

The effects of excessive rumination on one's well being have been investigated in prior research and may have implications for relationships between perfectionistic thinking and depressive symptomatology. Specifically, rumination following distressing events has been linked with physical ill health (Pennebaker & O'Heeron, 1984) and the development of pessimism about the future (Lyubomirsky & Nolen-Hoeksema, 1995; Nolen-Hoeksema, Parker, & Larson, 1994). As the frequency of perfectionistic thinking has been associated with rumination about past mistakes (Flett et al., 1998), it is possible that this aspect of perfectionism will be similarly associated with somatic and cognitive symptoms. Such a prediction is in line with expectations based on prior perfectionism research outlined above.

To summarize, the above research suggests that self-oriented and socially prescribed perfectionism are the trait dimensions most relevant to the experience of depression. Additionally, it appears that the tendency to engage in frequent perfectionistic thinking is predictive of depressive symptomatology. We expect that each of these aspects of perfectionism will be positively associated with overall levels of depression and that they are likely to be related to several clusters of depressive symptomatology. Specifically, the theory reviewed above suggests that self-oriented perfectionism is most likely to be associated with

cognitive and affective symptoms of depression. Additionally, socially prescribed perfectionism is expected to be associated primarily with cognitive symptoms of depression, but also to be related to somatic, affective, and behavioural symptomatology. Moreover, higher frequencies of perfectionistic cognitions seem likely to be related broadly to a variety of depressive symptoms including cognitive, somatic, and affective symptomatology.

The present study intends to clarify the relationships between aspects of perfectionism and specific symptom clusters of depression. More specifically, we aim to determine whether certain trait dimensions and/or perfectionistic thinking tend to be associated with certain types of depressive symptoms. The results of this research shall expand our understanding of the role of perfectionism in depression and the nature of the depression that perfectionistic individuals tend to experience. Furthermore, our findings may have implications for the course, severity, treatment, and/or outcome of such depression.

As this study investigates the perfectionism-depression link in both a clinical and subclinical sample, and considering that measures of depression specifically designed for use with each type of sample are available, different instruments were completed by each sample of participants. Specifically, all participants in the psychiatric sample completed the Beck Depression Inventory (BDI; Beck et al., 1979) and the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1983), whereas, student participants completed the short form of the Multiscore Depression Inventory (SMDI; Berndt, Petzel, & Kaiser, 1983). Although the BDI can be used with non-clinical populations, both the BDI and the MMPI were designed for use with clinical populations, whereas, the SMDI was designed for use with non-clinical populations. Finally, although levels of perfectionism have not consistently been found to differ significantly for males versus females (Arthur & Hayward, 1997; Hewitt, et al., 1995; Martin, et al., 1996), several studies suggest that gender differences in depressive

symptomatology exist (Kornstein, Schatzberg, Yonkers, Thase, Keitner, Ryan, & Schlager, 1995; Silverstein, 1999; Silverstein, Caceres, Perdue, & Cimarolli, 1995). Thus, analyses for the present study will be conducted for each sample as a whole and separately by gender.

Methods

Participants

Clinical Sample

Seventy-five individuals (39 males and 36 females) who were either inpatients (25%) or outpatients (75%) at a large Canadian psychiatric hospital participated in this study. Among this sample, DSM-III-R (APA, 1987) diagnoses of affective disorders (26.2%), adjustment disorder with depressed mood (21.5%), and schizophrenia (18.5%) were most common. A heterogeneous sample was chosen for this study in order to ensure adequate variation in levels of depression and avoid biased statistics that may result from the assessment of personality traits in homogeneous clinical samples (see Kline, 1987). Participants ranged in age from 16 to 63 years ($M = 37.13$, $SD = 10.44$) and of those who indicated, 28.9% were single, 40% were married, and 31.1% were separated or divorced. Individuals were excluded from the study if they had current psychotic symptoms, organic impairment, or a reading level below that of grade eight.

Subclinical Sample

Two hundred and twenty-five undergraduate students (71 males and 154 females) from a large Canadian university also took part in this study. Participants ranged from 17 to 51 years of age ($M = 20.74$, $SD = 5.86$) and of those who indicated, 90.6% were single, 6.6% were married, and 2.8% were separated or divorced. Students were enrolled in an undergraduate psychology course and volunteered to participate in exchange for course credit.

Measures

Perfectionism

Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991a).

The MPS is composed of three 15-item subscales that collectively measure three dimensions of trait perfectionism: self-oriented, other-oriented, and socially prescribed perfectionism. Using 7-point scales, participants rate their level of agreement with items such as: “I demand nothing less than perfection of myself” (self-oriented perfectionism), “I have high expectations for people who are important to me” (other-oriented perfectionism), and “People expect nothing less than perfection from me” (socially prescribed perfectionism). Higher scores reflect greater levels of perfectionism. The reliability and validity of the MPS have been demonstrated in clinical and nonclinical samples (Hewitt & Flett, 1991a; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991). Subscale scores correlate with clinician ratings and theoretically similar constructs but are not affected by response biases (Flett, Hewitt, Blankstein, & Koledin, 1991; Hewitt & Flett, 1991a; Hewitt, Flett, & Blankstein, 1991).

Perfectionism Cognitions Inventory (PCI; Flett, et al., 1998).

The PCI is a 25-item measure of the frequency of automatic perfectionistic thoughts. Using a 5-point scale, respondents indicate how frequently, if at all, each thought occurred to them over the past week (e.g. “I have to be the best”, “People expect me to be perfect”, “My work should be flawless”). Higher scores reflect greater frequency of perfectionistic thoughts. The PCI was demonstrated to have good reliability and validity in both student and clinical samples and was not associated with impression management (Flett et al., 1998).

Depression

Beck Depression Inventory (BDI; Beck, et al., 1979).

The BDI is a 21-item inventory that assesses cognitive, somatic, affective, and vegetative symptoms of depression. Respondents are asked to select the statement(s) that best reflect(s) the way they have been feeling over the past week. Symptoms are assessed with a 4-point rating scale for which a rating of zero indicates that a symptom is not present ("I do not feel sad") and a rating of three indicates the most severe form of a symptom ("I am so sad or unhappy that I can't stand it"). Higher scores reflect greater depression to a maximum score of 63. Beck & Steer (1987) suggest that scores from 10-18 indicate mild to moderate depression, those from 19-29 reflect moderate to severe depression, and those from 30-63 indicate extremely severe depression. The BDI is a widely used measure of depressive symptoms for which validity and reliability have been demonstrated (Beck, Steer, & Garbin, 1988).

Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1983).

The MMPI is a 566-item inventory that assesses a variety of personality characteristics and psychopathological problems in adults. The MMPI is composed of 10 clinical scales and a number of supplementary and content scales. All items are true/false format. For the present study, we were interested in participant responses to all items comprising all depression scales or subscales on the MMPI. These scales include: scale 2 (depression), the Harris depression subscales, Wiggins depression scale, Tryon, Stein, & Chu's depression scale, and the Wiener-Harmon subtle-obvious depression subscales. In total, 97 items comprise these scales, although several items appear on more than one scale. The MMPI is a well-standardized measure with acceptable reliability and validity. One exception is the low internal consistency of some scales owing in large part to the empirical keying procedures used in scale construction, in which homogeneity of the resulting scales was not a priority (Graham, 1987).

Multiscore Depression Inventory – Short Form (SMDI; Berndt et al., 1983).

The SMDI is a 47-item measure of depressive symptomatology designed for use with nonclinical samples. This short version was developed from the original 118-item version (MDI; Berndt, Petzel, & Berndt, 1980) in an effort to devise a more time-efficient scale of use to researchers without sacrificing the established reliability and validity of the original scale (Berndt & Kaiser, 1980; Berndt et al., 1980). The inventory provides a total depression score in addition to scores on 9 subscales: sad mood, fatigue, guilt, pessimism, social introversion, irritability, instrumental helplessness, low self-esteem, and cognitive difficulty. Symptoms are measured using a true/false response format. Satisfactory internal consistency and test-retest reliability have been demonstrated for the SMDI as has concurrent validity with other self-report depression measures (Berndt, Berndt, & Kaiser, 1984; Berndt et al., 1983).

Procedure

The present study used archival data collected as part of two prior studies. More specifically, data for the clinical sample was collected as part of a larger study on personality and distress, whereas data for the student sample was collected as part of a study on personality and depression.

Clinical Sample

Participants were obtained from one of several units in a large psychiatric hospital affiliated with the University of Ottawa. All patients were diagnosed by one of four staff psychiatrists according to DSM-III-R criteria. Patients who expressed an interest in participating in research were referred to this study by staff psychologists. These patients were then contacted by a female research assistant and asked to participate in a study of personality and distress. All patients referred to this study chose to participate and were paid \$10 for their

time. As noted above, each of these participants completed the MPS, BDI, and MMPI in small groups.

Subclinical Sample

Student participants were recruited from an undergraduate psychology class at a large Canadian university. Those that volunteered to participate completed the MPS, PCI, and SMDI in small groups.

Results

Clinical Sample

As there are a number of scales measuring various aspects of depression on the MMPI (e.g. scale 2, Wiggins content scale for depression, Harris-Lingoes subscales for depression, etc.), a principal-components analysis followed by varimax rotation was performed on all items comprising these scales. This analysis functioned to reduce the number of depression-related outcome variables and to group symptoms for further analysis. Salient component loadings were those $\geq .40$ on one component and $< .40$ on the other components. Examination of the scree plot indicated the existence of three distinct components, which are presented in Table 1. Together, these components accounted for 28.73% of the variance. The first component was interpreted as representing cognitive distortions and somatic disturbances and was comprised of 22 items with loadings ranging from .40 to .77. The second component was interpreted as representing apathy and negative self-evaluation and included 18 items with loadings ranging from .40 to .61. Finally, the third component was interpreted as representing guilt and passivity and was comprised of 13 items with loadings ranging between .41 and .63. Component scores were computed for use in subsequent analyses and are presented in Table 2.

As mentioned earlier, the three depression symptom subscales of the BDI (i.e. cognitive distortions, cognitive-affective symptoms, and somatic complaints; Steer et al., 1987) were also used in this analysis. The means, standard deviations, and alpha coefficients for measures of perfectionism and symptoms of depression measured by the BDI in the clinical sample are presented in Table 2. It should be noted that for each measure, higher scores reflect higher levels of perfectionism and depressive symptomatology. All but one measure in the clinical sample had acceptable internal consistency (i.e. $\alpha = .60-.91$). As the coefficient alpha for the guilt and passivity component of the MMPI was very low (i.e. $\alpha = .02$), this component was considered unreliable and excluded from further analyses.

A MANOVA was conducted to determine if gender differences existed among levels of the outcome variables in this sample and the overall MANOVA was significant, $F(10, 63) = 2.362, p < .05$. No gender differences were evident for self-oriented or socially prescribed perfectionism, however, males reported significantly higher levels of the other-oriented dimension, $F(1, 72) = 5.31, p < .05$. This finding is consistent with those of other studies that revealed gender differences in mean levels of other-oriented perfectionism (e.g. Flett, Hewitt, Blankstein, & Mosher, 1995; Hewitt & Flett, 1991a). For the depression variables, females reported significantly higher levels of total depression, $F(1, 72) = 6.75, p < .05$, a finding that is in line with that of other research (e.g. Boggiano & Barrett, 1991; Kornstein et al., 1995; Young, Fogg, Scheftner, Keller, & Fawcett, 1990) and prevalence rates indicating that major depressive disorder is twice as common in women than in men (Angst, 1992; APA, 1994). Females also reported higher levels of cognitive distortions, $F(1, 72) = 13.23, p < .001$, and cognitive-affective symptoms, $F(1, 72) = 4.18, p < .05$, on the BDI and higher levels of apathy and negative self-evaluation, $F(1, 52) = 14.03, p < .001$, on the MMPI. Although females have not consistently been found to experience higher levels of particular depressive symptoms,

these results are consistent with studies indicating that females experience depressed mood, decreased energy (Young et al., 1990) and psychomotor retardation (Kornstein et al., 1995) more frequently than males in addition to reporting more maladaptive cognitions than males (Boggiano & Barrett, 1991). Gender differences were not found for levels of any other outcome variable.

Correlations between the MPS perfectionism dimensions and the BDI and MMPI depressive symptom clusters are presented in Table 3 for the clinical sample. A Bonferroni correction ($p < .002$) was utilized to compensate for the large number of correlational analyses completed. In order to determine whether gender differences existed in the magnitude of correlations in this sample, Fisher's Z transformation was utilized, however, no gender differences were found. For the BDI, neither self- nor other-oriented perfectionism was associated with total BDI scores or with any of the three symptom clusters assessed. In contrast, socially prescribed perfectionism evidenced highly significant correlations with total BDI scores and with all three depressive symptom clusters. These results indicate that the socially prescribed perfectionism dimension was most directly associated with depression in this sample and that it was associated broadly with all clusters of depressive symptomatology measured by the BDI. Using the enter method, whereby all variables are entered simultaneously, a regression analysis was conducted to determine whether socially prescribed perfectionism was uniquely related to any of the three BDI subscales. This analysis revealed the degree of association between socially prescribed perfectionism and each BDI subscale after controlling for socially prescribed perfectionism's relationship with the other two BDI subscales. Thus, if socially prescribed perfectionism is significantly associated with the first BDI subscale after controlling for the other two, it can be said that socially prescribed perfectionism is uniquely related to the first subscale. The results of this analysis indicated that

socially prescribed perfectionism was not uniquely related to any of the BDI subscales, $R^2 = .25$, $F(3, 70) = 7.787$, $p < .001$.

In like manner to the BDI results, neither self- nor other-oriented perfectionism was associated with the MMPI depression symptoms. Furthermore, none of the three perfectionism dimensions was significantly correlated with apathy and negative self-evaluation or guilt and passivity symptoms as measured by the MMPI. In contrast, socially prescribed perfectionism was significantly related to cognitive distortions and somatic disturbances on the MMPI. This result supports the above conclusion that socially prescribed perfectionism was the dimension most closely related to depression in the clinical sample and supports the finding of a significant relationship between this dimension and both cognitive and somatic symptoms of depression on the BDI.

Subclinical Sample

Means, standard deviations, and alpha coefficients for trait perfectionism, perfectionistic cognitions, and symptoms of depression measured by the SMDI are presented in Table 4. Coefficient alphas for all measures were acceptable (i.e. $\alpha = .71 - .95$). As in the clinical sample, higher scores on each measure reflect higher levels of perfectionism and depression symptoms. A MANOVA indicated that no gender differences existed for any of the outcome variables in this sample, $F(13, 209) = 13.209$, $p > .10$.

Correlations between trait perfectionism, the frequency of perfectionistic cognitions, and the nine SMDI symptom subscales are illustrated in Table 5 for the subclinical sample. Again, a Bonferroni correction ($p < .001$) was utilized to compensate for the large number of correlations computed. As with the clinical sample, Fisher's Z transformations were utilized in order to compare correlations for males and females, however, no gender differences in the magnitude of such correlations were found.

As in the clinical sample, neither self- nor other-oriented perfectionism was significantly associated with any aspect of depression. However, several significant correlations were found between the socially prescribed dimension and depression. Specifically, this dimension was highly significantly associated with total depression scores and with all nine depression symptom subscales. These results suggest that socially prescribed perfectionism was the perfectionism dimension most closely related to depression in this sample. Furthermore, the findings indicate that socially prescribed perfectionism was associated broadly with all clusters of depressive symptomatology measured by the SMDI, as opposed to a select few.

Another way of examining relationships between aspects of perfectionism and SMDI depression symptoms is to use symptom clusters rather than individual depression symptoms in analyses. In this study, such practice has the benefits of reducing the number of outcome variables on the SMDI and of producing results that are more directly comparable to those involving the BDI and MMPI in the clinical sample. According to Berndt (personal communication, May, 2000), the following four clusters of depression symptoms are thought to be captured by SMDI items: cognitive, affective, somatic, and behavioural. The SMDI primarily measures cognitive symptoms of depression (Berndt et al., 1983), thus, this cluster consists of the cognitive difficulty, self-esteem, guilt, pessimism, and helplessness subscales. The affective cluster is comprised of the sad mood and irritability subscales. Somatic and behavioural depressive symptoms are assessed to a lesser extent by the SMDI, thus, each is comprised of only one subscale: energy level for the somatic cluster and social introversion for the behavioural cluster (D. J. Berndt, personal communication, May 2000). Correlational analyses between trait perfectionism, perfectionistic thoughts, and these depression symptom clusters are presented in Table 5, with a Bonferroni correction ($p < .002$). Similarly to results

discussed previously, neither self- nor other-oriented perfectionism was significantly related to depressive symptomatology in this analysis. However, socially prescribed perfectionism was highly significantly associated with all four depressive symptom clusters of the SMDI.¹ Furthermore, the socially prescribed dimension was more strongly related to the cognitive ($Z = 3.81, p < .001$; $Z = 3.75, p < .001$) and affective ($Z = 2.61, p < .01$; $Z = 2.55, p < .05$) depressive symptom clusters than to the somatic and behavioural clusters, respectively.

As with socially prescribed perfectionism, a number of significant associations were found between PCI scores and aspects of depression. Specifically, higher frequencies of perfectionistic thinking were significantly correlated with total depression scores in addition to six of the nine symptom subscales of depression measured by the SMDI (cognitive difficulties, self-esteem, guilt, irritability, sad mood, and helplessness). As for the SMDI depression clusters, perfectionistic cognitions were positively correlated with the cognitive and affective symptom clusters but not with the somatic or behavioural clusters. These findings indicate that high frequencies of thoughts with perfectionistic content are associated with depression characterized primarily by cognitive and affective symptoms.

A series of regression analyses were conducted with the subclinical sample to assess whether socially prescribed perfectionism or perfectionistic cognitions were uniquely associated with any of the depression symptoms measured by the SMDI. As in the clinical sample, the enter method was used for these analyses and both socially prescribed perfectionism, $R^2 = .30, F(9, 215) = 10.436, p < .001$, and perfectionistic cognitions, $R^2 = .24, F(9, 213) = 7.582, p < .001$, were found to be uniquely related to aspects of the SMDI. More specifically, these analyses revealed that socially prescribed perfectionism was uniquely related to low self-esteem, $\beta = .24, t = 2.35, p < .05$, irritability, $\beta = .15, t = 2.46, p < .05$, and

¹ A principle-components analysis followed by varimax rotation was also conducted with the 9 SMDI depression subscales. This analysis revealed three distinct components similar in composition to the clusters just described.

helplessness $\beta = .25, t = 3.63, p < .001$. Additionally, perfectionistic thinking was uniquely associated with symptoms of low self-esteem, $\beta = .21, t = 1.97, p < .05$, guilt, $\beta = .20, t = 2.36, p < .05$, pessimism, $\beta = -.21, t = -2.46, p < .05$, irritability, $\beta = .18, t = 2.75, p < .01$, and sad mood, $\beta = .20, t = 2.01, p < .05$.

Discussion

The current study was an effort to clarify the relationships between aspects of perfectionism and several symptom clusters of depression. Specifically, we sought to determine whether particular perfectionism trait dimensions and/or frequent perfectionistic thoughts tend to be associated with certain types of depressive symptoms. Several findings were in line with our expectations based on theory and early work in this area.

Firstly, results indicate that self-oriented perfectionism was not associated with depression as a main effect in this study. That is, the self-oriented dimension was not significantly related to total depression scores or to any of the depressive symptom clusters in either the clinical or subclinical sample. The lack of a significant relationship between these variables may be explained in a few ways. As discussed previously, theory and research suggest that self-oriented perfectionism is a specific vulnerability factor that requires the presence of achievement or self-related stress in order for depression to develop (Hewitt & Flett, 1993; Hewitt et al., 1996). Thus, in the present study, perhaps participants who scored highly on self-oriented perfectionism were not experiencing sufficient amounts or the necessary type of stress for depression to develop. Furthermore, as achievement stress was not measured in either sample, we could not assess whether or not it interacted with self-oriented perfectionism to lead to depression. Additionally, self-oriented perfectionism is more often related to depression in clinically depressed samples (Enns & Cox, 1999; Hewitt & Flett, 1993)

than in subclinical samples (Flett et al., 1991, 1997). Thus, the self-oriented dimension may only associated with depression as a main effect for clinically depressed individuals. Perhaps the impact of failure events is greater for these individuals who are already experiencing deficits in mood and self-esteem than for others who are not clinically depressed.

As expected, other-oriented perfectionism was not significantly associated with any aspect of depression in this study. This finding is in line with that of other studies (Flett et al., 1995; Hewitt & Flett, 1991a) and makes sense conceptually as other-oriented perfectionism is an interpersonal dimension of perfectionism that involves holding unrealistic expectations for others. Thus, it is possible that other-oriented perfectionism has greater negative implications for significant others than for the perfectionist (Hewitt & Flett, 1991a). In fact, recent research has demonstrated that other-oriented perfectionism is associated with negative outcomes for the target of the perfectionist's unrealistic expectations (Hewitt, Flett, & Mikail, 1995).

Also in line with expectations, socially prescribed perfectionism was highly relevant to depression in both the clinical and subclinical samples in this study. Unlike the other two perfectionism dimensions, socially prescribed perfectionism was significantly associated with all depressive symptom subscales measured by the BDI and SMDI and with one component of depression on the MMPI. More specifically, in the clinical sample, socially prescribed perfectionism was highly significantly correlated with the cognitive distortions, cognitive-affective, and somatic complaints subscales of the BDI. Furthermore, this dimension was the only one to evidence a significant association with cognitive distortions and somatic complaints as measured by the MMPI. Similarly, in the subclinical sample, socially prescribed perfectionism was significantly correlated with all nine symptom subscales measured by the SMDI. When these subscales were reduced to four symptom clusters, socially prescribed perfectionism continued to be related to all of the clusters. More specifically, socially

prescribed perfectionism was most highly associated with the cognitive and affective symptom clusters, but also with somatic and behavioural clusters. Taken together, these findings indicate that socially prescribed perfectionism was relevant to depression in these samples and was associated broadly with a variety of depressive symptoms rather than with a select few. More specifically, the results suggest that when socially prescribed perfectionists become depressed, they are likely to experience disturbances primarily in cognitions and mood, but also in body and behaviour.

The importance of socially prescribed perfectionism to specific symptom clusters of depression was highlighted by the results of the regression analyses. That is, socially prescribed perfectionism was found to be uniquely associated with symptoms of low self-esteem, helplessness, and irritability. These findings are in line with perfectionism theory, which suggests that failure to meet the perceived unrealistic expectations of others can impact negatively on socially prescribed perfectionists' level of self-esteem (Flett, et al., 1991), which is based largely on their ability to meet those expectations. Furthermore, these findings suggest that socially prescribed perfectionists' are likely to experience irritability and feelings of helplessness when they are unable to meet the perceived expectations of others. These results are in line with theory and prior research suggesting that, for socially prescribed perfectionists, failure experiences are likely to lead to negative emotions such as anger and to feelings of helplessness. Such feelings may be related to the perfectionist's perceived inability to meet others' standards and/or to the perception that others are being unfair or unrealistic in their expectations (Hewitt & Flett, 1991a). These findings also highlight the implications that a perceived lack of control has for socially prescribed perfectionists. That is, the socially prescribed perfectionism dimension has been found to be positively associated with an external locus of control (Hewitt & Flett, 1991a) and negatively associated with perceived interpersonal

control (Flett et al., 1995). As the perception that one's life is controlled by external factors (e.g. powerful others, chance) is uniquely related to the severity of depression (Burger, 1984), socially prescribed perfectionists are likely to be at increased risk for depressive outcomes.

The above finding of a significant relationship between socially prescribed perfectionism and somatic symptoms of depression contradicts the results of a similar study by Enns & Cox (1999) who did not find any significant correlations between perfectionism and somatic depression symptoms. Perhaps sample differences can partially account for these discrepant findings as Enns & Cox's sample was comprised of individuals with major depression, whereas, the present study consisted of a heterogeneous clinical sample and a subclinical student sample. It is possible that the depression experienced by participants in each sample may have manifest differently. Enns & Cox (1999) also found a significant relationship between self-oriented perfectionism and depression, which was not found in the present study. However, it appears that this relationship was accounted for by other variables. That is, when the authors controlled for neuroticism and extraversion, self-oriented perfectionism was no longer significantly associated with depression. Based on the conflicting results relating to perfectionism and somatic depression symptoms, future examination of this relationship is warranted to determine which of the findings are more robust.

The importance of aspects of perfectionism to depression indicated by the above results is further supported by those involving another aspect of perfectionism, perfectionistic thinking. In the subclinical sample, the frequency of perfectionistic cognitions was highly significantly associated with total depression and all but three of the nine depression symptom subscales on the SMDI. Furthermore, when the subscales were reduced into four clusters, high frequencies of perfectionistic thinking were significantly associated with two of the clusters. More specifically, perfectionistic cognitions were associated with the cognitive and affective

depression symptom clusters, but not with the somatic or behavioural symptom clusters. These findings replicate prior research (Flett et al., 1998) by indicating that the degree to which one engages in perfectionistic thinking is relevant to depressive outcomes, and extend existing knowledge by suggesting that perfectionistic thinking has implications for cognitive and affective depressive symptoms.

As with socially prescribed perfectionism, the findings of the regression analyses involving perfectionistic cognitions highlight their importance to certain depressive symptoms. Perfectionistic thinking was uniquely related to cognitive symptoms of low self-esteem, guilt, and pessimism, and to affective symptoms of irritability and sad mood. These findings are consistent with theory (Flett et al., 1998) suggesting that those who ruminate about their efforts to attain high standards are likely to experience irritability, sadness, and pessimism when a discrepancy exists between their ideal and current performance. Furthermore, to the extent that their sense of self-worth is derived from the attainment of high standards, this discrepancy may also impact negatively on their level of self-esteem. These results also suggest that those who engage in high levels of perfectionistic thinking are likely to experience guilt, perhaps related to their perceived sub-standard performance.

As suggested earlier, the results of this study may have implications for the onset, severity, course, treatment, and/or outcome of depression experienced by perfectionists. Although there is not yet a clear understanding of the implications of particular depressive symptoms for the onset, severity, course, treatment or outcome of a depressive episode, several studies shed light on this issue. For instance, research has demonstrated that individuals with somatic symptoms tend to experience more severe depression (Tuerkcapar et al., 1999). Furthermore, depression involving dysfunctional beliefs has been shown to be more severe and associated with nonrecovery over time (Scott, Harrington, House, & Ferrier, 1996) and higher

levels of negative cognition have been associated with slower recovery from depression (Dent & Teasdale, 1988). Additionally, depression characterized by melancholia has been found to be associated with a poorer outcome than depression without melancholia (Mazure, Nelson, & Jatlow, 1990). To our knowledge, no studies have examined differences in severity, course, treatment, or outcome for individuals with several clusters of depressive symptoms versus those with fewer clusters of symptoms. However, based on the above research with single symptom clusters, it is possible that depression characterized by several symptom clusters would be associated with even more severe depression, poorer response to treatment, and a poorer prognosis. Should such relationships exist, socially prescribed perfectionism and perfectionistic cognitions would have even greater implications for individuals who develop depression.

Limitations and Future Research

Some limitations of the current study follow from the use of archival data. For instance, different depression measures were used in the clinical and subclinical samples. Although the measures used were developed for utilization with each type of sample (i.e. clinical vs. subclinical), it is difficult to know if they measure depressive symptomatology in a comparable manner. For example, the degree to which symptoms on one measure with one sample represent similar symptoms on another measure with another sample is difficult to assess. Thus, when comparing correlational findings across samples, measure variability becomes a confound. To help alleviate this difficulty, future studies could include measures specifically designed for use with each sample in addition to measures completed by participants in both samples. This way, depression would be measured in the most suitable manner for each type of sample and results would be more easily compared across samples. Furthermore, the frequency of perfectionistic cognitions was not assessed in this study's clinical sample. Given the

demonstrated relationships between perfectionistic thinking and various depressive symptoms in the subclinical sample, examination of these relationships in clinical samples is an important next step. Another variable that was not assessed in the current study is cultural background. As research has indicated that depression may manifest itself differently in some cultures than in others (e.g. Lipscomb & Katon, 1987; Crittenden, Fugita, Bae, Lamug, & Lin, 1992), future studies could address whether aspects of perfectionism are associated with different clusters of depressive symptoms as a function of cultural background.

Additionally, as self-oriented perfectionism is conceptualized as a specific vulnerability factor that requires the presence of achievement or self-related stress to lead to depression (Hewitt & Flett, 1993; Hewitt et al., 1996), the inclusion of measures of this type of stress would be useful in future studies. As discussed previously, self-oriented perfectionism was not related to depression in this study. Although this result has been found in prior research (e.g. Flett et al., 1991; Flett et al., 1997), the possibility exists that in the present study, participants were not experiencing sufficient stress in order for self-oriented perfectionism to lead to depression. Without adequate measures of participants' stress, this matter cannot be addressed further.

A number of methodological difficulties also arise from the use of self-report questionnaires in research. For instance, the majority of measures used in this study do not have a mechanism in place to account for response bias. Thus, participants may misrepresent their difficulties, views, behaviours, thoughts, etc. to present a more or less desirable self to others. Thus, it is possible that the current findings were influenced by response bias. Additionally, questionnaires may not fully capture the richness or nature of depressive symptomatology. Thus, future studies would benefit from the inclusion of additional assessment tools. For instance, the addition of interview measures, behavioural observation

and recording, diary recordings, and multiple informants are a few ways in which to reduce the impact of response biases on results.

The current study addressed perfectionism's relationship to concurrent depressive symptomatology with a cross-sectional design, which precluded analyses relating to the onset, course, or relapse of depression symptoms over time. Given the role of perfectionism in chronic depression (Hewitt et al., 1998), there is a need to assess the relationships of trait perfectionism and perfectionistic cognitions to particular clusters of depressive symptoms over time. As discussed previously, such relationships may have implications for the course, severity, treatment, and outcome of depression experienced by perfectionistic individuals. Further research focused on differences in course, severity, treatment, and relapse rates of depression as a function of particular types or clusters of depressive symptoms is also needed. Such research would shed light on the implications of perfectionism for those who become depressed.

Conclusions

In summary, this study attempted to further our current understanding of the role of perfectionism in depression and of the nature of the depression that perfectionistic individuals tend to experience. The results suggest that socially prescribed perfectionism is the dimension most directly associated with depression. Furthermore, rather than being associated with a specific depression symptom profile, the findings of this study indicate that socially prescribed perfectionism is associated widely with a range of depressive symptomatology. Thus, when socially prescribed perfectionists become depressed, it appears that they are likely to experience disturbances in a number of areas: cognition, mood, and to a lesser extent, bodily functioning and behaviour. Moreover, the degree to which one engages in perfectionistic thinking is also relevant to depressive outcomes. Similarly to socially prescribed

perfectionism, individuals who engage in high levels of perfectionistic thinking are likely to experience primarily cognitive and affective symptoms when depressed. These findings stress the importance of attempts to further understand the role of perfectionism in depressive outcomes and of studying multiple facets of depressive phenomena.

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Table 1**Principal-Components Loadings for the MMPI Depression Items**

MMPI DEPRESSION ITEM	COMPONENT		
	I	II	III
I am easily awakened by noise (T)	.43		
I work under a great deal of tension (T)	.49		
My sleep is fitful and disturbed (T)	.69		
I am in just as good physical health as most of my friends (F)	.45		
Most of the time I feel blue (T)	.48		
I usually feel that life is worthwhile (F)	.55		
I don't seem to care what happens to me (T)	.62		
Much of the time I feel as though I have done something wrong or evil (T)	.75		
I am happy most of the time (F)	.41		
Most nights I go to sleep without thoughts bothering me (F)	.45		
During the past few years, I have been well most of the time (F)	.45		
I cry easily (T)	.53		
I am afraid of losing my mind (T)	.47		
I feel weak all over much of the time (T)	.47		
I believe I am a condemned person (T)	.55		
I believe I am no more nervous than most others (F)	.40		
Most of the time I wish I were dead (T)	.50		
I deserve severe punishment for my sins (T)	.66		
I feel like giving up quickly when things go wrong (T)	.47		
I cannot do anything well (T)	.46		
The future seems hopeless to me (T)	.69		
I often feel as if something dreadful is going to happen (T)	.66		
My daily life is full of things that keep me interested (F)		.60	
I am about as able to work as I ever was (F)		.46	
At times I feel like smashing things (F)		.51	
I have periods of days or weeks when I can't get going (T)		.61	
I am a good mixer (F)		.52	
I wish I could be as happy as others seem to be (T)		.40	
I seem to be about as capable and as smart as others (F)		.43	
I certainly feel useless at times (T)		.49	
I enjoy many different kinds of play and recreation (F)		.60	
Frequently I find myself worrying about something (T)		.44	
I have difficulty starting to do things (T)		.50	
Even when I am with people, I feel lonely much of the time (T)		.45	
I feel anxiety about something or someone almost all the time (T)		.55	
I have several times given up because I thought too little of my ability (T)		.52	
I have often felt badly over being misunderstood (T)		.48	
Often, even though everything is fine, I feel I don't care about anything (T)		.48	
I have sometimes felt that I could not overcome my difficulties (T)		.47	
I take disappointments keenly and can't put them out of my mind (T)		.47	
At times I feel like swearing (T)			.56
I sometimes keep on at a thing until others lose patience with me (T)			.49
I do many things which I regret afterwards (T)			.49

At times I feel like picking a fist fight with someone (F)	.41
Sometimes, when embarrassed, I sweat, which annoys me greatly (T)	.41
I like to flirt (F)	.50
Sometimes I feel excitedly happy or on top of the world (F)	.50
I sweat very easily even on cool days (T)	.45
I do not blame a person for taking advantage of others (F)	.42
I certainly have had more than my share of things to worry about (T)	.63
I feel unable to tell anyone all about myself (T)	.47
Once in a while, I laugh at a dirty joke (F)	.45
I have often felt guilty (T)	.44

Note: (T) = item indicative of depression if respondent answers true

(F) = item indicative of depression if respondent answers false

The wording of some items was altered slightly in order to fit the table.

Table 2

Means, Standard Deviations, and Alpha Coefficients for the MPS, the BDI Subscales, and the MMPI Depression Components in the Clinical Sample

MEASURE		TOTAL (n = 75)		MALES (n = 39)		FEMALES (n = 36)	
	α	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<u>Multidimensional Perfectionism Scale</u>							
Self-Oriented	.86	71.74	17.33	72.51	15.33	70.91	19.45
Other-Oriented	.72	54.31	13.15	57.62*	11.03	50.73	14.42
Socially Prescribed	.84	58.16	16.68	56.67	15.36	59.77	18.08
<u>Beck Depression Inventory</u>							
Total Score	.93	17.98	13.12	14.27	11.90	21.90*	13.36
Cognitive Distortions	.84	5.92	4.83	4.08	3.86	7.86***	5.04
Cognitive-Affective	.88	8.63	6.37	7.18	5.86	10.15*	6.61
Somatic Complaints	.60	2.52	2.51	2.27	2.55	2.78	2.49
<u>MMPI Component Scores</u>							
Cog. Distortions + Somatic Disturb.	.91	0	1.00	-.25	.94	.23	1.01
Apathy + Neg. Self-Evaluation	.67	0	1.00	-.47	1.90	.44***	.89
Guilt + Passivity	.02	0	1.00	0	1.00	0	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$ (indicates which gender reported higher levels of variables for which significant gender differences were found)

Table 3

Correlations between Perfectionism and Depressive Symptom Clusters in the Clinical Sample

DEPRESSION MEASURE	PERFECTIONISM DIMENSION		
	<u>Self-Oriented</u>	<u>Other-Oriented</u>	<u>Socially Prescribed</u>
<u>Beck Depression Inventory</u>			
Total Score	.02	-.01	.49***
Cognitive Distortions	.01	-.08	.46***
Cognitive-Affective Symptoms	.01	.00	.46***
Somatic Complaints	.07	.14	.42***
<u>Minn. Multiphasic Personality Inventory</u>			
Cognitive Distortions and Somatic Complaints	.01	-.01	.44**
Apathy and Negative Self-Evaluation	-.12	-.26	.02

** $p < .01$, *** $p < .001$

Table 4

Means, Standard Deviations, and Alpha Coefficients for the MPS, PCI, and SMDI Depression Subscales and Factors in the Subclinical Sample

MEASURE	TOTAL (n=225)			MALES (n=71)		FEMALES (n=154)	
	α	M	SD	M	SD	M	SD
<u>Multidimensional Perfectionism Scale</u>							
Self-Oriented	.88	69.14	14.84	70.80	14.73	68.38	14.87
Other-Oriented	.75	56.59	11.22	59.18*	12.29	55.40	10.52
Socially Prescribed	.79	54.43	12.15	56.62	12.12	53.42	12.07
<u>Perfectionistic Cognitions Inventory</u>	.94	45.09	20.56	48.55	20.94	43.47	20.25
<u>S-Multiscore Depression Inventory</u>							
Total Score	.90	17.14	11.01	16.76	10.83	17.32	11.12
Cognitive Difficulty	.76	3.00	2.05	2.73	2.01	3.12	2.06
Self-Esteem	.80	1.60	1.86	1.46	1.79	1.67	1.90
Guilt	.72	2.86	1.90	2.83	1.83	2.88	1.94
Pessimism	.83	1.79	1.87	1.68	1.87	1.84	1.87
Helplessness	.71	.92	1.24	1.11	1.37	.83	1.17
Sad Mood	.95	1.15	1.42	1.11	1.41	1.67	1.43
Irritability	.76	1.79	1.71	1.97	1.74	1.71	1.69
Energy Level	.84	2.72	2.20	2.45	2.18	2.84	2.20
Social Introversion	.71	1.31	1.49	1.41	1.49	1.27	1.50
<u>SMDI Symptom Clusters</u>							
Cognitive	.87	10.17	7.12	9.82	7.06	10.33	7.16
Affective	.80	2.94	2.50	3.08	2.36	2.88	2.56
Somatic	.84	2.72	2.20	2.45	2.18	2.84	2.20
Behavioural	.71	1.31	1.49	1.41	1.49	1.26	1.50

* $p < .05$ (indicates which gender reported higher levels of variables for which significant gender differences were found)

Table 5

Correlations between Perfectionism, Perfectionistic Thinking, and Depressive Symptom Clusters in the Subclinical Sample

DEPRESSION MEASURE	ASPECT OF PERFECTIONISM			
	Self-Oriented	Other-Oriented	Socially Prescribed	Perfectionistic Cognitions
<u>S-Multiscore Depression Inventory</u>				
Total Score	.00	.13	.47***	.40***
Cognitive Difficulty	.03	.12	.27***	.31***
Self-Esteem	-.02	.08	.45***	.38***
Guilt	.06	.05	.38***	.38***
Pessimism	-.05	.10	.35***	.18
Helplessness	-.08	.06	.44***	.28***
Sad Mood	-.02	.05	.33***	.33***
Irritability	.01	.16	.31***	.31***
Energy Level	-.01	.07	.25***	.19
Social Introversion	.07	.14	.25***	.15
<u>SMDI Symptom Clusters</u>				
Cognitive	-.01	.10	.47***	.38***
Affective	-.01	.14	.40***	.40***
Somatic	-.01	.07	.25***	.19
Behavioural	.01	.14	.25***	.15

Note: n = 225. ** p < .01, *** p < .001.