

Perfectionism in Anxiety and Depression: Comparisons across Disorders, Relations with Symptom Severity, and Role of Comorbidity

Heather A. Wheeler

*Humber River Regional Hospital, Toronto, Ontario
McMaster University, Hamilton, Ontario*

Kirk R. Blankstein

University of Toronto, Mississauga, Ontario

Martin M. Antony

Ryerson University, Toronto, Ontario

Randi E. McCabe and Peter J. Bieling

*St. Joseph's Healthcare Hamilton
McMaster University, Hamilton, Ontario*

We investigated perfectionism in clinical samples using new measures of maladaptive cognitive-personality dimensions—the *Evaluative Concerns Perfectionism Scale* (ECPS) and *Self-Critical Perfectionism Scale* (SCPS), as well as the Frost (FMPS) and the Hewitt and Flett (HMPS) *Multidimensional Perfectionism Scales*. Outpatients ($N = 190$) with a principal diagnosis of social anxiety disorder (SAD), panic disorder with or without agoraphobia (PDA), obsessive-compulsive disorder (OCD), or predominantly major depressive disorder were compared to non-psychiatric controls. Patients with depression and SAD had similar or significantly higher scores than the controls, and patients with PDA and/or OCD on many perfectionism measures. OCD patients were also higher than controls and those with PDA on many scales. PDA patients were similar to controls on all but a few measures. The SCPS was the only consistent unique positive predictor of variance on the *Depression Anxiety Stress Scale* (DASS) in a combined patient group.

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Correspondence concerning this article should be addressed to Dr. Kirk Blankstein, Department of Psychology, University of Toronto Mississauga, Mississauga, Ontario, Canada L5L 1C6; E-mail: kirk.blankstein@utoronto.ca.

Over the past 15 years, perfectionism and related constructs have become the focus of extensive theoretical interest and empirical research that illustrates their influence on a wide variety of psychological disorders and indices of maladjustment (for reviews, see Flett & Hewitt, 2002a; Shafran & Mansell, 2001). Indeed, perfectionism has been deemed a major risk factor for anxiety and depression (e.g., Antony, Purdon, Huta, & Swinson, 1998; Blankstein & Dunkley, 2002; Blankstein & Hillis Lumley, 2008). Although early theorizing and research considered perfectionism from a unidimensional perspective, most current work views it as a multidimensional cognitive-personality construct (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) and different components are related differentially to maladaptive and some adaptive qualities (for reviews see Bieling, Israeli, & Antony, 2003; Enns, Cox, & Clara, 2002; Shafran & Mansell, 2001; Stoeber & Otto, 2006).

Researchers have used different components, and different combinations of components, from either two or three of the primary multidimensional conceptualizations to arrive at their version of two higher-order dimensions (see Stoeber & Otto, 2006, for review), as well as different labels for the primary dimensions. For example, Blankstein and Dunkley (e.g., Blankstein & Dunkley, 2002; Blankstein, Dunkley, & Wilson, 2008) refer to a higher-order or latent construct comprised of maladaptive components as evaluative concerns perfectionism (ECP) and a construct comprised of components that have some adaptive aspects as personal standards perfectionism (PSP).

As described by Blatt (1995) in his seminal paper on the “destructiveness” of perfectionism, specific ECP components are associated theoretically and empirically with two other cognitive-personality constructs—self-criticism (see Blatt, D’Afflitti, & Quinlan, 1976), and autonomy (see Beck, Epstein, Harrison, & Emery, 1983). Blankstein and Dunkley (e.g., Blankstein & Dunkley, 2002; also see Clara, Cox, & Enns, 2007) described another negative higher order cognitive-personality vulnerability dimension—Self-critical Perfectionism (SCP), that refers to the shared variance among the perfectionism components that comprise ECP and critical aspects of self-criticism and autonomy. This construct obviously shares significant variance with ECP. In the current study, we examined links between perfectionism, assessed by the two most widely used multidimensional measures, and different anxiety disorders and depression, relative to a non-psychiatric patient control group. In addition, we examined how the components of perfectionism relate to symptom severity as assessed by reliable and valid self-report measures of anxiety, dysphoria, and stress, and the role of comorbidity in the relations with perfectionism. We further examined these links using two new measures (Blankstein, Harkins, & Jalali, 2008; Blankstein, Prezio, & Taylor, 2008) devised to capture more specifically the key maladaptive aspects of perfectionism represented by the ECP and SCP dimensions.

We also address the controversy about the relative maladaptiveness or adaptiveness of perfectionism (e.g., Stoeber & Otto, 2006), and the critical components of “clinical” perfectionism (Shafran, Cooper, & Fairburn, 2002). If we can identify significant relations between perfectionism and anxiety and mood disorders and determine for whom the link is strongest, we might be able to address more directly what constitutes effective treatment for perfectionistic individuals with these disorders. This work is important because perfectionism is difficult to treat and can hinder effective treatment of other psychological problems (e.g., Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998).

MULTIDIMENSIONAL PERFECTIONISM, ANXIETY, AND DEPRESSION

Presently, the most commonly used and well-validated measures of perfectionism were developed by two separate research teams and assigned the same name despite the fact they conceptualized perfectionism differently. Hewitt and Flett's (1991a) Multidimensional Perfectionism Scale (HMPS) employs a three-component model whereas Frost and colleagues' (Frost, Marten, Lahart, & Rosenblate, 1990) Multidimensional Perfectionism Scale (FMPS) represents perfectionism as a six-component model. Both the HMPS and the FMPS have subscales that measure elements of perfectionism that have been deemed maladaptive (i.e., linked with distress and other negative outcomes) as well as relatively adaptive (i.e., typically not linked strongly with distress and sometimes linked with positive outcomes). Blankstein and Dunkley (2002) summarized research that indicated which subscales of the HMPS and FMPS are associated with negative outcomes, including socially prescribed perfectionism (SPP) from the HMPS, and concern over mistakes (CM), doubts about actions (DA), parental criticism (PC), and parental expectations (PE) from the FMPS. The Hewitt and Flett self-oriented perfectionism (SOP) and Frost personal standards (PS) subscales are typically not strongly associated with negative adaptational outcomes and are possibly relatively adaptive, especially when the influence of maladaptive subscales is partialled out or controlled for (e.g., Mills & Blankstein, 2000). Although Frost et al. (1990, p. 450) proposed that the perfectionist's self-imposed "setting of and striving for high standards is certainly not in and of itself pathological," some researchers eschew the possibility that these components can ever be adaptive (e.g., Flett & Hewitt, 2002b), and Shafran and Mansell (2001, p. 887) argued that SOP and PS (along with CM) come "closest to the classical concept of perfectionism whereas the other subscales do not measure the construct."

In both nonclinical and clinical groups, researchers have linked the "maladaptive" subscales to negative anxiety and mood outcomes (see Flett & Hewitt, 2002a; Shafran & Mansell, 2001, for reviews). Some studies reported links between perfectionism components and specific types of anxiety symptoms (e.g., Bhar & Kyrios, 1999, and Blankstein, Flett, Hewitt, & Eng, 1993, for socially prescribed [SPP]; Rheaume, Freeston, Dugas, Letarte, & Ladouceur, 1995, for CM and obsessive-compulsive phenomena; Lundh & Öst, 1996, for SPP, CM, and DA; Rosser, Issakidis, & Peters, 2003 for CM and DA and social anxiety). Indeed, perfectionism is an important component of a cognitive model of social anxiety disorder (SAD; Heimberg, Juster, Hope, & Mattia, 1995) and is considered to be a risk factor for the development of obsessive-compulsive disorder (OCD; Obsessive Compulsive Cognitions Working Group, 1997). Differences between and/or among patient groups and nonclinical controls have been reported for SAD (e.g., Bieling & Alden, 1997, using HMPS; Juster et al., 1996, using FMPS), OCD (e.g., Frost & Steketee, 1997, using FMPS), and panic disorder with or without agoraphobia (PDA; e.g., Saboonchi, Lundh, & Öst, 1999, using FMPS; also SAD). Iketani and colleagues (2002a) compared PD patients and controls on the FMPS. The PDA scored highest on CM, PC, and PS. A study by Antony, Bieling, Cox, Enns, and Swinson (1998) was more comprehensive in that it compared perfectionism levels on both the FMPS and HMPS across several anxiety disorder groups (PDA, OCD, SAD) and nonclinical controls. Patients whose symptoms met criteria for more than one of the diagnostic groups were excluded.

Relative to the other groups, SAD was associated with greater CM, DA, PC, and SPP. As expected, OCD patients had the highest elevations on DA. PDA was associated with moderate CM and DA elevations. Frost and Steketee (1997) also examined PDA patients and Antony et al. (1998) examined patients with specific phobias; however, in both cases the samples were relatively small. Bieling, Summerfeldt, Israeli, and Antony (2004) examined the link between the HMPS and FMPS and comorbidity (i.e., a larger number of Axis I diagnoses) in anxiety disorders clinic patients. Scores on both perfectionism measures were correlated with number of diagnoses.

Further, SPP is a robust and consistent correlate or predictor of dysphoria in students (e.g., Blankstein & Hillis Lumley, 2008; Flett, Hewitt, Blankstein, & Mosher, 1995) and depression in psychiatric patients (e.g., Hewitt & Flett, 1991b; Hewitt, Flett, & Ediger, 1996; Sherry, Hewitt, Flett, & Harvey, 2003). Maladaptive components of perfectionism, especially SPP and CM, are also related to associated negative factors, including daily hassles stress, procrastination, poor problem-solving skills, emotion-focused coping strategies, and a perceived lack of social support (e.g. Bieling et al., 2003; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Flett, Hewitt, Blankstein & Gray, 1998).

EVALUATIVE CONCERNS PERFECTIONISM

Frost, Heimberg, Holt, Mattia, and Neubauer (1993) reported an exploratory factor analysis of the HMPS and FMPS and demonstrated that different components combine to form two underlying dimensions—a “maladaptive evaluation concerns” dimension related to depression and higher levels of negative affect (but not positive affect) and a “positive strivings” dimension correlated with higher positive affect (but not depression or negative affect). Suddarth and Slaney (2001) identified similar dimensions in an analysis that also included the Almost Perfect Scale—Revised (APS-R; Slaney et al., 2001) subscales. The higher-order, two-factor structure has also been demonstrated empirically using confirmatory factor analysis (e.g., Blankstein, Dunkley, & Wilson, 2008; Cox, Enns, & Clara, 2002; Rice, Lopez, & Vergara, 2005).¹ Although relations between ECP factors and anxiety and dysphoria have been reported (e.g., Bieling et al., 2003), few studies have examined relations in anxiety or mood disorders. Bieling et al. (2004) reported that a composite ECP scale predicted higher levels of comorbidity among anxiety disorder patients whereas PSP did not, and Cox, Enns, and Clara (2002) reported that ECP was positively correlated with scores on the Beck Depression Inventory (BDI), whereas a PSP scale was weakly (but significantly) correlated with depression in adult outpatients.

A unique feature of several recent studies (e.g., Blankstein, Dunkley, & Wilson, 2008; Rice, Lopez, & Vergara, 2005; Suddarth & Slaney, 2001) is the inclusion of the APS-R discrepancy subscale as an essential ECP component. Discrepancy involves “the perception that one consistently fails to meet the high standards one has set for oneself” (Slaney et al., 2001, p. 69). In our comprehensive, integrative conceptualization, the concept of discrepancy captures the sense of helplessness that high ECP people feel when they believe they might never be able to attain their own *or others’*

1. Although some researchers formed adaptive versus maladaptive factors by combining subscales from only one of the extant multidimensional measures (e.g., Chang, Watkins, & Banks, 2004), our focus is on integration of two or more extant measures to form higher order factors.

ideals. Blankstein, Prezio, and Taylor (2008) developed a new, refined measure of ECP that integrates, at the item level, the maladaptive components of the three major conceptualizations of perfectionism, including the concept of discrepancy as a defining feature. The Evaluative Concerns Perfectionism Scale (ECPS) measures beliefs that others set impossible standards, others are dissatisfied with the person's performance, and others evaluate the person negatively.

SELF-CRITICAL PERFECTIONISM

Derived from a broader theoretical perspective, SCP is based on the shared variance among ECP variables, self-criticism (Blatt, D'Afflitti, & Quinlan, 1976), and autonomy (Beck et al., 1983). Conceptually, all three constructs involve critical self-evaluations. Self-critical individuals strive for high achievement and perfection, are persistently and harshly critical and demanding of themselves, are chronically concerned about criticism, disapproval, and rejection from others, and are unable to derive satisfaction from successful performance (Blatt & Zuroff, 1992; Nietzel & Harris, 1990). Autonomous individuals are concerned with achievement and possible failure, and try to maximize control over the environment in order to reduce the probability of failure and criticism (Beck et al., 1983; Clark, Steer, Haslam, Beck, & Brown, 1997). Self-criticism and autonomy are related to negative adaptational outcomes in both nonclinical and clinical samples (see Coyne & Whiffen, 1995; Enns & Cox, 1997), including dysphoria and major depressive disorder (e.g., Cox, McWilliams, Enns, & Clara, 2004; Luyten et al., 2007) and SAD (Cox, Fleet, & Stein, 2004; Cox et al., 2000).² Cox, Walker, Enns, and Karpinsky (2002) found that self-criticism was associated with SAD severity even after controlling for depression.

The similarities among the negative components of perfectionism (e.g., SPP), self-criticism, and autonomy have been demonstrated empirically in nonclinical samples (see Dunkley & Blankstein, 2000; Dunkley, Zuroff, & Blankstein, 2003, for reviews; also see Shahar, 2006). Dunkley, Zuroff, and Blankstein (2006) compared the relative predictive ability of specific perfectionism components assessed by the HMPS and FMPS with self-criticism assessed by the *Depressive Experiences Questionnaire* (DEQ; Blatt et al., 1976) and determined that self-criticism was the most robust predictor of maladjustment factors, including negative affect, and low positive affect. Similarly, Dunkley, Blankstein, Masheb, and Grilo (2006) reported that "self-criticism substantially accounts for the relation between perfectionism measures and depressive, anxiety and eating disorder symptoms" (p. 80).

Blankstein, Harkins, and Jalali (2008; also see Harkins, Blankstein, Jalali, Krawczyk, & Wheeler, 2003) developed a new measure of SCP derived from the various measures of the three theoretical constructs. The *Self-Critical Perfectionism Scale* (SCPS) is comprised of three 15-item alternate forms. The ECP and SCP constructs are not identical (see Dunkley et al., 2003); however, they share a great deal in common both conceptually and empirically. The refined ECPS and SCPS have not been used in patient samples nor compared in the same study.

2. Results are less clear-cut for autonomy, possibly a function of measurement issues in early studies (see Enns & Cox, 1997).

THE CURRENT STUDY

Our study differs from, complements, and extends previous research on perfectionism and anxiety and mood disorders in important respects. First, we examined several different anxiety disorders in conjunction with a depression group and a non-patient control group in the same study. Second, this is the first study to examine similarities and differences in levels of perfectionism components and higher-order dimensions between different anxiety disorders, depression, and controls in conjunction with (a) an examination of the relation between perfectionism and symptom severity in the patient groups, and (b) an examination of the relation between perfectionism and patient Axis I comorbidity. Third, our assessment of perfectionism was more comprehensive than most past studies because we administered the two most widely used measures: the HMPS and the FMPS. Fourth, we addressed the maladaptiveness versus adaptiveness of perfectionism from a dimensional, integrative perspective. Fifth, we included a new measure of ECP developed specifically to capture the essential maladaptive aspects of perfectionism tapped by the major extant multidimensional measures. Finally, we adopted a broader perspective and employed a new measure of SCP based on the integration of ECP components with measures of self-criticism and autonomy.

METHOD

Participants

Participants consisted of patients whose principal diagnosis fell into one of four clinical groups: SAD ($n = 68$), PDA ($n = 58$; 22 with agoraphobia and 35 without agoraphobia), OCD ($n = 26$), and depression ($n = 39$), as well as a group of nonclinical volunteers ($n = 23$). Thirty-two of the 39 patients in the depression group were diagnosed with major depressive disorder (82%), 3 with dysthymic disorder, 2 with bipolar disorder, 1 with depressive disorder not otherwise specified, and 1 with adjustment disorder with depressed mood. In total, there were 214 participants. Patients were adult outpatients at St. Joseph's Healthcare who either came to the Anxiety Treatment and Research Centre (ATRC) for a diagnostic intake assessment or who presented for group treatment at the Mood Disorders Clinic (MDC). For patients, additional diagnoses were included for the purpose of evaluating comorbidity. One of the main strategies used to define comorbidity was the number of additional diagnoses (i.e., apart from the principal diagnosis). The number of additional diagnoses ranged from 0 to 7. More specifically, 20% of the patients had no comorbid diagnoses, 23% had at least one additional disorder (apart from the principal diagnosis), 25% had two additional disorders, and 29% had at least three additional disorders.³ These findings are comparable to those reported by Bieling et al. (2004). In terms of type of comorbidity, 70% of patients had at least one additional anxiety disorder, 36.3% had at least one

3. Some patients might technically have had co-principal diagnoses but were assigned to groups based on the disorder for which they decided to obtain treatment first. The other co-principal disorder was included as an additional diagnosis.

additional mood disorder, and 12% had some other type of disorder (e.g., substance abuse, eating disorder). Since neither the ATRC nor the MDC consistently assess for the presence of personality disorders, it was not possible to determine the distribution of Axis II conditions.

The sample had a mean age of 37 years and 69% of participants were female. Ethnic backgrounds were 69% Caucasian, 4% Asian, 1% Black, 2% Native Canadian; ethnicity data were missing for 22% of participants. Fifty-eight percent of participants were employed, 14% were students, and 24.6% were not working at the time. In terms of marital status, 38% were single, 38% were married, 4.4% lived common-law, and 7.4% were separated or divorced.

Measures

Frost et al. (1990) Multidimensional Perfectionism Scale (FMPS) is a 35-item measure comprised of six subscales: CM (e.g., "If I fail at work/school, I am a failure as a person"), PS (e.g., "It is important to me that I be thoroughly competent in everything that I do"), PE (e.g., "My parents wanted me to be the best at everything"), PC (e.g., "My parents never tried to understand my mistakes"), DA (e.g., "Even when I do something very carefully, I often feel that it is not quite right"), and PO (e.g., "Neatness is very important to me"). This measure and its subscales have demonstrated high validity in a wide variety of samples (e.g., Frost & DiBartolo, 2002).

Hewitt and Flett (1991a) Multidimensional Perfectionism Scale (HMPS) includes SOP (e.g., "I strive to be the best at everything I do"), OOP (e.g., "Everything that others do must be of top-notch quality"), and SPP (e.g., "People expect nothing less than perfection from me"). Reliability and validity has been demonstrated in clinical, community, and student populations (e.g., Flett & Hewitt, 2002a; Hewitt, Flett, Turnbull-Donovan, & Mikhail, 1991).

Maladaptive Evaluative Concerns Perfectionism (MECP) and *Personal Standards Perfectionism (PSP) Dimensions*. Using the relevant subscales of the FMPS and HMPS, two dimensions were created to represent the maladaptive versus adaptive components of perfectionism that have been identified and used in previous studies (e.g., Bieling et al., 2004). To create these dimensions, subscales were converted to *z*-scores. The MECP dimension is composed of the SPP, CM, PC, PE, and DA subscales. PSP is a composite of the SOP, OOP, PS, and PO subscales.

The Evaluative Concerns Perfectionism Scale (ECPS; Blankstein, Prezio, & Taylor, 2008) is a 21-item measure with three 7-item subscales measuring respondents' beliefs about others' perfectionistic perceptions of them: Negative Evaluation of Person (NEP) by others (e.g., "If I fail partly, others act as if it's as bad as being a complete failure"); Performance Dissatisfaction (PD; e.g., "Others are hardly ever satisfied with my performance"); and Impossible Standards (IS; e.g., "Others set higher goals for me than I can achieve"). Blankstein, Prezio, and Taylor (2008) reported strong reliability and validity for each subscale and the total scale in student samples.

The Self-Critical Perfectionism Scale (SCPS; Blankstein, Harkins, & Jalali, 2008; Harkins et al., 2003) is a 45-item (with three 15-item alternate forms) measure of the shared variance among self-criticism, autonomy, and ECP. Form A was used in the present study. Exploratory factor-analyses of a large pool of items were conducted with

563 university students to provide increased conceptual and measurement refinement of the SCP construct, followed by confirmatory factor analysis in 488 students. Items were derived from a revised DEQ (Welkowitz, Lish, & Bond, 1985), the Solitude subscale of a revised Sociotropy-Autonomy Scale (Clark, Steer, Beck, & Ross, 1995), the Autonomy subscale from the Personal Styles Inventory (Robins, Ladd, Welkowitz et al., 1994), as well as SPP, CM, and discrepancy. The construct reflects critical self-evaluation, pressure to reach unrealistic goals and expectations imposed by others, fear of negative evaluation, need for approval, and defensive separation and preference for solitude. Sample items include: "Doing my best never seems to be good enough," "There is a considerable difference between how I am now and how I would like to be," and "I feel controlled when others have a say in my plans." The SCPS has strong factor analytic, reliability, and validity findings in university students (Blankstein, Harkins, & Jalali, 2008).

The Depression Anxiety Stress Scales, 21-Item Version (DASS-21; Lovibond & Lovibond, 1995) is a 21-item self-report measure of the core symptoms of depression (dysphoric mood), anxiety (fear and autonomic arousal), and tension/stress (general nervousness and agitation) over the previous week. Example items include, "I just couldn't seem to get going" (Depression), "I felt scared without any good reason" (Anxiety), and "I found myself getting upset rather easily" (Stress). The DASS-21 has good reliability and validity, including an ability to distinguish depression from anxiety (e.g., Antony, Bieling, Cox, Enns, & Swinson, 1998).

Procedure

Participation was voluntary. The study received approval from the Research Ethics Board at St. Joseph's Healthcare, Hamilton. For patients in the anxiety groups (seen at the ATRC), diagnoses were based on the *Structured Clinical Interview for DSM-IV Axis I Disorders* (SCID-I; First, Spitzer, Gibbon, & Williams, 1996). Patients in the depression group had a psychiatric consultation to determine diagnosis at the Mood Disorder Clinic. Demographics and other patient or treatment-related information were obtained through review of patient charts. Participants in the nonclinical control group were recruited by advertisements posted in the community seeking individuals without a history of mental health problems. Participants received a telephone interview based on screening questions from the SCID-I to ensure that they did not have a history of any major forms of psychopathology. Eligible nonclinical volunteers were given minimal remuneration. Patients were not remunerated. Participants were given the questionnaire package complete with the aforementioned measures.

RESULTS

Preliminary demographic analyses using multivariate analyses of variance (MANOVAs) and chi-squares yielded no significant differences between groups in terms of age, ethnicity, marital status, household income, or gender. In addition, there were no gender differences on the perfectionism or symptom severity measures.

TABLE 1. Intercorrelations among Perfectionism Measures

Scale	HMPS- Social	HMPS- SOP	HMPS- OOP	FMPS- CM	FMPS- DA	FMPS- PC	FMPS- PE	FMPS- PS	FMPS- PO	MECP	PSP	ECPS- TOT	ECPS- NEP	ECPS-PD	ECPS-IS	SCPS
HMPS-SPP	.88															
HMPS-SOP	.53**	.92														
HMPS-OOP	.38**	.34**	.81													
FMPS-CM	.68**	.71**	.30**	.94												
FMPS-DA	.54**	.54**	.19**	.68**	.85											
FMPS-PC	.54**	.22**	.27**	.40**	.30**	.86										
FMPS-PE	.56**	.37**	.32**	.40**	.26**	.71**	.90									
FMPS-PS	.41**	.75**	.39**	.60**	.41**	.23*	.40**	.86								
FMPS-PO	.14**	.37**	.13	.11	.13	-.01	.16*	.41**	.91							
MECP	.85**	.61**	.38**	.81**	.71**	.77**	.76**	.53**	.13	.84						
PSP	.50**	.83**	.62**	.58**	.43**	.24**	.42**	.86**	.65**	.56**	.72					
ECPS-TOT	.82**	.29**	.23**	.55**	.48**	.46**	.42**	.23*	.07	.70**	.29**	.97				
ECPS-NEP	.82**	.43**	.28**	.68**	.50**	.39**	.38**	.32**	.08	.71**	.38**	.91**	.93			
ECPS-PD	.74**	.17*	.18*	.45**	.45**	.45**	.38**	.15*	.04	.63**	.20**	.94**	.79**	.92		
ECPS-IS	.72**	.21**	.19**	.39**	.41**	.43**	.42**	.16*	.07	.61**	.23**	.93**	.75**	.84**	.93	
SCPS	.80**	.60**	.30**	.76**	.66**	.47**	.46**	.51**	.17	.81**	.55**	.73**	.75**	.66**	.63**	.90

Note: 1) HMPS: Hewitt-Flett Multidimensional Perfectionism Scale; SPP=Socially-prescribed perfectionism; SOP =Self-oriented perfectionism; OOP =Other-oriented perfectionism; 2) FMPS: Frost Multidimensional Perfectionism Scale; CM=Concern for Mistakes; DA=Doubts about Action; PC=Parental Criticism; PE=Parental Expectations; PS=Personal Standards; PO=Preference for Order; 3) MECP: Maladaptive Evaluative Concerns Perfectionism; 4) PSP: Personal Standards Perfectionism; 5) ECPS: Evaluative Concerns Perfectionism Scale; NEP= Negative Evaluation of Person; PD = Performance Dissatisfaction; IS= Impossible Standards; 6) SCPS = Self-Critical Perfectionism Scale. Alpha reliabilities are listed on the diagonal. * $p < .05$, ** $p < .001$.

Intercorrelations

Table 1 shows intercorrelations among perfectionism subscales and dimensions for patient participants only (i.e., excluding controls; $n = 190$). Results are reported for males and females combined only since inspection of the separate correlation matrices for the male and female samples suggested that the results were comparable. There was only one pair of correlations whose difference in magnitude exceeded .40 between men and women and the majority were different by less than .20. As expected, “maladaptive” subscales and dimensions correlated positively and significantly. For example, the strong relation between the SCP dimension and ECPS negative evaluation of the person (NEP; $r = .75$) indicates approximately 56% variance in common.⁴ As expected, the SPP and CM were the components most strongly related to both the SCP and NEP measures. However, SOP was also quite strongly associated with SCPS and NEP in this patient sample. As expected, the MECP dimension was strongly correlated with both the SCPS and ECPS. Finally, among the perfectionism measures, SOP and PS were strongly correlated ($r = .75$). The DASS subscales were all positively and significantly intercorrelated: depression and anxiety $r = .58$, depression and stress $r = .64$, and anxiety and stress $r = .67$.

Perfectionism Levels Across Clinical Groups and Controls

Table 2 presents means, standard deviations, and the results of a MANOVA that tested for differences on the various perfectionism scales as a function of diagnostic group and controls. The means and standard deviations, where comparisons are possible, are comparable to those reported previously for patient populations; however, descriptive statistics for the SCPS and ECPS for anxiety and mood disorder patients are reported here for the first time. In general, the means are higher than those reported for college students. The overall MANOVA for the perfectionism measures was significant, $F(52, 722) = 2.25, p < .0005$. Table 2 shows the results of analyses of variance (ANOVAs) and *a priori* contrasts for individual measures across groups. Depression and SAD groups had similar and significantly higher scores than the PDA and OCD groups (which were similar to the Control group) on many perfectionism subscales and dimensions (i.e., SOP, SPP, PC, NEP, and IS).⁵ The OCD group was similar to the depression and SAD groups and higher than the Control group on the DA, CM, and the SCPS. Notably, there were no differences across groups on OOP, PS, PE, and PO subscales. Consistent with the above findings, there were significant differences among groups on the MECP dimension. Specifically, the Control group had significantly lower scores than all of the patient groups with the exception of the PDA

4. We based our criteria for strength of associations on the formal definition of small, medium, and large effect sizes specified by Cohen (1992). Correlations of greater than 0.1, 0.3, and 0.5 reflect small, medium, and large effects, respectively. We consider correlations representing medium or large effect sizes to be strong associations.

5. Given that past research has indicated significant differences between individuals who have panic disorder with agoraphobia and those without agoraphobia, a one-way ANOVA was conducted to see if there were any significant differences between the two groups of panic disorder patients on any of the main perfectionism, symptom, or comorbidity measures. No significant differences emerged between the panic disorder patients with agoraphobia ($n = 22$) and those without ($n = 35$) and therefore all subsequent analyses were performed with the group collapsed into one.

TABLE 2. Means (SDs) and ANOVA for Perfectionism Measures as a Function of Diagnosis

Measure	Group							F	P
	Controls	Depression	SAD	PDA	OCD	PDA	OCD		
HMPS-SPP	47.3 ^a (14.1)	60.5 ^b (14.1)	61.5 ^b (13.9)	47.2 ^a (17.5)	51.0 ^a (16.6)	47.2 ^a (17.5)	51.0 ^a (16.6)	9.48	<.0005
HMPS-SOP	60.0 ^a (15.4)	74.7 ^b (19.2)	72.0 ^b (19.6)	61.0 ^a (20.5)	69.4 ^b (15.7)	61.0 ^a (20.5)	69.4 ^b (15.7)	4.72	.001
HMPS-OOP	53.2 (13.4)	56.5 (13.3)	56.6 (13.7)	51.2 (14.6)	53.8 (10.6)	51.2 (14.6)	53.8 (10.6)	1.44	ns
FMPS-CM	19.0 ^a (8.87)	32.2 ^b (8.41)	30.6 ^b (8.48)	23.5 ^a (9.24)	27.3 ^b (10.2)	23.5 ^a (9.24)	27.3 ^b (10.2)	12.3	<.0005
FMPS-DA	8.91 ^a (3.73)	15.1 ^b (3.44)	14.0 ^b (3.74)	10.9 ^a (4.65)	13.8 ^b (4.09)	10.9 ^a (4.65)	13.8 ^b (4.09)	13.5	<.0005
FMPS-PC	8.20 ^a (3.85)	11.7 ^b (5.15)	11.7 ^b (4.56)	9.18 ^a (4.65)	8.92 ^a (4.84)	9.18 ^a (4.65)	8.92 ^a (4.84)	4.73	.001
FMPS-PE	13.2 ^a (4.98)	13.8 ^a (6.20)	14.1 ^a (5.68)	11.4 ^b (4.88)	13.5 ^a (5.62)	11.4 ^b (4.88)	13.5 ^a (5.62)	1.94	ns
FMPS-PS	21.9 (6.71)	25.4 (6.84)	23.4 (6.22)	21.9 (6.47)	23.9 (6.32)	21.9 (6.47)	23.9 (6.32)	1.86	ns
FMPS-PO	25.1 (4.51)	22.8 (5.30)	22.4 (5.51)	23.2 (5.18)	25.1 (5.79)	23.2 (5.18)	25.1 (5.79)	2.03	ns
MECP	-2.68 ^a (3.06)	1.74 ^b (3.37)	1.30 ^b (3.36)	-1.91 ^a (3.87)	-.31 ^c (4.04)	-1.91 ^a (3.87)	-.31 ^c (4.04)	11.5	<.0005
PSP	-.48 ^a (2.70)	.69 ^{ab} (3.05)	.008 ^a (2.79)	-.94 ^a (3.22)	.35 ^a (2.56)	-.94 ^a (3.22)	.35 ^a (2.56)	2.01	ns
ECPS-Total	47.5 ^a (19.2)	71.6 ^b (26.0)	79.1 ^b (29.0)	55.9 ^a (30.7)	58.1 ^a (34.1)	55.9 ^a (30.7)	58.1 ^a (34.1)	8.50	<.0005
ECPS-Neg. Evaluation of Person	15.6 ^a (7.24)	25.8 ^b (9.65)	26.4 ^b (10.3)	18.6 ^a (11.2)	19.0 ^a (12.8)	18.6 ^a (11.2)	19.0 ^a (12.8)	8.24	<.0005
ECPS-Perform. Dissatisfaction	14.5 ^a (5.99)	22.9 ^b (10.2)	25.7 ^b (10.4)	17.9 ^d (9.62)	19.3 ^{cd} (11.0)	17.9 ^d (9.62)	19.3 ^{cd} (11.0)	8.06	<.0005
ECPS-Imposs. Standards	17.4 ^a (8.21)	23.0 ^{ab} (10.0)	27.0 ^b (11.2)	19.9 ^a (11.5)	19.8 ^a (11.7)	19.9 ^a (11.5)	19.8 ^a (11.7)	5.28	<.0005
Self-Critical Perfectionism	45.5 ^a (16.6)	70.6 ^b (16.0)	70.4 ^b (13.8)	54.7 ^c (20.0)	63.2 ^b (19.1)	54.7 ^c (20.0)	63.2 ^b (19.1)	14.4	<.0005

Note. SAD = Social Anxiety Disorder; PDA = Panic Disorder with or without Agoraphobia; OCD = Obsessive-Compulsive Disorder. 1) HMPS: Hewitt-Flett Multidimensional Perfectionism Scale; SOP = Self-oriented perfectionism; OOP = Other-oriented perfectionism; SPP = Socially-prescribed perfectionism. 2) FMPS: Frost Multidimensional Perfectionism Scale; CM=Concern for Mistakes; DA=Doubts about Action; PC=Parental Criticism; PE=Parental Expectations; PS=Personal Standards; PO=Preference for Order; 3) MECP: Maladaptive Evaluative Concerns Perfectionism; 4) PSP: Personal Standards Perfectionism; 5) ECPS: Evaluative Concerns Perfectionism Scale; Neg. Evaluation = Negative Evaluation of Person; Perform. Dissatisfaction = Performance Dissatisfaction; Imposs. Standards= Impossible Standards. Means with different superscripts are significantly different from each other, $p < .01$.

TABLE 3. Correlations Between Perfectionism Measures and Symptoms Across Clinical Groups

Perfectionism Scale	Symptom Measures		
	DASS – Depression	DASS – Anxiety	DASS – Stress
HMPS – SPP	.41***	.25**	.36***
HMPS – SOP	.24**	.12	.25**
HMPS – OOP	.12	.09	.22**
FMPS – CM	.49**	.25**	.36***
FMPS – DA	.46***	.29***	.38***
FMPS – PC	.28***	.26***	.33***
FMPS – PE	.22**	.16*	.25**
FMPS – PS	.17*	.09	.16*
FMPS – PO	-.02	.01	.03
MECP	.47***	.30***	.42***
PSP	.19*	.10	.22***
ECPS – Total	.40***	.35***	.31***
ECPS – Negative Evaluation of Person	.41***	.33***	.33***
ECPS – Performance Dissatisfaction	.34***	.27***	.23**
ECPS – Impossible Standards	.36***	.36***	.29***
SCPS	.51***	.35***	.41***

Note. 1) HMPS: Hewitt-Flett Multidimensional Perfectionism Scale; SOP =Self-oriented perfectionism; OOP =Other-oriented perfectionism; SPP=Socially-prescribed perfectionism. 2) FMPS: Frost Multidimensional Perfectionism Scale; CM=Concern for Mistakes; DA=Doubts about Action; PC=Parental Criticism; PE=Parental Expectations; PS=Personal Standards; PO=Preference for Order; 3) MECP: Maladaptive Evaluative Concerns Perfectionism; 4) PSP: Personal Standards Perfectionism; 5) ECPS: Evaluative Concerns Perfectionism Scale; 6) SCPS = Self-Critical Perfectionism Scale. * $p < .05$; ** $p < .01$; *** $p < .001$.

group, who scored similarly to Controls. Further, the SAD and depression groups were not significantly different from each other but were significantly higher on the MECP dimension than were the PDA and OCD groups, who were also not different from each other. In contrast, there were no significant differences across groups on the PSP dimension except that the depression group scored significantly higher than the PDA group.

Perfectionism and Symptom Severity

The next set of analyses involved collapsing across all patient groups (i.e., control group excluded) in order to investigate the associations between perfectionism components or dimensions and symptoms of depression, anxiety, and stress as continuous variables assessed using the DASS. Table 3 summarizes zero-order correlations. In general, there were moderate to strong associations between perfectionism and symptom severity. Consistent with other results, among the perfectionism components, the strongest positive associations were between SPP, CM, DA and depression, anxiety, and stress severity. The SCPS, ECPS (especially the Negative Evaluation subscale), and MECP were also related positively and strongly to symptom severity. Consistently, the strongest associations were with DASS-depression severity. PSP and its components were weakly positively associated with DASS depression and stress severity but

TABLE 4. Summary of Hierarchical Regression Analyses: Perfectionism Measures Predicting DASS Symptom Severity Across Clinical Groups

	Depression			Anxiety			Stress		
	$R^2\Delta$	β	t	$R^2\Delta$	β	t	$R^2\Delta$	β	t
Depression	.36***								
HMPs-SOP		-.28*	-2.11						
FMPS-CM		.42**	2.89						
SCPS		.39**	2.65						
Anxiety				.23***					
HMPs-SPP					-.35*	-2.14			
ECP-PD					-.31*	-2.03			
FMPS-PC					.25	2.20			
ECP-IS					.37**	2.63			
SCPS					.34*	2.12			
Stress							.27***		
ECP-PD								-.40**	-2.65
FMPS-PC								.22*	1.99
SCPS								.32*	2.06

Note. * $p < .05$; ** $p < .01$; *** $p < .0005$. 1) HMPs: Hewitt-Flett Multidimensional Perfectionism Scale; SOP = Self-oriented perfectionism; SPP = Socially-prescribed perfectionism. 2) FMPS: Frost Multidimensional Perfectionism Scale; CM=Concern for Mistakes; PC = Parental Criticism; 4) ECP: Evaluative Concerns Perfectionism Scale; PD = Performance Dissatisfaction; IS = Impossible Standards; 6) SCPS = Self-Critical Perfectionism Scale.

not with anxiety. The primary significant correlations generally remained significant when diagnostic groups were examined separately (not shown in Table 3).

Next, hierarchical multiple regression analyses across all patient groups were conducted wherein the FMPS, HMPs, ECPS, and SCPS measures were entered simultaneously as predictors of each of the DASS subscales. It should be mentioned that some standardized regression coefficients between the perfectionism measures and certain symptom measures were larger, and sometimes of opposite direction, than the zero-order correlations possibly due to suppressor effects (see Cohen & Cohen, 1983). To facilitate comparison, we emphasize the results where both the zero-order correlations and regression coefficients were significant and of the same valence (positive or negative). As shown in Table 4, the perfectionism measures accounted for between 23% and 36% of the variance in symptom severity. The overall ANOVAs for the various perfectionism measures on each of the Depression, Anxiety, and Stress scales were all significant, $F_s(13, 166) = 6.52, 3.59, \text{ and } 4.27$, respectively, $p_s < .0005$. The SCPS was the only measure that was uniquely related to depression, anxiety, and stress symptom severity after shared variance with the other measures was partialled out. Among the FMPS measures, CM was a unique predictor of depression whereas PC was a predictor of both anxiety and stress. ECPS-IS was a predictor of anxiety symptoms suggesting that impossible standards imposed by others is uniquely associated with anxiety rather than depression.

In a separate set of regressions, with only MECP and PSP dimensions as predictors, the MECP was a significant predictor of depression, $R^2 = .23, F(2, 168) = 25.1, p < .0005, t = 6.52, p < .005$, anxiety, $R^2 = .10, F(2, 168) = 9.07, p < .0005, t = 4.04, p < .0005$, and stress, $R^2 = .18, F(2, 168) = 18.0, p < .0005, t = 5.11, p < .0005$. The PSP did not predict symptom severity.

TABLE 5. Correlations between Perfectionism Scales and Comorbidity (i.e., Number of Additional Diagnoses) Across Clinical Groups

Perfectionism Scale	Number of Additional (Comorbid) Diagnoses
HMPS – SPP	.26***
HMPS – SOP	.11
HMPS – OOP	.03
FMPS – CM	.26***
FMPS – DA	.33***
FMPS – PC	.21**
FMPS – PE	.12
FMPS – PS	.11
FMPS – PO	.03
MECP	.31***
PSP	.11
ECPS – Total	.29***
ECPS – Negative Evaluation	.25***
ECPS – Performance Dissatisfaction	.29***
ECPS – Impossible Standards	.27***
SCPS	.34***

Note. 1) HMPS: Hewitt-Flett Multidimensional Perfectionism Scale; SOP = Self-oriented perfectionism; OOP = Other-oriented perfectionism; SPP = Socially-prescribed perfectionism. 2) FMPS: Frost Multidimensional Perfectionism Scale; CM=Concern for Mistakes; DA=Doubts about Action; PC = Parental Criticism; PE = Parental Expectations; PS = Personal Standards; PO = Preference for Order; 3) MECP: Maladaptive Evaluative Concerns Perfectionism; 4) PSP: Personal Standards Perfectionism; 5) ECPS: Evaluative Concerns Perfectionism Scale; 6) SCPS = Self-Critical Perfectionism. ** $p < .01$; *** $p < .001$.

Symptom Severity Across Diagnostic Groups

It was important to examine whether the differences in perfectionism levels across clinical groups were a function of group differences in symptom severity. ANOVAs and contrasts indicated that all patient groups were similar and differed only in terms of being higher than controls on the DASS-anxiety and DASS-stress subscales, $ts < 1.96$, *ns*. Although DASS-depression was higher in all patient groups relative to controls, there was a significant difference within the patient groups such that the PDA group ($M = 13.0$, $SD = 10.6$) had significantly lower depression scores than the SAD ($M = 19.2$, $SD = 12.3$), depression ($M = 21.8$, $SD = 13.1$), and OCD ($M = 18.7$, $SD = 11.5$) groups, $ts(195) > 2.02$, $ps < .05$. However, when DASS-depression was included as a covariate in the MANOVA investigating differences in perfectionism as a function of diagnostic group, the pattern of results did not change, indicating that any differences in depression in the PDA group do not account for differences in perfectionism levels across groups.

Perfectionism and Comorbidity

Correlation analyses of the various perfectionism measures with comorbidity were first completed with comorbidity as a continuous variable: total number of additional (secondary) diagnoses per patient. Many of the maladaptive components and dimensions were positively associated with comorbidity. Table 5 shows these significant posi-

tive correlations collapsed across clinical groups, but it is notable that the patterns of significance within each clinical group paralleled the collapsed results. The strongest associations involved the SCPS and DA measures.

In order to investigate the link between comorbidity and perfectionism more conservatively, patients were split into high (2 or more additional diagnoses) and low (0 or 1 comorbid diagnoses) comorbidity groups. The goal was to examine differences between high and low (0 or 1 comorbid diagnoses) comorbidity groups. The goal was to examine differences between high and low comorbidity groups within each of the different diagnostic groups.

An overall MANOVA across clinical groups, with high/low comorbidity group and diagnosis (clinical group) as independent factors and the various perfectionism measures as dependent variables, yielded significant main effects for both comorbidity and diagnosis. Also, according to Roy's Largest Root, there was a significant diagnosis by comorbidity interaction, $F(13, 157) = 1.81, p < .05$. The main effect of diagnostic group was discussed previously (see Table 2). The main effect of comorbidity, $F(13, 155) = 3.22, p < .0005$, was followed up with one-way ANOVAs on each of the perfectionism scales. There was a main effect for comorbidity on all perfectionism measures, $F_s(3, 175) > 4.66, p_s < .05$, except for the PE and PO components, $F_s(3, 175) = 2.93$ and $.52, p_s > .09$. In all cases, higher comorbidity was associated with higher perfectionism scores. More specifically, post-hoc one-way contrasts indicated that the strongest and most consistent effects of comorbidity were on the SCPS scale. Significant differences in SCPS scores between high and low comorbidity were found for the SAD group, $M_s(SDs) = 73.7 (11.4)$ vs. $64.1 (16.1)$, PDA group, $M_s(SDs) = 63.1 (19.3)$ vs. $44.6 (17.0)$, and OCD group, $M_s(SDs) = 72.6 (15.0)$ vs. $53.8 (18.4)$, respectively, $F_s > 7.84, p_s < .01$. In the Depression group, there were also relatively higher SCPS scores for the high comorbidity, $M = 74.2, SD = 14.7$, relative to the low comorbidity group, $M = 66.4, SD = 17.4$; however, this difference was not statistically significant, $F(1, 36) = 2.08, p = ns$. Post-hoc tests of the interaction effect revealed that the most significant comorbidity effects occurred in the PDA group: means for all HMPS subscales, CM, DA, and PC, the ECPS, and the SCPS were all significantly higher in the high relative to the low comorbidity group, $F_s(1, 47) > 5.10, p_s < .05$.

Comorbidity and Symptom Severity

A MANOVA that included high/low comorbidity groups as the independent factor and the three symptom severity scales as dependent variables, was significant overall, $F(4, 170) = 6.92, p < .0005$. One-way ANOVAs revealed, as expected, that patients with high comorbidity had higher levels of self-reported symptoms than did those with none or only one additional diagnosis, $F_s(1, 175) > 13.5, p_s < .0005$. The means (and SDs) for high ($n = 97$) versus low ($n = 78$) comorbidity groups, respectively, were as follows: depression, $21.6 (11.7)$ vs. $13.2 (11.6)$; anxiety, 17.1 vs. $11.5 (8.05)$; stress, $22.8 (9.48)$ vs. $17.4 (9.84)$.

6. Partial correlation coefficients were obtained between each perfectionism subscale and comorbidity (i.e., additional number of diagnoses), controlling for DASS symptom scales. A majority of the associations remained significant, *partial r*s $> .16, p_s < .05$. The only perfectionism measure that failed to remain a significant predictor of comorbidity was the PC scale, *partial r* = $.10, ns$.

Perfectionism, Comorbidity, and Symptom Severity

As perfectionism was linked to both greater symptom severity and higher comorbidity, it was important to determine whether perfectionism was still linked to comorbidity when differences in symptom severity were taken into account.

To examine whether maladaptive perfectionism accounts for the presence or absence of comorbidity, a series of logistic regression analyses⁶ was conducted using comorbidity status (e.g., presence vs. absence) as the binary outcome variable (see Bieling et al., 2004). However, due to low power, in most cases we found significant effects only with a more extreme comparison between patients who had either no additional diagnoses (i.e., no comorbidity) and those who had *at least two* additional diagnoses (i.e., multiple comorbidities).

The first analysis was a partial replication of Bieling et al. (2004) using the MECP and PSP dimensions.⁷ The predictor variables were entered in three blocks: (1) DASS symptom subscales (to control for symptom severity); (2) PSP (to control for personal standards perfectionism); and (3) MECP. Consistent with Bieling et al., the model that included the DASS subscales only as predictors was significant, $\chi^2(3, N = 129) = 20.84, p < .0001$, indicating that the set differentiated between patients with multiple comorbidities and those without any comorbidity; however, no individual DASS subscale was a significant unique predictor of comorbidity, $ps > .13$ (*ns*). The PSP dimension resulted in a reliable change to the predictive power of the model, $\chi^2(4, N = 129) = 3.85, p < .05$. According to the Wald criterion, however, PSP was not a significant unique predictor of comorbidity status, $p < .06$. The addition of MECP in the final step not only resulted in a reliable change to the predictive power of the model, $\chi^2(5, N = 129) = 4.21, p < .05$, but also showed that MECP was a significant unique predictor of comorbidity status, $p < .05$. The odds ratio indicated that there was an increase by a factor of 3.97 in the likelihood of multiple comorbidities on the basis of a one-unit change in MECP. Prediction of success of the full model was moderate to good, with 46.9% of the noncomorbid and 93.8% of the comorbid cases correctly classified, for an overall success rate of 82.2%.

We next investigated whether PSP resulted in a significant effect when entered *after* the MECP. As predicted, the addition of MECP in Step 2 led to a significant change in the predictive utility of the model, $\chi^2(4, N = 129) = 7.95, p \leq .005$. Further, the MECP was a significant unique predictor of comorbidity status ($B = .19$, Wald test = 7.15, $p < .01$), and reflected an increase by a factor of 1.21 in the likelihood of multiple comorbidities on the basis of a one-unit change in MECP. PSP, entered on Step 3 of the model, did not reliably change the model, $\chi^2(5, N = 129) = .11, p = ns$, nor did it uniquely predict comorbidity status, $p = ns$.

We examined more closely the relative predictive utility of the various components of maladaptive evaluative concerns perfectionism, and the ECPS and the SCPS, in a series of separate logistic regressions. The first step controlled for DASS symptoms. Step 2 included the following predictors: (a) SPP, DA, and CM; (b) ECPS–Total; (c) ECPS subscales; (d) SCPS; (e) ECPS–Total and SCPS. Some of the maladaptive perfectionism scales entered on the second step resulted in changes to the predictive power of the symptom-only model.

The first analysis determined the results when measures of maladaptive perfectionism from the FMPS and HMPS were entered on the second step. There was a

7. Tables summarizing this and other logistic regression findings are available from the authors.

significant increase in predictive utility of the model, $\chi^2(6, 129) = 30.74, p < .0005$. Although the model correctly predicted 50% of noncomorbid cases and 92.78% of comorbid cases for an overall success rate of 82.17%, according to the Wald's statistics (Range = .42 to 1.55), none of these variables were significant in uniquely predicting comorbidity status.

The ECPS Total score was a significant predictor of comorbidity status ($\sigma = .02$, Wald test = 4.76, $p < .05$), whereas in the separate subscale analysis none of the individual ECPS subscales were significant predictors, $ps > .30$ (*ns*). In terms of the overall model with the ECPS-Total, the Chi-square indicated that it was an adequate predictor of comorbidity status, $\chi^2(4, N = 130) = 27.94, p < .0005$. The odds ratio indicated that there was an increase by a factor of 1.02 in the likelihood of multiple comorbidities on the basis of a one-unit change in ECPS-Total. Prediction success of the full model was moderate to good, with 38.2% of the noncomorbid and 92.7% of the comorbid cases correctly classified, for an overall success rate of 78.5%.

The SCPS contributed to a reliable increase in predictive power of the model over and above that of symptoms only, $\chi^2(4, 130) = 30.30, p < .0005$. The odds ratio indicated an increase by a factor of 1.04 in the likelihood of multiple comorbidities on the basis of a one-unit change in the SCPS ($\sigma = .04$, Wald = 8.61, $p < .05$). The model was successful in predicting noncomorbid cases (34.29%) and comorbid cases (92.78%) for an overall success rate of 77.27%.

Finally, we pitted the ECPS-Total and the SCPS against each other to determine whether one or the other would be a stronger predictor of comorbidity status. Again, the full model was significant, $\chi^2(5, 130) = 33.41, p < .0005$. The model correctly predicted 35.29% of noncomorbid cases and 92.71% of comorbid cases for an overall success rate of 77.69%. However, the SCPS, controlling for ECPS-Total, was clearly a stronger predictor ($\sigma = .04$, Wald = 5.11, $p < .05$) than was the ECPS, controlling for SCPS ($B = .00$, Wald = .00, $p = ns$).

DISCUSSION

This is the most extensive study to date of relations between perfectionism and anxiety and depression in adults referred to anxiety or mood disorder clinics. We considered perfectionism from a broad, comprehensive, integrative, and higher-order perspective. Our study is the first to examine anxiety and depression disorders, stress, anxiety, and depression symptoms, and Axis I comorbidities together. Further, our findings illustrate the value of assessing core perfectionism constructs, confirm that high personal standards are not directly maladaptive, and demonstrate the utility and predictive power of new measures of evaluative concerns and self-critical perfectionism.

Specific Perfectionism Components

We found significant and meaningful patterns of differences on HMPS and FMPS subscales between the depression and anxiety disorder groups, and the nonpsychiatric patient controls, clearly supporting the distinctiveness of different components of perfectionism. Consistent with previous research (e.g., Antony et al., 1998), outpatients with a principal diagnosis of SAD had significantly higher scores than did the controls, as well as patients with PDA and/or OCD, on many maladaptive perfectionism com-

ponents (e.g., HMPS socially prescribed and FMPS concern over mistakes). Although previous studies reported a link between perfectionism components and clinical depression (e.g., Clara et al., 2007), our finding that the depressed group differed from a control group, and individuals with PDA or OCD, but was similar to the SAD group in levels of these maladaptive components is unique. Further, the finding counters Shafran and Mansell's (2001) hypothesis that levels of socially prescribed perfectionism do not differ between depressed patients and controls.

While our findings that concern with mistakes and doubts about actions were elevated in OCD patients relative to controls confirms a previous report (Antony et al., 1998), the findings for PDA are inconsistent with past studies (e.g., Iketani et al., 2002a, 2002b; Saboonchi et al., 1999) in that any differences on the Frost scale (and HMPS) between the PDA group relative to other clinical groups and the controls were relatively weak. Perhaps, as reported by Iketani et al. (2002a, 2002b), it requires a stronger association with agoraphobia (only half of our group) or personality disorder (unknown in our group) to detect an association with elevated levels of perfectionism. Nonetheless, our PDA patients with high comorbidity reported significantly higher levels of perfectionism on most perfectionism scales relative to the low comorbidity group. Also, patients with OCD and PDA did not have as high scores on self-oriented perfectionism as did patients with SAD or depression.

We also found meaningful patterns of differences in the relations between perfectionism and symptoms assessed by the DASS scales. The association was strongest for the correlations between concern over mistakes, doubts about actions, and socially prescribed perfectionism and symptoms of depression. However, in hierarchical regression analyses that included the new ECPS subscales and SCPS, few of the HMPS and FMPS subscales accounted for unique variance in symptoms. Concern over mistakes was a unique positive predictor of depression whereas parental criticism was a unique predictor of both anxiety and stress symptoms.

This is only the second study to test directly the link between perfectionism components and level of comorbidity in anxiety and mood disorder patients. Consistent with the findings of Bieling et al. (2004), the FMPS concern over mistakes, doubts about actions, and parental criticism subscales as well as the HMPS socially prescribed subscale were correlated with the number of comorbid diagnoses. However, none of these variables were unique predictors of comorbidity status in a logistic regression analysis after first controlling for DASS symptoms.

Perfectionism Composite Maladaptive Dimension and the ECPS and SCPS

A unique and robust finding emerged from analyses involving the MECP dimension: both the SAD and depression groups reported higher levels of maladaptive perfectionism than did the controls and all other anxiety groups. Interestingly, the OCD group had higher scores than the control group but lower levels than both the SAD and depressed patients. The MECP was positively associated with depression, anxiety, and stress symptoms but also predicted comorbidity status after controlling for DASS symptoms and PSP.

The findings with respect to the new measures of evaluative concerns and self-critical perfectionism are informative. First, similar to the findings of Blankstein, Przewoźnik, and Taylor (2008) for university students, the ECPS is highly internally consis-

tent in outpatients (overall α reliability = .97; subscale α s at least .92). In contrast, reliability of the MECP was .84. Second, the ECPS total score and all three subscales discriminated between groups: SAD and depressed patients reported the highest levels but did not differ from each other. Thus, socially phobic and depressed patients believe that others set impossible standards, are dissatisfied with their performance, and evaluate them negatively. They are resentful that others impose high standards on them, perceive a discrepancy between the standards and their ability or desire to meet the standards, and are concerned about making mistakes and critical of themselves. Third, the ECPS was strongly positively correlated with DASS symptoms; however, only the impossible standards subscale was a unique predictor and the effect was specific to anxiety symptoms. Finally, the ECPS total score predicted comorbidity status even after controlling for symptom levels.

Our most robust and consistent findings involved the SCPS. Derived from a broader theoretical perspective than the ECPS, this new scale incorporates items from measures of self-criticism and autonomy, and from the FMPS and HMPS. First, the SCPS is highly reliable in our clinical sample ($\alpha = .90$), and, as expected, was strongly correlated with the ECPS (approximately 50% variance in common), the MECP (65% common variance), and, in particular, the HMPS socially-prescribed and FMPS concern with mistakes subscales. Second, consistent with expectations, the SAD and depressed groups reported the highest levels of self-critical perfectionism and differed significantly from the control and PDA groups; however, they did not differ significantly from the OCD group. PDA patients reported significantly higher levels than the control group but lower levels than the other clinical groups. Socially anxious or depressed self-critical perfectionists strive for achievement and perfection, engage in critical self-evaluation, perceive a need to reach unrealistic goals imposed by others, are concerned about criticism, disapproval, and rejection, and have a defensive separation and preference for solitude.⁸ Third, the SCPS was strongly correlated with all three DASS symptom measures and was the only significant unique positive predictor of these symptoms. Finally, the SCPS had a strong positive association with comorbidity, contributed to an increase in predictive power over and above that of symptoms, and was a stronger predictor than the ECPS.

Our results with patients are consistent with the findings of Dunkley, Zuroff, and Blankstein (2006) who found that self-criticism, relative to specific perfectionism components, was the most robust predictor of maladjustment in university students. The finding that self-critical perfectionism was highest among individuals with SAD and depression extends related research with both students and patients (e.g., Blankstein & Dunkley, 2002; Cox, Walker et al., 2002; Cox, McWilliams et al., 2004; Dunkley, Zuroff, & Blankstein, 2006). By definition, self-critical perfectionism is tapping into depressogenic cognitions such as self-punitiveness, a fear of failure, helplessness and hopelessness (see Blankstein, Hillis Lumley, & Crawford, 2007). Self-critics might experience dysphoria in part due to their heightened sensitivity to stressors that imply possible failure, a loss of control, or criticism from others (Dunkley et al., 2003). Self-critics experience emotional dysregulation (Aldea & Rice, 2006), respond to perceived stressful events with a helplessness orientation (Dweck & Sorich, 1999),

⁸Dunkley, Blankstein, Zuroff, Lecce, and Hui (2006) examined an SCP factor in relation to the revised NEO Personality Inventory. SCP was unrelated to conscientiousness contrary to the assumption that self-critical people strive for excessive achievement and perfectionism. Our current view is that many SCP individuals introject and adopt as their own high standards imposed on them by others. In the present study, SOP correlated .60 with the SCPS.

employ maladaptive coping strategies such as disengagement and denial (Dunkley et al., 2003), and do not find satisfaction from strategies (e.g., problem-solving) known to be helpful in reducing stress (Dunkley et al., 2003). Their ineffective coping methods are likely to maintain and/or exacerbate depressed mood.

The link between SAD and self-critical perfectionism is also not surprising given the defining features of the disorder. Sensitivity to criticism or scrutiny by others and a tendency to be excessively critical of oneself are part of the etiology and core symptoms of SAD. In addition, the SCPS taps into the constructs of socially-prescribed perfectionism and a defensive desire for solitude or autonomy, both of which typify individuals with SAD (see Neal & Edelman, 2003, and Shafran & Mansell, 2001, for reviews). Individuals with SAD are preoccupied with creating perfect social performances in order to avoid embarrassment or rejection yet are never satisfied with their performance. No matter how well they perform in social situations, patients with SAD perseverate on the discrepancy between where they are and where their perfectionistic ideal says they need to be. Thus, they will often avoid social situations because they inevitably lead to perceived failure, just as would be predicted in someone with high self-critical perfectionism.

“Clinical” Perfectionism, Adaptive Components, and an Adaptive Personal Standards Perfectionism Dimension?

Our findings further inform the debate on “clinical” perfectionism (Shafran et al., 2002) and the controversy about whether perfectionism is always destructive (e.g., Blatt, 1995; Flett & Hewitt, 2002b) or can be relatively benign or even adaptive under some circumstances (e.g., Blankstein & Dunkley, 2002; Stoeber & Otto, 2006). Shafran and Mansell (2001) assert that the HMPS self-oriented and FMPS personal standards subscales reflect the classical perfectionism construct. We found that both SAD and depressed patients were much higher than controls on the HMPS self-oriented subscale; however, the groups did not differ on the FMPS personal standards subscale. These subscales are highly positively intercorrelated ($r = .75$) but not redundant despite the fact that they are typically combined when forming the PSP dimension. Indeed, the reliability of the PSP dimension was relatively low ($\alpha = .72$). Further, while the self-oriented and personal standards subscales and PSP dimension were weakly correlated with DASS depression and stress (not anxiety) symptoms, the relations were nonsignificant or negative after controlling for maladaptive perfectionism, and unrelated to the number of comorbid diagnoses. Thus, consistent with other results (e.g., Dunkley, Zuroff, & Blankstein, 2006), personal standards perfectionism measures are mostly unrelated to specific disorders, symptoms, and comorbidity in anxious and depressed outpatients, and it is difficult to support the view that they are part of the clinical core of perfectionism, *as measured*.

Our findings also contradict the theoretical position of Flett and Hewitt (2002b) that self-oriented perfectionism reflects a demand for absolute perfection from the self, an extreme striving that goes beyond simply being conscientious and ultimately leads to negative adaptational outcomes. Blankstein, Dunkley, and Wilson (2008) observed that self-oriented perfectionism taps predominantly high standards, standards that might not actually be excessive, whereas the FMPS personal standards subscale clearly assesses high standards only. They proposed a “mismatch” between self-oriented perfectionism conceptualization and actual measurement. Perhaps self-oriented

perfectionism has both adaptive and maladaptive components that account for the inconsistent associations with maladaptive functioning (see Dunkley, Blankstein, Zuroff, Lecce, & Hui, 2006). PSP as currently measured without the negative “baggage” associated with self-critical evaluative processes is not by itself maladaptive.

However, while PSP variables are not particularly pernicious, in contrast to some of our own and others’ past research with students (see Stoeber & Otto, 2006), we did not find strong support for the hypothesized *adaptiveness* of perfectionism in this patient sample. Nonetheless, the unique predictive validity of PSP could occur in interaction with other variables, such as stress, coping, or social support (e.g., Dunkley, Zuroff, & Blankstein, 2006). Hewitt and Flett (1993) proposed that self-oriented perfectionism predicts depression in the context of achievement stress and Enns and Cox (2005) confirmed that self-oriented perfectionism can interact with achievement (but not interpersonal) life events to predict nonremission of major depressive disorder a year later. Blankstein et al. (2007) reviewed this “congruency” and related moderator hypotheses and demonstrated that perfectionism components interact with specific moderators to enhance or buffer the link between perfectionism and suicide risk. Thus, self-oriented perfectionism is possibly either adaptive or maladaptive under certain conditions.

Clinical and Treatment Implications

What are the implications of our findings? Our findings have the potential to inform practice efforts because they clarify for clinicians the importance of assessing specific components and dimensions of perfectionism in clients who present with anxiety disorders or depression, high symptoms of anxiety, depression, and stress, or multiple comorbidities. Further, the results demonstrate the utility of new measures of evaluative concerns and self-critical perfectionism that should prove useful to both clinicians and researchers. The ECPS scale assesses salient characteristics and critical defining features of the MECP dimension identified in past research while at the same time incorporating the perception of failure to achieve high standards imposed by others. It offers a briefer (almost 50% fewer items), relatively more reliable, high discriminant validity measure of maladaptive perfectionism based on a conceptually refined, integrative construct. Specific factor subscales afford clinicians an opportunity to assess different patterns in patients with the same diagnosis prior to and throughout treatment. The SCPS is an alternative brief 15-item (with two alternate forms), reliable, single scale measure that incorporates items adapted from selected measures from the Blatt, Beck, Hewitt and Flett, Frost, and Slaney research group frameworks to reflect self-critical perfectionism. It could be used in tandem with, or independently of, the ECPS.

Our findings are consistent with the hypothesis (Blankstein & Dunkley, 2002) that the maladaptive cognitive-personality ECP and SCP constructs are nonspecific vulnerabilities for numerous disorders. Further, assuming that research confirms a cause-effect relation between these dimensions and anxiety and depression, including symptom severity, the findings will support proposals that personality factors be incorporated into classification systems that extend beyond manifest symptoms and are “more congruent with complex clinical realities” (see Luyten, Blatt, Van Houdenhove, & Corvelyn, 2006, p. 985). Consistent with a thrust of current psychotherapy research that attempts to identify the characteristics of patients, including cognitive-personality dispositions, that predict outcome to treatment (e.g., Blatt & Zuroff, 2005), a major

implication of our findings is that clinicians need to be sensitive to the possibly critical role that evaluative concerns and self-critical perfectionism play, particularly in both SAD and depression. Since perfectionism, self-criticism, or autonomy can possibly impact treatment response negatively (see Blatt, 1995; Blatt & Zuroff, 2005 for reviews), it would be prudent for therapists to target perfectionism directly, particularly as emerging research supports the strategy (e.g., Pleva & Wade, 2006; Riley, Lee, Cooper, Fairburn, & Shafran, 2007). However, past studies did not focus specifically on evaluative concerns or self-critical perfectionism. Our findings confirm the need for interventions to include specific attention to self-critical and evaluative concern dispositions in depressed and anxious psychiatric patients.

A future goal should be to further investigate mediator and moderator effects on the role that perfectionism plays in putting people at risk for developing disorders and/or failure to respond to treatment (e.g., Blankstein & Dunkley, 2002; Blankstein et al., 2007), including situational influences (e.g., Dunkley et al., 2006), and gender (e.g., Blankstein et al., 2007).

Limitations

Certain limitations also suggest future research directions. First, a longitudinal design could explore temporal relations between perfectionism and depression or anxiety. Second, since self-report measures are susceptible to impression management, self-deception, and the effect of shared variance across measures, replication with other data collection methods (e.g., diaries) would be beneficial. Third, while the research-based treatment literature has been criticized for excluding cases with co-occurring conditions as unrepresentative of real clinical samples (e.g., Westen, Novotny, & Thompson-Brenner, 2004), and our use of patients with multiple Axis I diagnoses led to important findings about links between perfectionism and comorbidity, research with “pure” groups would help determine relations between perfectionism and specific disorders independent of other disorders. Fourth, although the majority of patients in the depression group were diagnosed with major depression, it was not a homogeneous group and our sample size did not allow us to distinguish between subtypes (e.g., recurrent vs. single episode, etc.). Finally, we could not determine possible effects of Axis II personality disorder comorbidity, and some studies have shown that coexisting personality disorders impact degree of symptom severity, time to remission, and treatment response for patients with Axis I disorders (e.g., Grilo et al., 2005; Iketani et al., 2002b).

Conclusions

The development of new measures is an important step toward conceptual integration of multiple lines of theoretical and empirical work on perfectionism. It is important to explore the value of a focus on self-critical perfectionism, evaluative concerns perfectionism, and personal standards perfectionism to facilitate understanding of the development and treatment of anxiety and mood disorders. Researchers should continue to study broad dispositions in a hierarchical organization that recognizes multidimensionality but use a simpler structure, wherein there are two main overlapping but not redundant indicators reflective of maladaptive perfectionism: ECP (the integration of

critical components from extant multidimensional perfectionism measures), and SCP (a broader construct that reflects the integration of ECP with the critical aspects of self-criticism and autonomy), as well as PSP (the integration of measures of high standards) which reflects less maladaptive and possibly adaptive components (see Judge, Erez, Bono, & Thoresen, 2002, for explication of this argument).

REFERENCES

- Aldea, M.A., & Rice, K.G. (2006). The role of emotional dysregulation in perfectionism and psychological distress. *Journal of Counseling Psychology, 53*, 498-510.
- Antony, M.M., Bieling, P.J., Cox, B.J., Enns, M.W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales (DASS) in clinical groups and a community sample. *Psychological Assessment, 10*, 176-181.
- Antony, M., Purdon, C.L., Huta, V., & Swinson, R.P. (1998). Dimensions of perfectionism across the anxiety disorders. *Behaviour Research and Therapy, 36*, 1143-1154.
- Beck, A.T., Epstein, N., Harrison, R. P., & Emery, G. (1983). *Development of the Sociotropy-Autonomy Scale (DASS): A measure of personality factors in psychopathology*. Unpublished manuscript, University of Pennsylvania.
- Bhar, S.S., & Kyrios, M. (1999). Cognitive personality styles associated with depressive and obsessive compulsive phenomena in a non-clinical sample. *Behavioural and Cognitive Psychotherapy, 27*, 329-343.
- Bieling, P.J., & Alden, L.E. (1997). The consequences of perfectionism for patients with social phobia. *British Journal of Clinical Psychology, 36*, 387-395.
- Bieling, P.J., Israeli, A.L., & Antony, M.M. (2003). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36*, 1373-1385.
- Bieling, P.J., Summerfeldt, L.K., Israeli, A.L., & Antony, M.M. (2004). Perfectionism as an explanatory construct in comorbidity of axis I disorders. *Journal of Psychopathology and Behavioral Assessment, 26*, 193-201.
- Blankstein, K.R., & Dunkley, D. (2002). Evaluative concerns, self-critical, and personal standards perfectionism: A structural equation modeling strategy. In G.L. Flett and P.L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 285-315). Washington: American Psychological Association.
- Blankstein, K.R., Dunkley, D., & Wilson, J. (2008). Evaluative concerns and personal standards perfectionism: Self-esteem as a mediator and moderator of relations with personal and academic needs and estimated GPA. *Current Psychology, 27*, 29-61.
- Blankstein, K.R., Flett, G.L., Hewitt, P.L., & Eng, A. (1993). Dimensions of perfectionism and irrational fears: An examination with the fear survey schedule. *Personality and Individual Differences, 15*, 323-328.
- Blankstein, K.R., Harkins, L., & Jalali, D. (2008). *Development and validation of a new measure of self-critical perfectionism: Stress, coping, and social support as mediators and moderators of the link to positive and negative adaptational outcomes*. Unpublished Manuscript.
- Blankstein, K.R., & Hillis Lumley, C. (in press). Multidimensional perfectionism and ruminative brooding: Role in current dysphoria, anxiety, worry, and anger. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*.
- Blankstein, K.R., Hillis Lumley, C., & Crawford, A. (2007). Perfectionism, hopelessness, and suicide ideation: Revisions to diathesis-stress and specific vulnerability models. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 25*, 279-319.
- Blankstein, K.R., Prezio, T., & Taylor, S. (2008). *The essential defining negative components of perfectionism: Development and validation of the Evaluative Concerns Perfectionism Scale (ECPS)*. Unpublished Manuscript.
- Blatt, S. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50*, 1003-1020.
- Blatt, S.J., D'Afflitti, J.P., & Quinlan, D.M. (1976). Experiences of depression in normal young adults. *Journal of Abnormal Psychology, 85*, 383-389.
- Blatt, S.J., & Zuroff, D.C. (1992). Interpersonal relatedness and self-definition: Two prototypes for depression. *Clinical Psychology Review, 12*, 527-562.
- Blatt, S.J., & Zuroff, D.C. (2005). Empirical evaluation of the assumptions in identifying evidence-based treatments in mental health. *Clinical Psychology Review, 25*, 459-486.
- Blatt, S.J., Zuroff, D.C., Bondi, C.M., Sanislow, C.A., & Pilkonis, P.A. (1998). When and how perfectionism impedes the brief treatment of depression: Further analyses of the National Institute of Mental Health Treatment of Depression Collaborative Research

- Program. *Journal of Consulting and Clinical Psychology*, 66, 423-428.
- Chang, E.C., Watkins, A.F., & Banks, K.H. (2004). How adaptive and maladaptive perfectionism relate to positive and negative psychological functioning: Testing a stress mediation model in black and white female college students. *Journal of Counseling Psychology*, 51, 93-102.
- Clara, I.P., Cox, B.J., & Enns, M.W. (2007). Assessing self-critical perfectionism in clinical depression. *Journal of Personality Assessment*, 88, 309-316.
- Clark, D.A., Steer, R.A., Beck, A.T., & Ross, L. (1995). Psychometric characteristics of revised sociotropy and autonomy scales in college students. *Behaviour Research and Therapy*, 33, 325-334.
- Clark, D.A., Steer, R.A., Haslam, N., Beck, A.T., & Brown, G. K. (1997). Personality vulnerability, psychiatric diagnoses, and symptoms: Cluster analyses of the Sociotropy-Autonomy Subscales (SAS). *Cognitive Therapy and Research*, 21, 267-283.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression: Correlational analysis for the behavioral sciences*. New York: Psychology Press.
- Cox, B.J., Enns, M.W., & Clara, I.P. (2002). The multidimensional structure of perfectionism in clinically distressed and college student samples. *Psychological Assessment*, 14, 365-373.
- Cox, B.J., Fleet, C., & Stein, M.B. (2004). Self-criticism and social phobia in the U.S. national comorbidity survey. *Journal of Affective Disorders*, 82, 227-234.
- Cox, B.J., McWilliams, L.A., Enns, M.W., & Clara, I.P. (2004). Broad and specific personality dimensions associated with major depression in a nationally representative sample. *Comprehensive Psychiatry*, 45, 246-253.
- Cox, B.J., Rector, N.A., Bagby, M.R., Swinson, R.P., Levitt, A.J., & Joffe, R.T. (2000). Is self-criticism unique for depression? A comparison with social phobia. *Journal of Affective Disorders*, 57, 223-228.
- Cox, B.J., Walker, J.R., Enns, M.W., & Karpinsky, D.C. (2002). Self-criticism in generalized social phobia and response to cognitive-behavioral treatment. *Behaviour Research and Therapy*, 33, 479-491.
- Coyne, J.C., & Whiffen, V.E. (1995). Issues in personality as diathesis for depression: The case of sociotropy-dependency and autonomy-self-criticism. *Psychological Bulletin*, 118, 358-378.
- Dunkley, D.M., & Blankstein, K.R. (2000). Self-critical perfectionism, coping, hassles, and current distress: A structural equation modeling approach. *Cognitive Therapy and Research*, 24, 713-730.
- Dunkley, D.M., Blankstein, K.R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping, and perceived social support as mediators and moderators. *Journal of Counseling Psychology*, 47, 437-457.
- Dunkley, D.M., Blankstein, K.R., Masheb, R.M., & Grilo, C. (2006). Personal standards and evaluative concerns dimensions of "clinical" perfectionism: A reply to Shafran et al. (2002, 2003) and Hewitt et al. (2003). *Behaviour Research and Therapy*, 44, 63-84.
- Dunkley, D.M., Blankstein, K.R., Zuroff, D.C., Lecce, S., & Hui, D. (2006). Self-critical and Personal Standards factors of perfectionism located within the five-factor model of personality. *Personality and Individual Differences*, 40, 409-420.
- Dunkley, D.M., Zuroff, D.C., & Blankstein, K.R. (2003). Self-critical perfectionism and daily affect: Dispositional and situational influences on stress and coping. *Journal of Personality and Social Psychology*, 84, 234-252.
- Dunkley, D.M., Zuroff, D.C., & Blankstein, K.R. (2006). Specific perfectionism components versus self-criticism in predicting maladjustment. *Personality and Individual Differences*, 40, 665-676.
- Dweck, C.S., & Sorich, L.A. (1999). Mastery-oriented thinking. In C.R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 232-251). New York: Oxford University Press.
- Enns, M.W., & Cox, B.J. (1997). Personality dimensions and depression: Review and commentary. *Canadian Journal of Psychiatry*, 42, 274-284.
- Enns, M.W., & Cox, B.J. (2005). Perfectionism, stressful life events, and the 1-year outcome of depression. *Cognitive Therapy and Research*, 29, 541-553.
- Enns, M.W., Cox, B.J., & Clara, I. (2002). Adaptive and maladaptive perfectionism: Developmental origins and association with depression proneness. *Personality and Individual Differences*, 33, 921-935.
- First, M.B., Spitzer, R.L., Gibbon, M., & Williams, J.B.W. (1996). *Structured Clinical Interview for DSM-IV Axis I Disorders—Patient Edition (SCID-I/P, Version 2.0)*. New York: New York State Psychiatric Institute, Biometrics Research Department.
- Flett, G.L., & Hewitt, P.L. (Eds.). (2002a). *Perfectionism: Theory, research, and treatment*. Washington, DC: American Psychological Association.
- Flett, G.L., & Hewitt, P.L. (2002b). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues.

- In G.L. Flett & P.L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5-31). Washington, DC: American Psychological Association.
- Flett, G.L., Hewitt, P.L., Blankstein, K.R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology, 75*, 1363-1381.
- Flett, G.L., Hewitt, P.L., Blankstein, K.R., & Mosher, S.W. (1995). Perfectionism, life events, and depressive symptoms: A test of a diathesis-stress model. *Current Psychology, 14*, 112-137.
- Frost, R. O., & DiBartolo, P. M. (2002). Perfectionism, anxiety, and obsessive-compulsive disorder. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 341-371). Washington, DC: American Psychological Association.
- Frost, R.O., Heimberg, R.G., Holt, C.S., Mattia, C.S., & Neubauer, A.L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*, 119-126.
- Frost, R.O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.
- Frost, R.O., & Steketee, G. (1997). Perfectionism in obsessive-compulsive disorder patients. *Behaviour Research and Therapy, 35*, 291-296.
- Grilo, C.M., Sanislow, C.A., Shea, M.T., Skodol, A.E., Stout, R.L., Gunderson, J.G. et al. (2005). Two-year prospective naturalistic study of remission from major depressive disorder as a function of personality disorder comorbidity. *Journal of Consulting and Clinical Psychology, 73*, 78-85.
- Harkins, L., Blankstein, K.R., Jalali, D., Krawczyk, B., & Wheeler, H. (2003, August). Self-Critical perfectionism: Analyses of mediation and scale development. Paper presented at the meeting of the American Psychological Association, Toronto, ON, Canada.
- Heimberg, R.G., Juster, H.R., Hope, D.A., & Mattia, J.J. (1995). Cognitive behavioral group treatment: Description, case presentation, and empirical support. In M.B. Stein (Ed.), *Social phobia: Clinical and research perspectives* (pp. 293-321). Washington, D C: American Psychiatric Press.
- Hewitt, P.L., & Flett, G.L. (1991a). Perfectionism in the self and social contexts: Conceptualization, assessment and association with psychopathology. *Journal of Personality and Social Psychology, 60*, 456-470.
- Hewitt, P.L., & Flett, G.L. (1991b). Dimensions of perfectionism in unipolar depression. *Journal of Abnormal Psychology, 100*, 98-101.
- Hewitt, P.L., & Flett, G.L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology, 102*, 58-65.
- Hewitt, P.L., Flett, G.L., & Ediger, E. (1996). Perfectionism and depression: Longitudinal assessment of a specific vulnerability hypothesis. *Journal of Abnormal Psychology, 105*, 276-280.
- Hewitt, P.L., Flett, G.L., Turnbull-Donovan, X., & Mikhail, S.F. (1991). The multidimensional perfectionism scale: Reliability, validity, and psychometric properties in psychiatric samples. *Psychological Assessment, 3*, 464-468.
- Iketani, T., Kiriike, N., Stein, M.B., Nagao, K., Nagata, T., Minamikawa, N., Shidao, A., & Fukuhara, H. (2002a). Relationship between perfectionism and agoraphobia in patients with panic disorder. *Cognitive Behaviour Therapy, 31*, 119-128.
- Iketani, T., Kiriike, N., Stein, M.B., Nagao, K., Nagata, T., Minamikawa, N., Shidao, A., & Fukuhara, H. (2002b). Relationship between perfectionism, personality disorders and agoraphobia in patients with panic disorder. *Acta Psychiatrica Scandinavica, 106*, 171-178.
- Judge, T.A., Erez, A., Bono, J.E., & Thoresen, C.J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology, 83*, 693-710.
- Juster, H., Heimberg, R.G., Frost, R.O., Holt, C.S., Mattia, J.I., & Faccenda, K. (1996). Social phobia and perfectionism. *Personality and Individual Differences, 21*, 403-410.
- Lovibond, S.H., & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales (DASS: 2nd ed.)*. Sydney, Australia: The Psychology Foundation of Australia.
- Lundh, L.-G., & Öst, L.-G. (1996). Stroop interference, self-focus, and perfectionism in social phobics. *Personality and Individual Differences, 20*, 725-731.
- Luyten, P., Blatt, S. J., Van Houdenhove, B., & Corvelyn, J. (2006). Depression research and treatment: Are we skating to where the puck is going to be? *Clinical Psychology Review, 26*, 985-999.
- Luyten, P., Sabbe, B., Blatt, S. J., Meganck, S., Jansen, B., De Grave, C. et al. (2007). Dependency and self-criticism: Relationship with major depressive disorder, severity of depression, and clinical presentation. *Depression and Anxiety, 24*, 586-596.
- Mills, J.S., & Blankstein, K.R. (2000). Perfectionism, intrinsic versus extrinsic motivation, and motivated strategies for learning: A multidimensional analysis of university stu-

- dents. *Personality and Individual Differences*, 29, 1191-1204.
- Neal, J.A., & Edelman, R.J. (2003). The etiology of social phobia: Toward a developmental profile. *Clinical Psychology Review*, 23, 761-786.
- Nietzel, M.T., & Harris, M. J. (1990). Relationship of dependency and achievement/autonomy to depression. *Clinical Psychology Review*, 10, 279-297.
- Obsessive Compulsive Cognitions Working Group. (1997). Cognitive assessment of obsessive-compulsive disorder. *Behaviour Research and Therapy*, 35, 667-681.
- Pleva, J., & Wade, T.D. (2006). Guided self-help versus pure self-help for perfectionism: A randomized controlled trial. *Behaviour Research and Therapy*, 45, 849-861.
- Rheaume, J., Freeston, M.H., Dugas, M.J., Letarte, H., & Ladouceur, R. (1995). Perfectionism, responsibility and obsessive-compulsive symptoms. *Behaviour Research and Therapy*, 33, 785-794.
- Rice, K.G., Lopez, F.G., & Vergara, D. (2005). Parental/social influences on perfectionism and adult attachment orientations. *Journal of Social and Clinical Psychology*, 24, 580-605.
- Riley, C., Lee, M., Cooper, Z., Fairburn, C. G., & Shafran, R. (2007). A randomized controlled trial of cognitive-behaviour therapy for clinical perfectionism: A preliminary study. *Behaviour Research and Therapy*, 45, 2221-2231.
- Robins, C.J., Ladd, J., Welkowitz, J., Blaney, P.H., Diaz, R., & Kutcher, G. (1994). The Personal Style Inventory (PSI): Preliminary validation studies of new measures of sociotropy and autonomy. *Journal of Psychopathology and Behavioral Assessment*, 16, 277-300.
- Rosser, S., Issakidis, C., & Peter, L. (2003). Perfectionism and social phobia: Relationship between the constructs and impact on cognitive behavior therapy. *Cognitive Therapy and Research*, 27, 143-151.
- Saboonchi, F., Lundh, L., & Öst, L. (1999). Perfectionism and self-consciousness in social phobia and panic disorder with agoraphobia. *Behaviour Research and Therapy*, 37, 799-808.
- Shafran, R., Cooper, Z., & Fairburn, C.G. (2002). Clinical perfectionism: A cognitive-behavioural analysis. *Behaviour Research and Therapy*, 40, 773-791.
- Shafran, R., & Mansell, W. (2001). Perfectionism and psychopathology: A review of research and treatment. *Clinical Psychology Review*, 21, 879-906.
- Shahar, R. (2006). An investigation of the perfectionism/self-criticism domain of the Personal Style Inventory (PSI). *Cognitive Therapy and Research*, 30, 185-200.
- Sherry, S. B., Hewitt, P. L., Flett, G. L., & Harvey, M. (2003). Perfectionism dimensions, perfectionistic attitudes, dependent attitudes, and depression in psychiatric patients and university students. *Journal of Counseling Psychology*, 50, 373-386.
- Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The revised Almost Perfect Scale (APP). *Measurement and Evaluation in Counseling and Development*, 34, 130-145.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, 10, 295-319.
- Suddarth, B. H., & Slaney, R. B. (2001). An investigation of the dimensions of perfectionism in college students. *Measurement and Evaluation in Counseling and Development*, 34, 157-164.
- Welkowitz, J., Lish, J.D., & Bond, R.N. (1985). The Depressive Experiences Questionnaire (DEQ): revision and validation. *Journal of Personality Assessment*, 49, 89-94.
- Westen, D., Novotny, C.M., & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: Assumptions, findings, and reporting in controlled clinical trials. *Psychological Bulletin*, 130, 631-663.