Self-Oriented and Socially Prescribed Perfectionism in the Eating Disorder Inventory Perfectionism Subscale

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Abstract: **Objective:** *The purpose of this study was to demonstrate the existence and the importance of the distinction between self-oriented and socially prescribed perfectionism in the Eating Disorder Inventory Perfectionism subscale (EDI-P).* **Method:** *Trait perfectionism, measured by the EDI-P, and eating disorder symptoms, measured by the 26-item Eating Attitudes Test, were examined in 220 university students (110 women and 110 men) belonging to a campus-based fitness facility.* **Results:** *Confirmatory factor analysis indicated that, for both genders, the EDI-P is best represented by a multidimensional factor structure with three self-oriented perfectionism items (EDI-SOP) and three socially prescribed perfectionism items (EDI-SPP). Structural equation modeling demonstrated that, for both genders, EDI-SOP and EDI-SPP are related independently to eating disorder symptoms. Moderational analysis indicated that, for women, the impact of EDI-SOP on eating disorder symptoms is dependent on the level of EDI-SPP.* **Discussion:** *It is suggested that future research should acknowledge the empirical and theoretical implications of having EDI-SOP and EDI-SPP in the EDI-P. It is cautioned that EDI-SOP and EDI-SPP are a partial representation of an already published multidimensional model of trait perfectionism.* © 2003 by Wiley Periodicals, Inc. Int J Eat Disord 35: 69–79, 2004.

Key words: self-oriented perfectionism; socially prescribed perfectionsim; Eating Disorder Inventory

INTRODUCTION

Researchers and practitioners have long recognized that perfectionism predisposes, precipitates, and prolongs eating disorders. Although investigators have used various measures to examine the association between perfectionism and eating disorders, the

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Eating Disorder Inventory Perfectionism subscale (EDI-P; Garner, Olmsted, & Polivy, 1983) has distinguished itself in terms of its frequent use. Research using the EDI-P, although unquestionably comprising a valuable contribution to investigators' understanding of the link between perfectionism and eating disorders, has one troubling shortcoming. It largely ignores the empirical and theoretical implications of having self-oriented and socially prescribed perfectionism in the EDI-P.

Despite commonly being viewed as a unidimensional scale capturing exclusively self-directed features of perfectionism (Ackard & Peterson, 2001), the EDI-P is a multidimensional scale assessing both self-directed and socially based dimensions of perfectionism. One half of the EDI-P represents intrapersonal themes embodying what Hewitt and Flett (1991) have termed *self-oriented perfectionism* (i.e., requiring perfection of oneself). The other one half of the EDI-P reflects interpersonal themes approximating what Hewitt and Flett (1991) have called *socially prescribed perfectionism* (i.e., perceiving that others are demanding perfection of oneself).

Support for the existence and the importance of the distinction between self-oriented and socially prescribed perfectionism in the EDI-P is fourfold. First, solid support for the usefulness of differentiating between self-oriented and socially prescribed perfectionism is provided by research using the Hewitt and Flett multidimensional model of trait perfectionism. In one focus of this research, self-oriented and socially prescribed perfectionism have been implicated consistently in, but differentially related to, eating disorder symptoms (Hewitt, Flett, & Ediger, 1995). Second, direct support for the significance of distinguishing between self-oriented and socially prescribed perfectionism in the EDI-P is furnished by the investigation into perfectionism as a risk factor by Joiner & Schmidt (1995). For instance, Joiner and Schmidt used confirmatory factor analysis (CFA) to demonstrate that the EDI-P is best represented by a multidimensional factor structure with three self-oriented perfectionism and three socially prescribed perfectionism items. They also found that self-oriented perfectionism is most relevant to depression, whereas socially prescribed perfectionism is related to both anxiety and depression. Therefore, not distinguishing between self-oriented and socially prescribed perfectionism in the EDI-P may distort or suppress unique information resulting from one dimension of perfectionism independent of the other.

Third, additional support for the value of differentiating between self-oriented and socially prescribed perfectionism is supplied by theory about the role of perfectionism in eating disorders. For example, Shafran, Cooper, and Fairburn (2002) have postulated that self-oriented perfectionistic tendencies are most relevant to anorexia, whereas Bruch (1981) has argued that socially based perfectionistic tendencies figure prominently in anorexia. Differentiating between self-oriented and socially prescribed perfectionism in the EDI-P would enable precise tests of existing theories. Fourth, not distinguishing between self-oriented and socially prescribed perfectionism may distort or suppress unique information arising from one dimension of perfectionism interacting with the other. If the impact of self-oriented perfectionism on eating disorder symptoms is dependent on the level of socially prescribed perfectionism, then this information is only accessible if a multidimensional conceptualization of trait perfectionism is adopted.

The aim of this study was to demonstrate the existence and the importance of the distinction between self-oriented and socially prescribed perfectionism in the EDI-P in three ways. First, we used CFA to evaluate our hypothesis that the EDI-P has a multidimensional factor structure with three self-oriented perfectionism items (EDI-SOP) and three socially prescribed perfectionism items (EDI-SPP). Second, we utilized structural equation modeling (SEM) to test our hypothesis that EDI-SOP and EDI-SPP are independently related to eating disorder symptoms. Third, we used moderational analysis to examine our hypothesis that the impact of EDI-SOP on eating disorder symptoms is

conditional on the level of EDI-SPP. Finally, we examined the equivalence of each proposed factor structure, structural model, and moderational model across gender.

METHOD

Participants

A sample of 220 university students (110 women and 110 men) belonging to a campus-based fitness facility completed measures. The women had an average age of 23.34 years ($SD = 5.25$) and a body mass index (BMI) of 21.90 ($SD = 2.41$). The men had an average age of 24.05 years ($SD = 6.58$) and a BMI of 24.81 ($SD = 3.10$).

Measures

Participants completed the EDI-P (Garner et al., 1983), a six-item scale that measures trait perfectionism. Lower scores signify increased trait perfectionism. They also completed the Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982), a 26-item scale that assesses eating disorder symptoms. The EAT-26 is divided into three subscales: dieting (13 items), bulimia and food preoccupation (six items), and oral control (seven items). Lower scores represent increased eating disorder symptoms.

RESULTS

We used CFA models to determine if the EDI-P was best represented by a multidimensional factor structure. We used SEM to test the hypothesized associations between the six items of the EDI-P and the underlying constructs. To evaluate the overall goodness of fit for the SEM models, we used the chi-square p value, the normed fit index (NFI), the robust comparative fit index (CFI), the goodness-of-fit index (GFI), and the adjusted GFI. Table 1 displays means, standard deviations, coefficient alphas, and correlations for each gender.

Hypotheses about the Factor Structure of the EDI-P: CFA Models

Two CFA measurement models about the associations between the six EDI-P items were performed separately for each gender and then compared. The unidimensional model (UM) involved a CFA testing for a unidimensional factor structure that defined all six items of the EDI-P as a single latent construct. The UM specified did not fit the data well for both genders (Table 2): χ^2 (9, $N = 110$) = 31.7, $\chi^{2/df} = 3.5$, $p = .00001$, CFI = .93, GFI = .92, NFI = .90 for women and χ^2 (9, $N = 110$) = 33.0, $\chi^{2/df} = 3.8$, $p = .00001$, CFI = .87, GFI = .90, NFI = .85 for men.

The multidimensional model (MM) involved a CFA testing for a multidimensional factor structure that defined three EDI-SOP items and three EDI-SPP items as distinct but correlated constructs. The MM fit the data well for both genders (Table 2): χ^2 (8, $N = 110$) = 24.2, $\chi^{2/df} = 3.0$, $p = .002$, CFI = .95, GFI = .93, NFI = .93 with EDI-SOP and EDI-SPP as significantly correlated $r = .87$, $t = 4.89$, $p = .0001$ for women and χ^2 (8, $N = 110$) = 11.9, $\chi^{2/df} = 1.49$, $p = .15$, CFI = .98, GFI = .97, NFI = .95 with EDI-SOP and EDI-SPP as significantly correlated $r = .71$, $t = 4.27$, $p = .0001$ for men. Comparisons of the UM and the MM revealed that the MM is a significantly better representation of the data for each gender: UM $\neq$ MM: χ^2 diff (1, $N = 110$) = 7.5, $p < .01$ for women and UM $\neq$ MM): χ^2 diff (1, $N = 110$) = 21.1, $p < .0001$ for men.

Table 1. Means, standard deviations, coefficient alphas, and correlations

	EDI-SOP	EDI-SPP	EDI-P	EAT-Dieting	EAT-Bulimia	EAT-Oral	EAT-Total	BMI	M	SD	Coefficient Alpha
EDI-SOP	–	.72*	.93*	.28*	.37*	.42*	.39*	.12	8.67	3.68	.86
EDI-SPP	.55*	–	.92*	.35*	.36*	.34*	.42*	.10	8.92	3.55	.76
EDI-P	.88*	.89*	–	.34*	.39*	.41*	.43*	.12	17.59	6.69	.88
EAT-Dieting	.24	.09	.19	–	.70*	.38*	.96*	-.21	54.63	11.40	.89
EAT-Bulimia	.23	.11	.19	.57*	–	.29*	.80*	-.12	29.88	4.10	.77
EAT-Oral	.27*	.14	.24	.39*	.41*	–	.58*	.19	33.41	4.01	.54
EAT-Total	.30*	.13	.25	.92*	.75*	.68*	–	-.13	117.91	16.48	.90
BMI	-.02	-.06	-.05	-.15	-.10	.12	-.08	–	21.90	2.41	–
M	8.22	9.03	17.25	58.82	30.06	32.16	121.04	24.81	–		
SD	3.26	3.20	5.68	10.18	3.78	5.11	15.64	3.10	–		
Coefficient alpha	.80	.71	.82	.84	.60	.62	.86				

Note: EDI-SOP = self-oriented Perfectionism subscale of the EDI-P; EDI-SPP = socially prescribed perfectionism subscale of the EDI-P; EDI-P = Perfectionism subscale of the EDI; EAT = 26-item Eating Attitude Test; EAT-Dieting = Dieting subscale of the EAT-26; EAT-Bulimia = Bulimia and Food Preoccupation subscale of the EAT-26; EAT-Oral = Oral Control subscale of the EAT-26; EAT-Total = total scale score of the EAT-26; BMI = body mass index. Statistics for women are above the diagonal; statistics for men are below the diagonal.
*For women and men: $p < .002$. A Bonferroni correction was applied.

Table 2.   Factor loadings and path coefficients for the unidimensional and the multidimensional models

| | Unidimensional Model | | Multidimensional Model | | | | R^2 | | | |
| | | | EDI-SOP | | EDI-SPP | | Unidimensional Model | | Multidimensional Model | |
Items	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
EDI-SPP1	.62	.57	.83	.84			.38	.32	.68	.70
EDI-SPP2	.71	.49	.87	.65			.51	.24	.75	.43
EDI-SPP3	.68	.61	.76	.80			.47	.38	.57	.64
EDI-SOP1	.82	.79			.67	.68	.67	.63	.45	.46
EDI-SOP2	.85	.65			.73	.59	.72	.42	.53	.35
EDI-SOP3	.75	.78			.77	.76	.56	.61	.60	.48

Note: All factor loadings are significant at $p < .001$. EDI-P = Perfectionism subscale of the Eating Disorder Inventory: EDI-SOP = self-oriented perfectionism subscale of the EDI-P; EDI-SPP = socially prescribed perfectionism subscale of the EDI-P.

Hypotheses about the Predictive Validity of the EDI-P: SEM Models

To examine the predictive validity of EDI-SOP and EDI-SPP, we specified structural models estimating (1) the effect of EDI-SOP on eating disorder symptoms (i.e., dieting, bulimia and food preoccupation, and oral control) controlling for its correlation with EDI-SPP and (2) the effect of EDI-SPP on eating disorder symptoms controlling for its correlation with EDI-SOP. First, we estimated the effect of EDI-SOP on eating disorder symptoms (Figure 1). The specified model resulted in the following acceptable fit indices: χ^2 (25, $N = 110$) = 53.0, $\chi^{2/df} = 2.1$, $p = .001$, CFI = .94, GFI = .91, NFI = .90 for women and χ^2 (25, $N = 110$) = 33.33, $\chi^{2/df} = 1.33$, $p = .12$, CFI = .97, GFI = .94, NFI = .90 for men. After controlling for the association of EDI-SOP and EDI-SPP, EDI-SOP was related significantly to eating disorder symptoms (Figure 1; path coefficient = .49, $t = 3.09$, $p = .002$; 24% of the variance in women's eating disorder symptoms was explained; path coefficient = .35, $t = 3.09$, $p = .002$; 13% of the variance in men's eating disorder symptoms was explained). Second, we estimated the effect of EDI-SPP on eating disorder symptoms (Figure 2). The specified model resulted in the following acceptable fit indices: χ^2 (25, $N = 110$) = 52.0, $\chi^{2/df} = 2.08$, $p = .001$, CFI = .94, GFI = .91, NFI = .90 for women and χ^2 (25, $N = 110$) = 37.75, $\chi^{2/df} = 1.51$, $p = .05$, CFI = .96, GFI = .93, NFI = .90 for men. After controlling for the association of EDI-SPP and EDI-SOP, EDI-SPP was related significantly to eating disorder symptoms (Figure 2; path coefficient = .51, $t = 3.04$, $p = .002$; 26% of the variance in women's eating disorder symptoms was explained; path coefficient = .27, $t = 1.96$, $p = .05$; 7% of the variance in men's eating disorder symptoms was explained). In sum, both EDI-SOP (controlling for EDI-SPP) and EDI-SPP (controlling for EDI-SOP) were associated significantly with eating disorder symptoms for each gender. None of the aforementioned results were altered after controlling for the effect of BMI.

Hypotheses about the Interactive Influence of EDI-SOP and EDI-SPP: Moderational Models

Hierarchical multiple regression analysis with interaction represented by a product term was used to determine whether EDI-SPP moderated the association between EDI-SOP and eating disorder symptoms. Support for the proposed moderational model was

specific to women. Therefore, only women are discussed. EDI-SOP, EDI-SPP, and the interaction of EDI-SOP and EDI-SPP significantly predicted eating disorder symptoms (Table 3). This interaction indicates that the relationship between EDI-SOP and eating disorder symptoms varies according to the level of EDI-SPP. After controlling for BMI, we established the slopes of the regression of eating disorder symptoms on EDI-SOP at two levels of EDI-SPP: 1 SD above the mean (low EDI-SPP) and 1 SD below the mean (high EDI-SPP). The slope for the low level of EDI-SPP was not significant ($\beta = .03$, $t = 0.20$, $p > .01$) and the slope for the high level of EDI-SPP was significant ($\beta = .38$, $t = 2.44$,
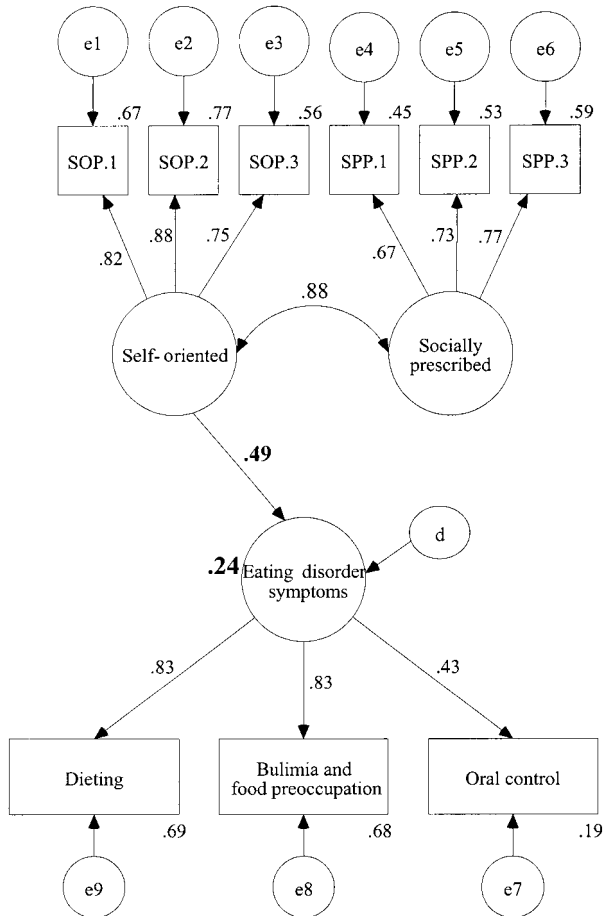

Figure 1. (A) Self-oriented perfectionism predicting eating disorder symptoms in women controlling for the association of self-oriented and socially prescribed perfectionism. A rectangle reflects a measured variable, a large circle indicates a latent construct, and a small circle represents a residual variance (e) or a disturbance variance (d). Numbers on paths from latent constructs to their indicators reflect factor loading coefficients. Numbers above indicators and exogenous variables indicate the amount of variance explained (R^2). Bidirectional arrows represent correlations and unidirectional arrows depict hypothesized directional or ''causal'' links. Standardized maximum likelihood parameters are utilized. Bold estimates are statistically significant as determined by critical ratios. (B) Self-oriented perfectionism predicting eating disorder symptoms in men controlling for the association of self-oriented and socially prescribed perfectionism.
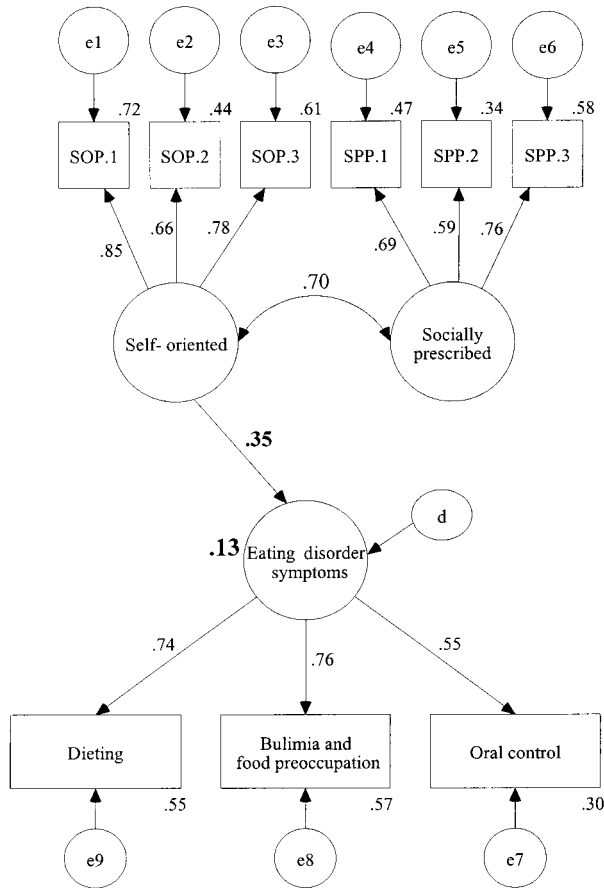
Figure 1.   Continued

p < .05). Figure 3 shows that women at high levels of EDI-SPP experienced increased eating disorder symptoms as EDI-SOP levels increased.

DISCUSSION

The study demonstrated the existence and the importance of the distinction between self-oriented and socially prescribed perfectionism in the EDI-P in three ways. First, CFA indicated that the EDI-P has a multidimensional factor structure. Second, SEM demonstrated that EDI-SOP and EDI-SPP are related independently to eating disorder symptoms. Third, for women, moderational analysis indicated that the impact of EDI-SOP on eating disorder symptoms is dependent on the level of EDI-SPP.

CFA indicated that the EDI-P is best represented by a multidimensional factor structure with three self-oriented perfectionism items and three socially prescribed perfectionism items. This finding replicates Joiner and Schmidt (1995) by demonstrating the multidimensional factor structure of the EDI-P and extends their original analysis by establishing this factor structure as generalizable across gender. Such evidence suggests that, although commonly viewed as a unidimensional scale that captures exclusively self-directed features

of perfectionism (Ackard & Peterson, 2001), the EDI-P is best regarded as a multidimen-
sional scale that encompasses both self-directed and socially based dimensions of perfec-
tionism. Furthermore, consistent with theory (Bruch, 1981) and research (Hewitt et al., 1995)
emphasizing that both the intrapersonal and interpersonal aspects of perfectionism are
implicated in the emergence and continuance of eating disorder symptoms, SEM indicated
that EDI-SOP and EDI-SPP are independently related to eating disorder symptoms.

Moderational analyses indicated that, for women, the impact of EDI-SOP on eating
disorder symptoms is conditional on the level of EDI-SPP. This finding suggests that,
although women high on either dimension of perfectionism are at risk, women high on
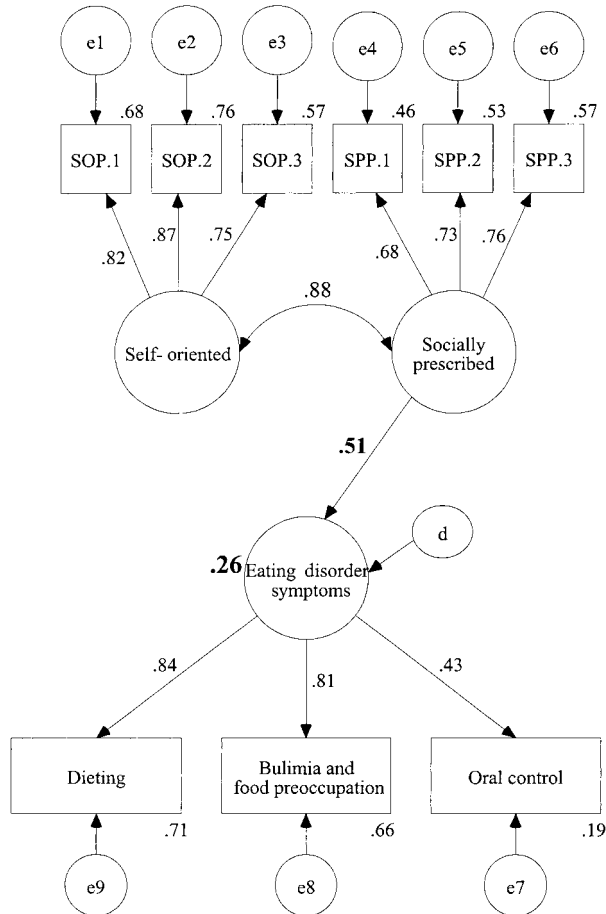

Figure 2. (A) Socially prescribed perfectionism predicting eating disorder symptoms in women
controlling for the association of socially prescribed and self-oriented perfectionism. (B) Socially
prescribed perfectionism predicting eating disorder symptoms in men controlling for the association of
socially prescribed and self-oriented perfectionism. A rectangle reflects a measured variable, a large
circle indicates a latent construct, and a small circle represents a residual variance (e) or a disturbance
variance (d). Numbers on paths from latent constructs to their indicators reflect factor loading
coefficients. Numbers above indicators and exogenous variables indicate the amount of variance
explained (R^2). Bidirectional arrows represent correlations and unidirectional arrows depict
hypothesized directional or "causal" links. Standardized maximum likelihood parameters are
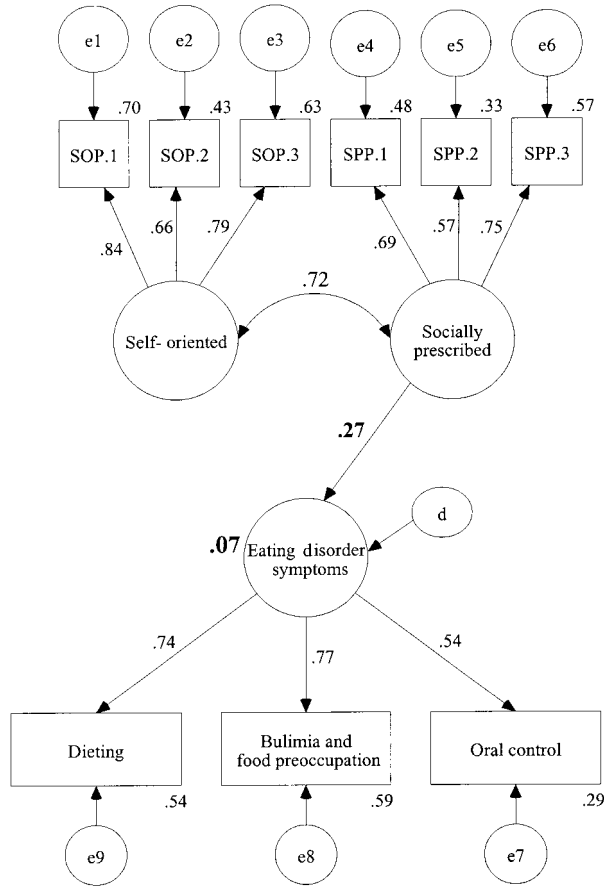utilized. Bold estimates are statistically significant as determined by critical ratios.

Figure 2. Continued

both dimensions of perfectionism are especially vulnerable. Support for the proposed moderational model was specific to women, suggesting that, for men, the influence of dimensions of perfectionism on eating disorder symptoms is not interactive but direct.

Table 3. Socially prescribed perfectionism moderating the association between self-oriented perfectionism and eating disorder symptoms in women

Predicting Eating Disorder Symptoms	R^2	β	R^2 Change	F Change
Step 1	.02		.02	1.81
BMI		−.13		
Step 2	.18		.17	21.52**
EDI-SOP		.41**		
Step 3	.22		.04	5.60*
EDI-SPP		.29*		
Step 4	.25		.03	3.95*
EDI-SOP × EDI-SPP		−.80*		

Note: BMI = body mass index; EDI-P = Perfectionism subscale of the Eating Disorder Inventory; EDI-SOP = self-oriented perfectionism subscale of the EDI-P; EDI-SPP = socially prescribed perfectionism subscale of the EDI-P.
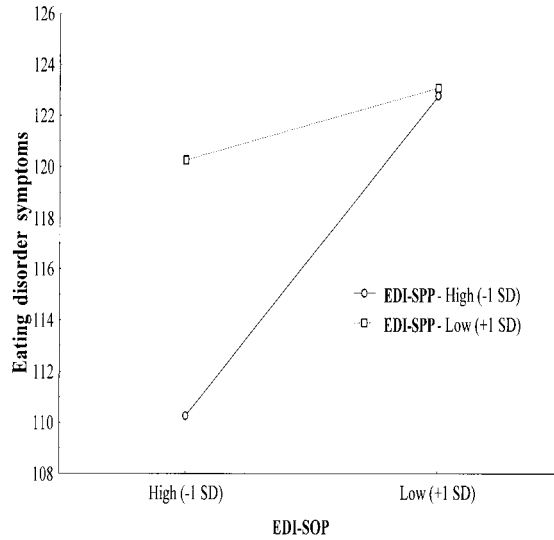*$p < .05$.
**$p < .001$.

Figure 3. Socially prescribed perfectionism moderating the association between self-oriented perfectionism and eating disorder symptoms in women. Lower scores signify increased trait perfectionism and eating disorder symptoms. EDI-SOP = self-oriented perfectionism subscale of the Eating Disorder Inventory Perfectionsim subscale (EDI-P); EDI-SPP = socially prescribed perfectionism subscale of the EDI-P.

If EDI-SOP and EDI-SPP are strongly intercorrelated and comparably predictive, why bother distinguishing between them? Our answer is that not differentiating between EDI-SOP and EDI-SPP may distort or suppress unique information resulting from one dimension of perfectionism independent of the other and/or interacting with the other. For example, research using the EDI-P as a unidimensional scale would conclude erroneously that perfectionism is unrelated to eating disorder symptoms in men (Table 1). Such unique information is only accessible when the multidimensional factor structure of the EDI-P is acknowledged.

We caution that EDI-SOP and EDI-SPP are a partial representation of the Hewitt and Flett (1991) multidimensional model of trait perfectionism. For example, EDI-SPP, as represented by the EDI-P, centers mainly on the past, whereas socially prescribed perfectionism, as represented by the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991), focuses mainly on the present. Future investigators should consider adopting the MPS as a more compressive assessment of perfectionism. Not distinguishing between self-oriented and socially prescribed perfectionism has introduced an element of uncertainty into the sizable literature linking the EDI-P to eating disorder symptoms. Future research should consider the empirical and theoretical implications of having EDI-SOP and EDI-SPP in the EDI-P.

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