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Perfectionism Explains Variance in Self-Defeating Behaviors Beyond Self-Criticism:  
Evidence From a Cross-National Sample

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— Short communication (2986 words) —

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### Abstract

Does perfectionism predict maladjustment beyond self-criticism? Attention to this key question is needed as some studies suggest perfectionism may not explain variance in maladjustment beyond self-criticism. Using a large cross-national sample of 524 undergraduates (229 Canadian, 295 British), this study examined whether evaluative concerns perfectionism (socially prescribed perfectionism, concern over mistakes, doubts about actions) explained variance in self-defeating behaviors (binge eating, procrastination, interpersonal conflict) after controlling for self-criticism. Results showed that—after controlling for self-criticism—concern over mistakes predicted binge eating, doubts about actions predicted procrastination, and socially prescribed perfectionism and concern over mistakes predicted interpersonal conflict. Self-criticism also uniquely predicted self-defeating behaviors beyond evaluative concerns perfectionism. The relationships that evaluative concerns perfectionism shows with self-defeating behaviors appear neither redundant with nor fully captured by self-criticism. Results dovetail with theoretical accounts suggesting evaluative concerns perfectionism is a uniquely important part of the personality of people prone to self-defeating behaviors.

*Keywords:* perfectionism; self-criticism; binge eating; procrastination; interpersonal conflict

## 1. Introduction

Perfectionism is an important personality characteristic that explains individual differences in maladjustment beyond neuroticism, personality disorders, and low self-esteem (Dunkley, Sanislow, Grilo, & McGlashan, 2006). A few studies, however, have suggested perfectionism's close relations with self-criticism explain why perfectionism predicts maladjustment, and assertions have been made that perfectionism may not explain variance in maladjustment beyond self-criticism (Dunkley, Blankstein, Masheb, & Grilo, 2006; Dunkley, Zuroff, & Blankstein, 2006). The present research tests these assertions by examining whether evaluative concerns perfectionism explains variance in self-defeating behaviors beyond self-criticism.

### *1.1. Evaluative concerns perfectionism versus self-criticism*

Evaluative concerns perfectionism involves a habitual pattern of perceived pressure from others to be perfect (socially prescribed perfectionism), negative reactions to perceived failures (concern over mistakes), and misgivings about performance abilities (doubts about actions; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2002). Self-criticism involves a habitual pattern of self-rebuke, a sense of falling short of one's own standards (or others' standards), and an extreme focus on achievement (Blatt, D'Afflitti, & Quinlan, 1976). Consequently, it comes as no surprise that evaluative concerns perfectionism and self-criticism positively correlate with one other, and with various forms of maladjustment (Sherry & Hall, 2009).

Some researchers, however, have questioned if evaluative concerns perfectionism adds to our understanding of maladjustment beyond self-criticism. Dunkley, Zuroff, and Blankstein (2006) found aspects of evaluative concerns perfectionism (socially prescribed perfectionism, concern over mistakes, and doubts about actions) did not explain variance in daily hassles, avoidant coping, perceived social support, negative affect, or positive affect beyond self-criticism. In contrast, self-criticism explained variance in these outcomes beyond evaluative

concerns perfectionism (see Dunkley, Blankstein, Masheb, & Grilo, 2006 for similar findings).

The studies by Dunkley, Zuroff, and Blankstein (2006) and Dunkley, Blankstein, et al. (2006) represent important contributions, but they have unique features that potentially influenced their results. For example, Dunkley, Zuroff, and Blankstein (2006) involved 163 participants. However, for an effect size in the small to medium range ( $f^2 = .042$ ; see Dunkley, Zuroff, & Blankstein, 2006), with  $\alpha = .05$  and power = .80, analyses with five predictors would require an estimated 312 participants (Faul, Erdfelder, Lang, & Buchner, 2007). This suggests Dunkley, Zuroff, and Blankstein's (2006) analyses may have had insufficient statistical power to find significant effects of evaluative concerns perfectionism after controlling for self-criticism.

Moreover, Dunkley, Blankstein, et al. (2006; Study 2), measured self-criticism with the 66-item Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976) whereas they measured evaluative concerns perfectionism with the 3-item subscale from the Eating Disorder Inventory capturing socially prescribed perfectionism (EDI-SPP; Garner, Olmstead, & Polivy, 1983). Dunkley, Blankstein, et al. (2006) did not report Cronbach's alphas, but research indicates Cronbach's alphas for the DEQ are around .80, whereas Cronbach's alphas for the EDI-SPP are around .60 (Klein, 1989; Sherry & Hall, 2009). In Dunkley, Blankstein, et al. (2006; Study 2), self-criticism may therefore have had an advantage over evaluative concerns perfectionism in predicting maladjustment as longer scales are usually broader and more reliable—and thus explain more variance in criterion variables—than shorter scales (Nunnally & Bernstein, 1994).

### *1.2. The present study*

Against this background, we reinvestigated the question of whether evaluative concerns perfectionism predicts maladjustment beyond self-criticism. Regarding maladjustment, we examined individual differences in three self-defeating behaviors: binge eating, procrastination, and interpersonal conflict. We focused on these behaviors because research suggests they are

associated with evaluative concerns perfectionism and self-criticism (Mushquash & Sherry, 2012). Based on extensive research suggesting perfectionism predicts maladjustment beyond neuroticism, personality disorders, low self-esteem, and other constructs (Dunkley, Sanislow, et al., 2006; Sherry & Hall, 2009), we expected evaluative concerns perfectionism would predict self-defeating behaviors beyond self-criticism.

## **2. Method**

### *2.1. Participants*

524 undergraduates participated. 229 Canadian undergraduates (177 women, 45 men, 7 unreported) were recruited from XXX University. These participants averaged 20.07 years of age ( $SD = 2.22$ ) and 2.15 years of university education ( $SD = 1.23$ ); 73.4% were European in ethnicity, 10.0% Asian, 7.0% Arab, 7.4% belonged to other groups, and 2.2% did not indicate their ethnicity. 295 British undergraduates (248 women, 44 men, 3 unreported) were recruited from YYY University. These participants averaged 20.10 years of age ( $SD = 4.63$ ) and 1.29 years of university education ( $SD = 0.55$ ); 75.0% were European in ethnicity, 10.2% Asian, 9.8% Black, 4.7% belonged to other groups, and 0.3% did not indicate their ethnicity.

### *2.2. Measures*

#### *2.2.1. Evaluative concerns perfectionism*

We measured evaluative concerns perfectionism using the 5-item short form of the socially prescribed perfectionism subscale from Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (HF-MPS; Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008), the 5-item short form of the concern over mistakes subscale and the 4-item doubts about actions subscale from Frost, Marten, Lahart, and Rosenblate's (1990) Multidimensional Perfectionism Scale (FMPS; Cox, Enns, & Clara, 2002). All three subscales have evidenced reliability and validity (McGrath et al., 2012). HF-MPS items were rated on a scale from 1 (*strongly disagree*) to 7

(*strongly agree*), and FMPS items on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

### 2.2.2. *Self-criticism*

We measured self-criticism using the 5-item short form of the self-criticism subscale from Blatt et al.'s (1976) DEQ (see Bagby, Parker, Joffe, & Buis, 1994; McGrath et al., 2012). The subscale has demonstrated reliability and validity (Gautreau, Sherry, Mushquash, & Stewart, 2015). DEQ items were rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

### 2.2.3. *Self-defeating behaviors*

We measured binge eating using the 4-item binge eating subscale from Garner et al.'s (1983) EDI-BE (see Sherry & Hall, 2009). We measured procrastination using the 5-item short form of Tuckman's (1991) Procrastination Scale (TPS; see Mushquash & Sherry, 2012). We measured interpersonal conflict using the 5-item conflictual behaviors towards others subscale from Murray, Holmes, and Griffin's (1996) Interpersonal Qualities Scale (IQS; see Mushquash & Sherry, 2012). Subscales have demonstrated reliability and validity (Mushquash & Sherry, 2012). EDI-BE and TPS items were rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), and IQS items on a scale from 1 (*not characteristic*) to 9 (*completely characteristic*).

### 2.2.4. *Procedure*

The study was approved by the relevant ethics boards of XXX University and YYY University. Participants received extra course credit.

### 2.2.5. *Data-analytic plan*

To examine whether evaluative concerns perfectionism explained variance in self-defeating behaviors beyond self-criticism, we conducted hierarchical regression analyses. Assumptions underlying hierarchical regression analyses (e.g., linearity) were checked and satisfied. Because sample (coded -1 for XXX University and +1 for YYY University) showed significant bivariate correlations with two of the self-defeating behaviors (binge eating,

procrastination; see Table 1), we controlled for sample main effects in Step 1 and sample  $\times$  predictor interactions in Step 4 of all regressions. In the same way, we examined whether self-criticism explained variance in self-defeating behaviors beyond evaluative concerns perfectionism (see Tables 2 and 3).

Assuming an effect size in the small to medium range ( $f^2 = .042$ ) based on past research (Dunkley, Zuroff, & Blankstein, 2006), with  $\alpha = .05$  and power = .80, analyses with eight predictors would require an estimated 366 participants (Faul et al., 2007). This suggests our hierarchical regression analyses had sufficient statistical power.

### **3. Results**

#### *3.1. Descriptive statistics*

Means of the measures appear in Table 1. Cronbach's alphas for the measures were adequate ( $\geq .78$ ) and resembled those of prior studies (e.g., Mushquash & Sherry, 2012).

#### *3.2. Bivariate correlations*

As expected, all aspects of evaluative concerns perfectionism (socially prescribed perfectionism, concern over mistakes, doubts about actions) were positively intercorrelated and also showed positive correlations with self-criticism (see Table 1). Furthermore, all aspects of evaluative concerns perfectionism and self-criticism showed positive correlations with the self-defeating behaviors (binge eating, procrastination, interpersonal conflict).

#### *3.3. Hierarchical regression analyses*

As expected, evaluative concerns perfectionism explained significant variance in self-defeating behaviors beyond self-criticism (see Table 2,  $\Delta R^2$  values of Step 3). For binge eating, concern over mistakes was a positive unique predictor after controlling for self-criticism. For procrastination, doubts about actions were a positive unique predictor. For interpersonal conflict, socially prescribed perfectionism and concern over mistakes were positive unique predictors.



Regarding predictor  $\times$  sample interactions (Step 4), the doubts about actions  $\times$  sample interaction on binge eating was significant but was not further examined because Step 4 did not explain significant variance in binge eating ( $\Delta R^2 = .01, ns$ ).

Conversely, self-criticism explained significant variance in self-defeating behaviors beyond evaluative concerns perfectionism (see Table 3,  $\Delta R^2$  values of Step 3). Self-criticism was a unique positive predictor of binge eating, procrastination, and interpersonal conflict after controlling for socially described perfectionism, concerns over mistakes, and doubts about actions. Regarding predictor  $\times$  sample interactions (Step 4), no interactions reached significance.

#### **4. Discussion**

Our study reinvestigated whether perfectionism predicts maladjustment beyond self-criticism. Using a large sample of Canadian and British undergraduates, we tested if evaluative concerns perfectionism explained variance in self-defeating behaviors beyond self-criticism. Results supported our expectation that evaluative concerns perfectionism would predict maladjustment beyond self-criticism in that—after controlling for self-criticism—concern over mistakes predicted binge eating, doubts about actions predicted procrastination, and socially prescribed perfectionism and concern over mistakes predicted interpersonal conflict. That is, aspects of evaluative concerns perfectionism were linked with certain self-defeating behaviors beyond self-criticism, whereas other aspects were not.

Sample (Canadian vs. British undergraduates) showed correlations of a small magnitude with four variables, but we believe these correlations should be replicated in another study before they are interpreted as substantive. Moreover, hierarchical regression analyses suggested the relationship that evaluative concerns perfectionism and self-criticism showed with self-defeating behaviors generalized across Canadian and British undergraduates in our sample. Future studies might also use other ways to test if the relationship between perfectionism and self-defeating

behaviors generalizes across Canadian and British undergraduates (e.g., multigroup analysis). Overall, evaluative concerns perfectionism appears to be a unique construct that is neither redundant with nor fully captured by self-criticism. Self-criticism also seems uniquely important as it predicted self-defeating behaviors beyond evaluative concerns perfectionism. These results complement research suggesting that, even after perfectionism is controlled for, self-evaluative processes like self-criticism are important to maladjustment (Dunkley, Blankstein, et al., 2006).

In contrast to our findings, some studies indicate perfectionism may not add incrementally to our understanding of maladjustment beyond self-criticism (Dunkley, Blankstein, et al., 2006). Why are our findings discrepant from these studies? Differences in focus and in methodology may explain the discrepancies between studies, including differences in samples. For example, Dunkley, Blankstein, et al. (2006) used a clinical sample (Sample 2) whereas we used an undergraduate sample; and Dunkley, Zuroff, and Blankstein (2006) used a much smaller sample than we did ( $N = 163$  compared to our  $N = 524$ ) and so may not have had sufficient statistical power to detect unique effects of perfectionism after controlling for self-criticism. Furthermore, the use of different indicators of maladjustment may have played a role. For example, Dunkley, Zuroff, and Blankstein (2006) examined avoidant coping whereas our study examined procrastination. Finally, Dunkley and colleagues used a measure of self-criticism that was longer and broader than their measures of perfectionism (giving self-criticism a predictive advantage).

Our findings support the incremental validity of the perfectionism construct beyond self-criticism. They also dovetail with clinical observations and theoretical accounts suggesting evaluative concerns perfectionism is a uniquely important part of the personality of people prone to self-defeating behaviors. Evaluative concerns perfectionism is linked with binge eating, task avoidance, and interpersonal conflict—behaviors painfully opposed to the ultra-thin, task-focused, well-liked perfect person those high in evaluative concerns perfectionism aspire to be.

Further research is needed to examine whether perfectionism predicts maladjustment beyond self-criticism when examining other indicators of maladjustment or when using different methods (e.g., longitudinal designs) or different measures of self-criticism. While our study differentiated evaluative concerns perfectionism from self-criticism, moderate to strong intercorrelations among these variables support other researchers' decisions to combine these variables into a superordinate factor labelled self-critical perfectionism (e.g., Gaudreau et al., 2015).

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## PERFECTIONISM VERSUS SELF-CRITICISM

Table 1

*Means, Standard Deviations, Cronbach's Alpha, and Bivariate Correlations*

Variable	1	2	3	4	5	6	7
Evaluative concerns perfectionism							
1. Socially prescribed perfectionism	--	.51***	.35***	.40***	.16***	.19***	.34***
2. Concern over mistakes		--	.54***	.53***	.27***	.24***	.36***
3. Doubts about actions			--	.59***	.28***	.34***	.31***
4. Self-criticism				--	.34***	.37***	.38***
Self-defeating behaviors							
5. Binge eating					--	.29***	.31***
6. Procrastination						--	.29***
7. Interpersonal conflict							--
8. Sample	.07	.03	.15***	.14**	.13**	-.11*	.01
<i>M</i>	19.70	12.05	10.84	19.89	10.95	22.96	19.48
<i>SD</i>	5.89	4.59	3.80	7.18	6.55	8.10	8.60
Cronbach's alpha	.78	.83	.79	.87	.87	.92	.79

*Note.*  $N = 524$ . Sample was coded -1 for University XXX and +1 for University YYY.

\* $p < .05$ . \*\* $p < .001$ . \*\*\* $p < .001$ .

Table 2

*Hierarchical Regression Analyses: Evaluative Concerns Perfectionism Controlling for Self-Criticism*

Variables	Binge eating		Procrastination		Interpersonal conflict	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.02**		.01*		.00	
Sample		.13**		-.11*		.01
Step 2	.10***		.15***		.15***	
Self-criticism		.33***		.40***		.39***
Step 3	.02*		.03**		.06***	
Socially prescribed perfectionism		-.02		.03		.16**
Concern over mistakes		.11*		-.04		.14*
Doubts about actions		.08		.21***		.06
Step 4	.01		.002		.01	
Socially prescribed perfectionism $\times$ sample		-.15		.15		.27
Concern over mistakes $\times$ sample		-.06		-.11		-.24
Doubts about actions $\times$ sample		.33*		.06		-.04

*Note.*  $N = 524$ .\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 3

*Hierarchical Regression Analyses: Self-Criticism Controlling for Evaluative Concerns Perfectionism*

Variables	Binge eating		Procrastination		Interpersonal conflict	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.02**		.01*		.00	
Sample		.13**		-.11*		.01
Step 2	.09***		.13***		.18***	
Socially prescribed perfectionism		.01		.07		.19***
Concern over mistakes		.17**		.04		.19***
Doubts about actions		.17**		.32***		.14**
Step 3	.03***		.05***		.03***	
Self-criticism		.23***		.29***		.22***
Step 4	.001		.00		.002	
Self-criticism $\times$ sample		-.08		.01		-.13

*Note.*  $N = 524$ .\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



Acknowledgements

This research was funded by a grant from the Social Sciences and Humanities Research Council awarded to [first author]. The funding source had no involvement in research design, data collection, or manuscript preparation.