Short Communication

Informant reports add incrementally to the understanding of the perfectionism–depression connection: Evidence from a prospective longitudinal study

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ABSTRACT

Perfectionism is a putative risk factor for depressive symptoms. However, most research in this area uses cross-sectional designs (which fail to address temporal precedence) and mono-source designs (which are influenced by various biases). The present study overcomes these limitations by using a novel design involving both self- and informant reports of self-critical perfectionism (i.e., negative reactions to perceived failures, concern over others' criticism and expectations, doubts about performance abilities, and intense self-rebuke). It was hypothesized that self- and informant reports of self-critical perfectionism would correlate moderately and that self- and informant reports of self-critical perfectionism would predict increases in depressive symptoms over time. A sample of 155 target participants and 588 informants was recruited and studied using a prospective longitudinal design. All study hypotheses were supported, including evidence that self- and informant reports of self-critical perfectionism each add incrementally to the understanding of the self-critical perfectionism–depressive symptoms connection. Informant reports may provide a more complete picture of the self-critical perfectionist and her or his vulnerability to depressive symptoms.

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1. Introduction

Perfectionism is a putative risk factor for depressive symptoms. Evidence suggests this link persists after controlling for established predictors of depressive symptoms such as neuroticism (Mackinnon et al., 2012). Notwithstanding, major gaps still exist in our understanding of the perfectionism–depressive symptom connection.

Nearly all studies in this area use cross-sectional, mono-source designs. Cross-sectional designs fail to address temporal precedence. Mono-source designs are potentially problematic, especially when studying undesirable or maladaptive traits (Klonsky, Oltmanns, & Turkheimer, 2002). Self-report questionnaires assessing people high in perfectionism may be influenced by self-presentational biases (e.g., appearing perfect) or defensive responses that promote or conceal certain traits. People high in perfectionism may become so accustomed to their behavior

(e.g., unrealistic self-expectations) that they fail to accurately recall or report it. Informant reports can overcome biases in or limitations of self-perceptions (Vazire, 2006). For example, informant ratings of perfectionism help to bypass self-enhancing or self-deprecating biases.

We know of only one perfectionism study involving informants (Flett, Besser, & Hewitt, 2005). These authors used a cross-sectional, single informant design where one friend informed on the other; they found self- and informant reports of perfectionism were correlated with each other and with depressive symptoms. Although this study improved on mono-source designs, multiple informants produce a more reliable, encompassing assessment of target participants' traits (Vazire, 2006). Multiple informants participate in various roles and situations with target participants; for example, romantic partners observe different behaviors than coworkers.

Our study overcomes limitations of prior research. Specifically, we collected self-reports of perfectionism as well as informant reports of perfectionism from multiple sources and tested whether these reports predicted longitudinal increases in depressive symptoms.

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1.1. Self-critical perfectionism and depressive symptoms

Three prominent theoretical models in perfectionism research include psychodynamic models (Blatt, 1995), cognitive-behavioral models (Frost, Marten, Lahart, & Rosenblate, 1990), and interpersonal models (Hewitt & Flett, 1991). Self-critical perfectionism (negative reactions to perceived failures, concern over others' criticism and expectations, doubts about performance abilities, and intense self-rebuke) represents a theoretically based, empirical synthesis of these models (Dunkley, Zuroff, & Blankstein, 2003). Self-critical perfectionism is conceptualized as a risk factor that comes before and contributes to increases in depressive symptoms. Consistent with this conceptualization, clinical observations (Blatt, 1995) and empirical findings (Dunkley et al., 2003; McGrath et al., 2012) suggest self-critical perfectionism encapsulates core attributes (e.g., harsh self-criticism) and central preoccupations (e.g., evaluative fears) of people at risk for depressive symptoms.

Building upon Flett et al. (2005), we hypothesized Wave 1 self- and informant reports of self-critical perfectionism would correlate moderately. We also hypothesized Wave 1 informant reports of self-critical perfectionism would predict Wave 2 depressive symptoms after controlling for Wave 1 self-reports of self-critical perfectionism and Wave 1 depressive symptoms. Based on McGrath et al. (2012), we hypothesized Wave 1 self-reports of self-critical perfectionism would predict Wave 2 depressive symptoms after controlling for Wave 1 informant reports of self-critical perfectionism and Wave 1 depressive symptoms. These hypotheses draw on research suggesting each source (self- and informant reports) has unique information to convey that is important in predicting depressive symptoms (Vazire, 2006).

2. Method

2.1. Participants

A sample of 155 undergraduates (119 women) was recruited from Dalhousie University. Participants averaged 20.65 years of age (SD = 3.03) and were mostly (70.3%) of European descent. We call these 155 participants targets. A sample of 588 participants (364 women) was recruited from friends, family, etc. of targets. We call these 588 participants informants; 39.3% of informants were friends, 16.3% were mothers, 9.7% were fathers, and 34.7% were involved in other types of relationships with targets (e.g., girlfriend). Informants averaged 30.20 years of age (SD = 14.82), and were mostly (73.3%) of European descent. Informants indicated they had face-to-face contact with targets an average of 3.70 days per week (SD = 2.57) and had some other form of contact with targets (e.g., phone) an average of 5.13 days per week (SD = 2.05). Most informants (50.9%) reported they knew targets "extremely well" (M = 3.39, SD = 0.72) on a 5-point scale from 1 (not at all) to 5 (extremely well). Informants indicated the average length of their relationship with targets was 10.46 years (SD = 8.97).

2.2. Measures

2.2.1. Self-critical perfectionism

Self-critical perfectionism was measured using the 9-item self-criticism subscale (SC; e.g., "I often find I don't live up to my ideals") of the *Depressive Experience Questionnaire* (DEQ; Bagby, Parker, Joffe, & Buis, 1994), the 5-item short form of the concern over mistakes subscale (COM; e.g., "If I fail at school, I am a failure as a person") of *Frost's Multidimensional Perfectionism Scale* (FMPS; Frost et al., 1990), the 4-item doubts about actions subscale (DAA; e.g., "I have doubts about the things I do") of the FMPS, and the 5-item short form of the socially prescribed perfectionism subscale

(SPP; e.g., "My family expects me to be perfect") of *Hewitt and Flett's Multidimensional Perfectionism Scale* (HFMPS; Hewitt & Flett, 1991). Studies support the reliability and validity of these subscales (McGrath et al., 2012).

Informant reports of self-critical perfectionism were assessed with modified versions of the DEQ-SC, FMPS-COM, FMPS-DAA, and HFMPS-SPP. Self-report items (e.g., "People expect more from me than I am capable of giving") were modified into informant report items (e.g., "They believe that people expect more from them than they are capable of giving"). The number of items (e.g., five items for the socially prescribed perfectionism subscale) and the item response options (e.g., 1 = strongly disagree; 7 = strongly agree) were unmodified for informant measures. These four informant measures were created for the present study. Research on their reliability and validity is therefore unavailable.

2.2.2. Depressive symptoms

Depressive symptoms were measured using the 7-item depression subscale (e.g., "I felt down-hearted") of the *Depression Anxiety Stress Scale* (DASS-D; Lovibond & Lovibond, 1995). Evidence supports the reliability and validity of this subscale, including research suggesting the DASS-D specifically measures depressive symptoms apart from anxiety symptoms and stress (Lovibond & Lovibond, 1995).

2.3. Procedure

Dalhousie University's Ethics Board approved this study. Our study involved two waves separated by 28 days. Targets completed measures of self-critical perfectionism at Wave 1 and measures of depressive symptoms at Wave 1 and 2. Informants completed measures of self-critical perfectionism at Wave 1. After Wave 2, targets received $30 and a 3.0% bonus credit toward a psychology course or $45; informants were entered in 1 of 20 draws for $50. Targets provided a list of five informants before starting our study. Informants met three inclusion criteria: knowing the target for at least three months, interacting with the target at least twice a week, and knowing the target reasonably well. Informants were contacted via email and invited to complete an internet-based questionnaire. Informants were emailed three times to maximize participation. Not all informants who were invited to participate completed our study, meaning the number of informants per target varied somewhat; 75.9% (588 of 775) of informants invited to participate completed our study. For each target, there was an average of 3.89 informants (SD = 1.36). Overall, 155 (100%) targets finished Wave 1 and 152 targets (98.1%) finished Wave 2. Not all targets completed Wave 2 exactly when requested (i.e., 28 days after Wave 1). On average, Wave 2 occurred 30.11 (SD = 1.88) days after Wave 1.

2.4. Data analysis

Missing data were minimal for targets and informants (<2.5%). We imputed missing data with an expectation maximization algorithm. Hierarchical multiple regression analyses were also used to test hypotheses.

3. Results

3.1. Descriptive statistics

Means for self-report measures were within one standard deviation of means from past studies of undergraduates (McGrath et al., 2012), indicating consistency with past studies using similar samples. Alpha reliabilities for self- and informant report measures

Table 1
Means, standard deviations, alpha reliabilities, and correlations.

Variable		M	SD	α	1	2	3	4
1.	*Self-critical perfectionism* (Wave 1; self-report)	–	–	.90	–	.35***	.53***	.42***
2.	*Self-critical perfectionism* (Wave 1; informant report)	–	–	.95		–	.20*	.32***
3.	*Depressive symptoms* (Wave 1; self-report)	4.01	3.98	.86			–	.45***
4.	*Depressive symptoms* (Wave 2; self-report)	3.87	4.07	.88				–

Note: Self- and informant report subscales comprising self-critical perfectionism were standardized and summed. Self-critical perfectionism has a mean of 0 and standard deviation of 1.
*$p < .05$, **$p < .01$, ***$p < .001$.

Table 2
Hierarchical multiple regression analyses predicting wave 2 depressive symptoms.

Panel 1	ΔR^2	ΔF	β	Panel 2	ΔR^2	ΔF	β
Step 1 Depressive symptoms (Wave 1; self-report)	.21	38.83***	.46***	Step 1 Depressive symptoms (Wave 1; self-report)	.21	38.83***	.46***
Step 2 Self-critical perfectionism (Wave 1; self-report)	.05	9.34**	.26**	Step 2 Self-critical perfectionism (Wave 1; informant report)	.06	11.12***	.24***
Step 3 Self-critical perfectionism (Wave 1; informant report)	.03	6.66*	.19*	Step 3 Self-critical perfectionism (Wave 1; self-report)	.02	4.95*	.19*

Note: $N = 151$.
*$p < .05$, **$p < .01$, ***$p < .001$.

were acceptable (⩾.86; see Table 1); alpha reliabilities for self-report measures resembled prior work (McGrath et al., 2012). Comparison means and alphas for informant report measures are not available as our study represents the first time these informant report measures have been used.

3.2. Correlations

Indicators of self-critical perfectionism were standardized and summed before analyses. We aggregated across informant reports since aggregation of reports from multiple informants leads to more reliable assessments of personality (Vazire, 2006). For example, if informant reports from a roommate, friend, mother, and girlfriend were available for a target participant, then we combined all four reports into one aggregated informant report. This resulted in 151 aggregated informant reports, meaning 97.4% of our 155 targets provided us with at least one informant.

As hypothesized, Wave 1 self- and informant reports of self-critical perfectionism were correlated (see Table 1). Wave 1 self- and informant reports of self-critical perfectionism were also correlated with Wave 1 and 2 depressive symptoms.

3.3. Hierarchical multiple regression analyses

As Panel 1 of Table 2 shows, a hierarchical multiple regression analysis was conducted with Wave 2 depressive symptoms as the outcome. Wave 1 depressive symptoms were entered as a predictor in Step 1, followed by Wave 1 self-critical perfectionism (self-report) in Step 2, and Wave 1 self-critical perfectionism (informant report) in Step 3. As hypothesized, Wave 1 informant reports of self-critical perfectionism significantly predicted incremental variance in Wave 2 depressive symptoms after controlling

for Wave 1 self-reports of self-critical perfectionism and Wave 1 depressive symptoms.

As Panel 2 of Table 2 illustrates, another hierarchical multiple regression analysis was conducted with Wave 2 depressive symptoms as the outcome. Wave 1 depressive symptoms were entered as a predictor in Step 1, followed by Wave 1 self-critical perfectionism (informant report) in Step 2, and Wave 1 self-critical perfectionism (self-report) in Step 3. Consistent with hypotheses, Wave 1 self-reports of self-critical perfectionism significantly predicted incremental variance in Wave 2 depressive symptoms even after controlling for Wave 1 informant reports of self-critical perfectionism and Wave 1 depressive symptoms.

4. Discussion

Though self-perceptions can be accurate, a person's position as expert on his or her traits can be compromised by biases (e.g., self-serving biases). Using self-report questionnaires, Dunkley et al. (2003) and McGrath et al. (2012) found that people high in self-critical perfectionism are at risk for depressive symptoms. Our study complements and extends this research by showing that (a) self- and informant reports of self-critical perfectionism were moderately correlated and (b) self- and informant reports of self-critical perfectionism each add incrementally to the understanding of the perfectionism-depressive symptoms connection.

Our study supported the convergent validity of the self-critical perfectionism construct by demonstrating self- and informant reports correlated moderately ($r = .35$). This finding is congruent with Flett et al. (2005), who found self- and informant reports of perfectionism correlated moderately in a single informant study where one friend informed on the other. This finding also intersects with a wider literature suggesting self- and informant

reports of disordered personality traits correlate moderately (Klonsky et al., 2002).

Self-critical perfectionism represents a constellation of traits with salient self-evaluative features (e.g., intense self-reproach) and social-cognitive features (e.g., perceiving that others demand perfection of oneself). These traits may be conceptualized as internal mental representations of the self and other people (Blatt, 1995). So, what is it informants see when they think they see a perfectionist? Informants may be directly observing (or indirectly inferring) targets' self-critical perfectionism through verbally expressed self-criticism, repetitive checking behaviors, or overt interpersonal behaviors with perfectionistic themes (e.g., complaints regarding pressures from others).

Results also indicated informant reports of self-critical perfectionism provide information that is non-redundant with self-reports of self-critical perfectionism. Wave 1 informant reports of self-critical perfectionism predicted Wave 2 depressive symptoms after controlling for Wave 1 self-reports of self-critical perfectionism and Wave 1 depressive symptoms, thereby supporting our hypothesis. These analyses represent a strict test of the self-critical perfectionism–depressive symptoms connection and support our assertion self-critical perfectionism may be a premorbid personality structure that places people at risk for depressive symptoms (McGrath et al., 2012). Researchers and clinicians should be aware informant reports of self-critical perfectionism can contribute incrementally to the understanding of participants and patients.

Tests of self-critical perfectionism as a risk factor for depressive symptoms are scarce. Consistent with Dunkley et al. (2003), McGrath et al. (2012), and our hypotheses, Wave 1 self-reports of self-critical perfectionism predicted Wave 2 depressive symptoms after taking into account Wave 1 informant reports of self-critical perfectionism and Wave 1 depressive symptoms. Our research also converges with Dunkley et al. (2003) and McGrath et al. (2012) to suggest aggregating multiple, lower-order perfectionism facets into a single, higher-order perfectionism domain (i.e., self-critical perfectionism) represents one effective way to operationalize the perfectionism construct.

Our study has limitations. Our sample was primarily female and Caucasian. It is unclear whether our results generalize to other samples. Informants were not selected randomly from targets' social networks. Targets may have selected informants who viewed them positively. We also did not collect informant reports of depressive symptoms, meaning our outcome variable is more susceptible to self-report biases. Moreover, informants reported on targets' internal traits; some of these traits could not be directly observed (e.g., self-criticism). Informants may be better judges of external traits (e.g., behaviors) compared to internal traits (e.g., thoughts). Informants are also not without potential biases (e.g., parents might have ego-protective biases in reporting on children) or informants may simply lack information about targets.

Self-reports are subject to biases (e.g., defensive responses) which may compromise the accuracy of information obtained, especially for participants with undesirable or maladaptive traits such as self-critical perfectionism (Klonsky et al., 2002). In our study, self- and informant reports of self-critical perfectionism converged moderately, and both approaches to assessing self-critical perfectionism predicted longitudinal increases in depressive symptoms.

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