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Why Does Socially Prescribed Perfectionism Place People at Risk for Depression? A Five-Month, Two-Wave Longitudinal Study of the Perfectionism Social Disconnection Model

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Highlights

- Tested the perfectionism social disconnection model (PSDM).
- Study involved a 5-month, 2-wave longitudinal design of 127 undergraduates.
- Socially prescribed perfectionism (SPP) conferred risk for depressive symptoms.
- Interpersonal discrepancies and social hopelessness mediated the SPP-depression link.
- Clarified the specific interpersonal mechanisms involved in the PSDM.

Abstract

The Perfectionism Social Disconnection Model (PSDM) is a promising integrative model explaining relations between socially prescribed perfectionism (i.e., perceiving others require perfection) and depressive symptoms. Yet, the nature of the social disconnection proposed by the PSDM requires explication. Likewise, longitudinal tests of the PSDM are scarce. We addressed these important limitations by extending, testing, and supporting the PSDM in 127 undergraduates using a five-month, two-wave longitudinal design. Our model posited socially prescribed perfectionism generates depressive symptoms via two putative triggers: interpersonal discrepancies (i.e., viewing oneself as falling short of others' expectations) and social hopelessness (i.e., negative expectations concerning future interpersonal relationships). Congruent with the PSDM, bias-corrected bootstrapped tests of mediation revealed socially prescribed perfectionism conferred vulnerability for depressive symptoms five months later via interpersonal discrepancies and social hopelessness. Furthermore, results supported the specificity of our model beyond self-oriented perfectionism and other-oriented perfectionism. Findings lend credence and coherence to theoretical accounts suggesting socially prescribed perfectionism has a generative role in the development of psychosocial environments conducive to depressive symptoms. Moreover, our study offers investigators a conceptual framework for understanding the specific interpersonal mechanisms involved in the socially prescribed perfectionism-depressive symptom link.

Keywords: socially prescribed perfectionism, social disconnection, interpersonal discrepancies, social hopelessness, depression, longitudinal

1. Introduction

Depression is a widespread mental health problem involving a loss of positive affect that manifests in a range of symptoms including lack of motivation, feelings of worthlessness, lack of self-care, anxiety, suicide ideation, and poor concentration (APA, 2013). Nearly 30.6% of undergraduates suffer from depressive symptoms. And depressive symptoms impair students' interpersonal, academic, and psychological functioning (Ibrahim, Kelly, Adams, & Glazebrook, 2013; Steptoe, Tsuda, Tanaka, & Wardle, 2007). Depressive symptoms in young adulthood can also lead to an accumulation of negative life events that carry over into adulthood and leave lasting psychological scars (Ibrahim et al., 2013). Moreover, the incidence of depressive symptoms among undergraduates is threefold higher than the general population (Gonzalez et al., 2010). Accordingly, the pressures of young adulthood and the demands of university life appear to leave students particularly susceptible to depressive symptoms. As such, investigators are increasingly interested in testing explanatory models of depression to inform development of more effective, targeted prevention and intervention strategies for undergraduates. Our study extended and tested one such explanatory model—the Perfectionism Social Disconnection Model (Hewitt, Flett, Sherry, & Caelian, 2006).

1.1. Perfectionism and depression

As with depression (Miller & Chung, 2009), the incidence of perfectionism among North American and UK undergraduates has increased over the last three decades (Curran & Hill, in press). But, what is perfectionism? Several conceptualizations of perfectionism exist (e.g., Dunkley, Zuroff, & Blankstein, 2003; Frost, Marten, Lahart, & Rosenblate, 1990), and one widely used model is proposed by Hewitt and Flett (1991). Hewitt and Flett (1991) maintain perfectionism is best understood as a multidimensional personality trait with three dimensions:

self-oriented perfectionism (i.e., demanding perfection of the self), other-oriented perfectionism (i.e., demanding perfection from other people), and socially prescribed perfectionism (i.e., perceiving other people demand perfection of oneself).

Self-oriented perfectionism confers vulnerability for depression in the presence of ego-involving stressors, such as achievement failure (e.g., poor performance on an exam; Békés et al., 2015; Enns & Cox, 2005). Similarly, socially prescribed perfectionism confers vulnerability for depression in the presence of interpersonal stressors, such as social disconnection (i.e., feeling rejected by and disliked by others; Hewitt et al., 2006; Sherry, Mackinnon, & Gautreau, 2016; Sherry, Mackinnon, Macneil, & Fitzpatrick, 2013). Nonetheless, relative to self-oriented perfectionism, socially prescribed perfectionism is a more robust predictor of depression (Smith et al., 2016). Likewise, though people high on other-oriented perfectionism distress those close to them (Hewitt, Flett, & Mikail, 1995; Sherry et al., 2016; Smith, Speth, Sherry et al., 2017), other-oriented perfectionism is an inconsistent predictor of depression (Chen, Hewitt, & Flett, 2017). Accordingly, evidence suggests socially prescribed perfectionism is the perfectionism dimension most relevant to depressive symptoms. As such, we focused on interpersonal mediators of the socially prescribed perfectionism-depressive symptom link.

1.2. Advancing research on the socially prescribed perfectionism-depression link

To improve our understanding of *why* socially prescribed perfectionism confers vulnerability for depressive symptoms, we need methodological improvements. In fact, much of our understanding of the socially prescribed perfectionism-depression link derives from cross-sectional designs, which are incapable of testing the extent to which socially prescribed perfectionism predicts change in depressive symptoms (e.g., Wei, Mallinckrodt, Russell, & Abraham, 2004). Similarly, some longitudinal studies measure depression at one time point and

fail to account for depression's self-propagating effect (e.g. Chang & Sanna, 2001). Likewise, mediation models examining relations between socially prescribed perfectionism and depression commonly include mediating variables that are likely multi-factorial (e.g., social self-esteem; Smith, Sherry, Mushquash et al., 2017). Moreover, some studies restrict their focus to socially prescribed perfectionism and depression (e.g., Dean, Range, & Goggin, 1996). However, not controlling for socially prescribed perfectionism's overlap with self-oriented and other-oriented perfectionism potentially obscures distinct relationships (see Stoeber & Gaudreau, 2017). Lastly, measurement occasions in longitudinal studies have made drawing conclusions challenging. For instance, some studies limit follow-up assessments to days or weeks (e.g., Smith, Sherry, Mushquash et al., 2017)—potentially too short a duration for a rigorous test of the socially prescribed perfectionism-depressive symptom link. Other studies allow several years to elapse between measurement occasions (e.g., Dunkley, Sanislow, Grilo, & McGlashan, 2006)—potentially too long a duration, given that major life events can lead to improvements or deteriorations in depressive symptoms.

Given the above limitations, Limburg, Watson, Hagger, and Egan (2016) issued a call for investigators to improve methodologically research on the perfectionism-psychopathology link. We answered Limburg et al.'s (2016) call by rigorously testing the Perfectionism Social Disconnection Model (PSDM; Hewitt et al., 2006) using a 5-month, 2-wave longitudinal design.

1.3. The Perfectionism Social Disconnection Model

Our extended PSDM posits socially prescribed perfectionism generates depressive symptoms via two putative triggers: interpersonal discrepancies and social hopelessness (Habke & Flynn, 2002; Hewitt et al., 2017). Specifically, people high on socially prescribed perfectionism see their world as a threatening place where others demand perfection (Sherry et

al., 2016). Subsequently, socially prescribed perfectionism predisposes cognitions of falling short of other people's expectations (i.e., interpersonal discrepancies). These adverse social cognitions then precipitate negative expectations concerning one's ability to "fit in" and be comfortable with others (i.e., social hopelessness), which gives rise to depressive symptoms (Habke & Flynn, 2002; Hewitt et al., 2017; Sherry et al., 2016).

Supporting these assertions, Flett and Hewitt (1994) reported positive associations between socially prescribed perfectionism, social hopelessness, and depressive symptoms. Likewise, Rice, Leever, Christopher, and Porter (2006) reported intrapersonal discrepancies correlated positively with general hopelessness. Moreover, Besser, Flett, Guez, and Hewitt (2008) demonstrated that during an experimentally induced negative mood state, people with high socially prescribed perfectionism were prone to attend to, and remember, information characterized by interpersonal discrepancies. And Sherry et al. (2013) found that interpersonal discrepancies mediated socially prescribed perfectionism's relationship with depressive symptoms. Hence, evidence implies important links between socially prescribed perfectionism, interpersonal discrepancies, social hopelessness, and depressive symptoms. Nonetheless, these findings have not yet been integrated into a theory-driven model.

1.4. Present study

We conducted a longitudinal test of our extended PSDM to advance understanding of the social mechanisms through which socially prescribed perfectionism confers vulnerability for depressive symptoms. Guided by theory (e.g., Habke & Flynn, 2002; Hewitt et al., 2017; Sherry et al., 2016) and evidence (e.g., Besser et al., 2008; Flett & Hewitt, 1994; Rice et al., 2006; Sherry et al., 2013), we anticipated socially prescribed perfectionism would have a significant indirect effect on follow-up depressive symptoms via interpersonal discrepancies and social

hopelessness (see Figure 1). We also expected the indirect effect of socially prescribed perfectionism on depressive symptoms would remain significant after controlling for self-oriented perfectionism, other-oriented perfectionism, and baseline depressive symptoms.

2. Method

2.1. Participants

We recruited 143 participants (79.0% female) from a large university in western Canada to test our model (see Figure 1). Participants had a mean age of 19.9 years ($SD = 2.7$). Most participants (86.0%) were in their first year of university. Of the original sample, 127 participants (88.8%) completed Time 2 roughly five months after Time 1. Ethnicity data was not collected.

2.2. Measures

2.2.1. Perfectionism

Perfectionism was measured at Time 1 using Hewitt and Flett's (1991) *Multidimensional Perfectionism Scale* (FMPS) socially prescribed perfectionism subscale (15-items; FMPS-SPP; e.g., "People expect nothing less than perfection from me"), other-oriented perfectionism subscale (15-items; FMPS-OOP; e.g., "Everything that others do must be of top-notch quality"), and self-oriented perfectionism subscale (15-items; FMPS-SOP; e.g., "I demand nothing less than perfection of myself"). Participants responded to the FMPS using a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Evidence suggests the FMPS has acceptable reliability and validity (Flett & Hewitt, 2015; Hewitt & Flett, 1991, 2004). In the present study Cronbach's alpha for the FMPS-SPP, FMPS-OOP, and FMPS-SOP were .83, .84, and .82, respectively.

2.2.2. Interpersonal discrepancies

Interpersonal discrepancies were measured at Time 2 using Flett and Hewitt's (2012) *Multidimensional Discrepancies Inventory* (MDI) interpersonal discrepancy subscale (5-items; MDI-ID; e.g., "Do your behaviors fall short of other people's expectations?"). Participants responded to the MDI-ID using a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Research suggests the MDI-ID has acceptable reliability and validity (e.g., Mushquash & Sherry, 2012). Sherry et al. (2013) reported the MDI-ID had a Cronbach's alpha of .92-.94. Mushquash and Sherry's (2012) discriminant validity analysis demonstrated that interpersonal discrepancies and socially prescribed perfectionism are meaningfully distinct. Cronbach's alpha for the MDI-ID was .82 in the present study.

2.2.3. *Social hopelessness*

Social hopelessness was measured at Time 2 using Flett, Hewitt, Heisel, Davidson, and Gayle's (2003) *Social Hopelessness Questionnaire* (20-items; SHQ; e.g., "My social relationships will never be as good as I would like them to be"). Participants responded to the SHQ using a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Evidence suggests the SHQ has high internal consistency (e.g., Heisel, Flett, & Hewitt, 2003; $\alpha=.88$). Likewise, research supports the SHQ's predictive, convergent, discriminant and incremental validity (e.g., Flett & Hewitt, 1994; Heisel et al., 2003). For instance, Heisel et al. (2003) reported the SHQ correlated .72 with the Beck Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974). In the present study the SHQ had a Cronbach's alpha of .90.

2.2.4. *Depressive symptoms*

Depressive symptoms were assessed at Time 1 and Time 2 using the Beck Depression Inventory (21-items; BDI; Beck, 1976). Each BDI item consists of a depressive symptom (e.g., sadness) ranging from 0 (*no depressive symptoms*) to 3 (*severe depressive symptoms*).

Cronbach's alpha for the BDI is typically acceptable (e.g., $\alpha = .88$; Wei et al., 2004) and ample evidence supports the BDI's predictive, convergent, discriminant, and incremental validity (e.g., Beck, Steer, & Carbin, 1988; Wei et al., 2004). Cronbach's alpha for the BDI at time 1 and time 2 in the present study were .82 and .87, respectively.

2.3. Procedure

XXX University's research ethics board approved our study. Participants were recruited via ads posted in the Department of Psychology's participant pool. At Time 1, participants completed measures of perfectionism and depressive symptoms. At Time 2, five months after Time 1, participants completed measures of interpersonal discrepancies, social hopelessness, and depressive symptoms. Participants received one bonus point to use towards a psychology course at Time 1 and one bonus point to use towards a psychology course at Time 2.

3. Results

3.1. Descriptive statistics

Means, standard deviations, skewness, kurtosis, Cronbach's alpha, and bivariate correlations are in Table 1. Given that fluctuations in sample sizes can bias estimated standard errors and test statistics, these descriptive statistics were computed using listwise deletion. Following Cohen's (1992) guidelines for small, medium, and large effects ($r = .10, .30, .50$, respectively), socially prescribed perfectionism had a moderate positive relationship with interpersonal discrepancies and social hopelessness and a small positive relationship with follow-up depressive symptoms. Likewise, interpersonal discrepancies had moderate positive correlations with social hopelessness and follow-up depressive symptoms. In contrast, self-oriented perfectionism and other-oriented perfectionism had non-significant positive relationships with social hopelessness and follow-up depressive symptoms.

3.2. Path analysis

Less than 5% of data points were missing. Thus, we tested our model (see Figure 1) using path analysis with full information maximum likelihood estimation in Mplus 7.2. (Muthén & Muthén, 1998-2012). The significance of indirect effects were determined using bias-corrected bootstrapping with 20,000 resamples. Bias-corrected bootstrapping was used as a non-parametric alternative given that indirect effects tend to have distributions skewed away from zero (Shrout & Bolger, 2002). If the 95% bias-corrected bootstrapped confidence interval for an indirect effect does not contain zero within its upper and lower bounds, it suggests mediation.

Our model (see Figure 1) was just-identified (i.e., $df = 0$). As expected, the total indirect effect of baseline socially prescribed perfectionism on follow-up depressive symptoms via interpersonal discrepancies and social hopelessness was significant: $B = 0.08$, $\beta = .19$ (95% CI .04, .14), and $SE = .05$. Moreover, this total indirect effect remained significant after controlling for baseline depressive symptoms: $B = 0.05$, $\beta = .12$ (95% CI .04, .23), and $SE = .05$ (see Figure 1). Similarly, the total indirect effect of baseline depressive symptoms on follow-up depressive symptoms via interpersonal discrepancies and social hopelessness was significant: $B = 0.11$, $\beta = .11$ (95% CI .04, .21), and $SE = .04$. Furthermore, as anticipated, when we tested the same model (see Figure 1), but with self-oriented and other-oriented perfectionism added as covariates, the total indirect effect of socially prescribed perfectionism on depressive symptoms remained significant: $B = 0.08$, $\beta = .18$ (95% CI .04, .14), and $SE = .06$. Conversely, the total indirect effect of self-oriented perfectionism on follow-up depressive symptoms via interpersonal discrepancies and social hopelessness (controlling for baseline depression) was non-significant: $B = -0.03$, $\beta = -.08$ (95% CI -.18, .01), and $SE = .05$. Likewise, the total indirect effect of other-oriented perfectionism on follow-up depressive symptoms via interpersonal discrepancies and social

hopelessness (controlling for baseline depression) was non-significant: $B = -0.03$, $\beta = -.07$ (95% CI $-.08, .00$), and $SE = .04$. As such, socially prescribed perfectionism appeared to be more relevant to our model than other-oriented perfectionism and self-oriented perfectionism.

4. Discussion

We spend roughly 80% of our waking life with other people, and positive relationships are vital to our well-being (Baumeister & Leary, 1995). However, some people are characterized by personality traits that make participating in, and benefiting from, harmonious and stable interpersonal relationships challenging. Our study focused on one such trait—socially prescribed perfectionism (i.e., perceiving others demand perfection of oneself)—through the lens of the Perfectionism Social Disconnection Model (PSDM; Hewitt et al., 2006). The PSDM maintains socially prescribed perfectionism confers vulnerability for depressive symptoms by engendering social disconnection (i.e., feeling rejected, excluded, and unwanted by others). Nonetheless, though investigators have studied the PSDM for over a decade, the specific social mechanisms linking socially prescribed perfectionism to depressive symptoms require explication. Moreover, longitudinal tests of the PSDM are rare. Consequently, we addressed these important limitations by extending and testing the PSDM using a 5-month, 2-wave longitudinal design.

As anticipated, socially prescribed perfectionism predicted increased depressive symptoms five months later through interpersonal discrepancies and social hopelessness (see Figure 1). Likewise, as expected, all paths were virtually identical after including self-oriented and other-oriented perfectionism as covariates. In the context of the broader literature, our findings complement research showing that personality vulnerabilities are tied to depressive symptoms via interpersonal mediators (Shahar, Joiner, Zuroff, & Blatt, 2004). More specifically, our results align with a large body of evidence showing socially prescribed perfectionism confers

vulnerability for depressive symptoms (see Smith, Sherry, Rnic et al., 2016 for a review); and we add substantially to this literature by providing novel insights into the interpersonal mechanisms mediating the socially prescribed perfectionism-depressive symptom link.

Indeed, consistent with Sherry et al. (2013), perceiving on-going disappointment and disapproval from others (i.e., interpersonal discrepancies) appears to be a prototypic form of social cognition for people high on socially prescribed perfectionism. Furthermore, our results suggest interpersonal discrepancies leave people feeling like their future social relationships are doomed to fail—feelings that are depressogenic (Baumeister & Leary, 1995; Hewitt et al., 2006). As such, our study underscores the destructive nature of interpersonal discrepancies. Believing one has fallen short of others' expectations does not empower people to better their social relationships; it triggers social hopelessness and depressive symptoms. Seen from this perspective, people high on socially prescribed perfectionism are prone to depressive symptoms due to a sense of disappointing others that thwarts the feelings of acceptance by and connection to others that are essential for well-being (Baumeister & Leary, 1995). Put differently, our findings align with theory and research suggesting interpersonal mediators are critically important for understanding the link between personality traits (e.g., Sherry, Mackinnon, & Gautreau, 2016) and depressive symptoms (e.g., Joiner & Coyne, 1999). As such, we encourage investigators to develop more effective prevention and intervention strategies by targeting dysfunctional relational contingencies and adverse interpersonal expectations (see Hewitt, Flett, & Mikail, 2017).

Lastly, our results supported the specificity of our model beyond other perfectionism dimensions. Though both socially prescribed and self-oriented perfectionism confer vulnerability to depressive symptoms (see Smith, Sherry, Rnic et al., 2016), our findings align with research

showing interpersonal problems are more pertinent to the socially prescribed perfectionism-depression link (e.g., Enns & Cox, 2005). As such, research is needed to specify intrapersonal mechanisms that explain the self-oriented perfectionism-depression link (e.g., self-worth contingencies; Sturman, Flett, Hewitt, & Rudolph, 2009).

4.1. Limitations and future directions

Our sample was predominantly female precluding examination of gender differences. Though some studies have found differential patterns of social dysfunction in men and women high on socially prescribed perfectionism (e.g., Hill, Zrull, & Turlington, 1997), other studies have not identified salient gender differences (e.g., Mackinnon et al., 2012). Thus, research testing potential gender differences is needed before assumptions of generalizability can be made. Similarly, ethnicity data was not collected and research is needed testing the generalizability of our findings to different ethnic groups. Additionally, we assessed all study variables using self-reports which are potentially biased. Future research could overcome this potential bias by using methods of data collection that go beyond self-reports (e.g., informant reports). Research testing the incremental validity of our model beyond compelling covariates such as neuroticism and anxiety is also needed (e.g., Smith et al., 2016). Likewise, interpersonal discrepancies, social hopelessness, and follow-up depressive symptoms were temporally confounded in our study. As such, researchers should test whether our model replicates when predictors, mediators, and outcome variables are assessed at separate time points (Cole & Maxwell, 2003). We also tested a specific sequence of events (see Figure 1) based on theory (Hewitt et al., 2006; Sherry et al., 2016) and research (e.g., Sherry, Law, Hewitt, Flett, & Besser, 2008; Sherry et al., 2013; Smith, Sherry, Mushquash et al. 2017). However, different sequences are possible. For instance, social hopelessness might be an antecedent of, rather than a

consequence of, interpersonal discrepancies. Furthermore, though our findings provide useful information about the mechanisms involved in the PSDM, our study did not involve manipulation of variables, necessitating inferences of causality based on longitudinal, but not experimental, data. Future investigations could substantially advance research on the PSDM literature through randomization of participants, manipulation of social variables, and use of behavioral indicators (c.f., Besser et al., 2008). Lastly, investigators should consider comparing the PSDM to other theoretically similar models such as Joiner's (1995) Interpersonal Psychological Theory of Suicide

4.2. Concluding remarks

The PSDM posits that socially prescribed perfectionism confers vulnerability for depression through social disconnection. Our study extended, tested, and supported the PSDM by integrating socially prescribed perfectionism, interpersonal discrepancies, social hopelessness, and depressive symptoms into a conceptual framework that explains why socially prescribed perfectionism places people at risk for depressive symptoms. Results suggest people high on socially prescribed perfectionism tend to perceive others as dissatisfied with them and disappointed in them and that such adverse social cognitions are tied to negative future social expectations and a perceived inefficacy regarding interpersonal relations. Subsequently, feeling that they will never belong, fit in, or feel comfortable around others leaves people high on socially prescribed perfectionism vulnerable to depressive symptoms.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York, NY: International Universities Press.
- Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8*, 77-100.
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology, 42*, 861-865.
- Békés, V., Dunkley, D. M., Taylor, G., Zuroff, D. C., Lewkowski, M., Foley, J. E., ... & Westreich, R. (2015). Chronic stress and attenuated improvement in depression over 1 year: The moderating role of perfectionism. *Behavior Therapy, 46*, 478-492.
- Besser, A., Flett, G. L., Guez, J., & Hewitt, P. L. (2008). Perfectionism, mood, and memory for positive, negative, and perfectionistic content. *Individual Differences Research, 6*, 211-244.
- Chang, E. C., & Sanna, L. J. (2001). Negative attributional style as a moderator of the link between perfectionism and depressive symptoms: Preliminary evidence for an integrative model. *Journal of Counseling Psychology, 48*, 490-495.
- Chen, C., Hewitt, P. L., & Flett, G. L. (2017). Ethnic variations in other-oriented perfectionism's association with depression and suicide behavior. *Personality and Individual Differences,*

104, 504-509.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.

Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112, 558-577.

Curran, T., & Hill, A. P. (in press). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological Bulletin*.

Dean, P. J., Range, L. M., & Goggin, W. C. (1996). The escape theory of suicide in college students: Testing a model that includes perfectionism. *Suicide & Life-Threatening Behavior*, 26, 181-186.

Dunkley, D. M., Sanislow, C. A., Grilo, C. M., & McGlashan, T. H. (2006). Perfectionism and depressive symptoms 3 years later: Negative social interactions, avoidant coping, and perceived social support as mediators. *Comprehensive Psychiatry*, 47, 106-115.

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.

Enns, M. W., & Cox, B. J. (2005). Perfectionism, stressful life events, and the 1-year outcome of depression. *Cognitive Therapy & Research*, 29, 541-553.

Flett, G. L., & Hewitt, P. L. (1994). *The Social Hopelessness Questionnaire: Psychometric properties and association with adjustment in adolescents*. Presented at the annual conference of the Association for Advancement of Behavior Therapy, San Francisco, CA.

Flett, G. L., & Hewitt, P. L. (2012). *The multidimensional discrepancy inventory*. Unpublished manuscript.

- Flett, G. L., & Hewitt, P. L. (2015). Measures of perfectionism. In G. J. Boyle, D. H. Saklofske., & G. Matthews (Eds.), *Measures of personality and social psychology constructs* (pp. 595-618). San Diego, CA: Elsevier Academic Press.
- Flett, G. L., Hewitt, P. L., Heisel, M. J., Davidson, L., & Gayle, B. (2003). The Social Hopelessness Questionnaire: Development of a domain specific measure. *Unpublished Manuscript*.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.
- Gonzalez, O., Berry, J. T., Mcknight-Eily, L. R., Strine, T., Edwards, V.J., Lu, H., & Croft, J. B. (2010). Current depression among adults – United States, 2006 and 2008. *Morbidity & Mortality Weekly Report, 59*, 1229-1235.
- Habke, A. M., & Flynn, C. A. (2002). Interpersonal aspects of trait perfectionism. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 151-180). Washington, DC: American Psychological Association.
- Heisel, M. J., Flett, G. L., & Hewitt, P. L. (2003). Social hopelessness and college student suicide ideation. *Archives of Suicide Research, 7*, 221-235.
- Hewitt, P. L., & Flett, G. L. (1991). 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. (2004). *The Multidimensional Perfectionism Scale: Manual*. Toronto: Multi-Health Systems, Inc.
- 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., & Mikail, S. F. (1995). Perfectionism and relationship adjustment in pain patients and their spouses. *Journal of Family Psychology*, *9*, 335-347.
- Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. New York, NY: Guilford.
- Hewitt, P. L., Flett, G. L., Sherry, S. B., & Caelian, C. (2006). Trait perfectionism dimensions and suicidal behavior. In T. E. Ellis (Ed.), *Cognition and Suicide: Theory, Research, and Therapy* (pp. 215-235). Washington, DC: American Psychological Association.
- Hill, R. W., Zrull, M. C., & Turlington, S. (1997). Perfectionism and interpersonal problems. *Journal of Personality Assessment*, *69*, 81-103.
- Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, *47*, 391-400.
- Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Joiner, T. E., & Coyne, J. C. (1999). *The interactional nature of depression: Advances in interpersonal approaches*. Washington, DC: American Psychological Association.
- Limburg, K., Watson, H. J., Hagger, M. S., & Egan, S. J. (2016). The relationship between perfectionism and psychopathology: A meta-analysis. *Journal of Clinical Psychology*, *73*, 1301-1326.
- Mackinnon, S. P., Sherry, S. B., Antony, M. M., Stewart, S. H., Sherry, D. L., & Hartling, N. (2012). Caught in a bad romance: Perfectionism, conflict, and depression in romantic relationships. *Journal of Family Psychology*, *26*, 215-225.

- Miller, E. J., & Chung, H. (2009). A literature review of studies of depression and treatment outcomes among U.S. College students since 1990. *Psychiatric Services, 60*, 1257-1260.
- Mushquash, A. R., & Sherry, S. B. (2012). Understanding the socially prescribed perfectionist's cycle of defeat. *Journal of Research in Psychopathology, 46*, 700-709.
- Muthén, L. K., & Muthén, B. O. (1998-2012). *Mplus users' guide*. Los Angeles, CA: Author.
- Rice, K. G., Leever, B. A., Christopher, J., & Porter, J. D. (2006). Perfectionism, stress, and social (dis)connection: A short-term study of hopelessness, depression, and academic adjustment among honors students. *Journal of Counseling Psychology, 53*, 524-534.
- Shahar, G., Joiner, T. E., Zuroff, D. C., & Blatt, S. J. (2004). Personality, interpersonal behavior, and depression: Co-existence of stress-specific moderating and mediating effects. *Personality and Individual Differences, 36*, 1583-1596.
- Sherry, S. B., Law, A., Hewitt, P. L., Flett, G. L., & Besser, A. (2008). Social support as a mediator of the relationship between perfectionism and depression: A preliminary test of the social disconnection model. *Personality and Individual Differences, 45*, 339-344.
- Sherry, S. B., Mackinnon, A. L., Fossum, K., Antony, M. M., Stewart, S. H., Sherry, D. L., Nealis, L. J., & Mushquash, A. R. (2013). Perfectionism, discrepancies, and depression: Testing the perfectionism social disconnection model in a short-term, four-wave longitudinal study. *Personality and Individual Differences, 54*, 692-697.
- Sherry, S. B., Mackinnon, S. P., & Gautreau, C. M. (2016). Perfectionists don't play nicely with others: Expanding the social disconnection model. In F. M. Sirois & D. Molnar (Eds.), *Perfectionism, health, and well-being* (pp. 225-243). New York, NY: Springer.
- Sherry, S. B., Mackinnon, S. P., Macneil, M. A., & Fitzpatrick, S. (2013). Discrepancies confer vulnerability to depressive symptoms: A three-wave longitudinal study. *Journal of*

Counseling Psychology, 60, 112-126.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422-445.

Smith, M. M., Sherry, S. B., Mushquash, A. R., Saklofske, D. H., Gaudreau, C. M., & Nealis, L. J. (2017). Perfectionism erodes social self-esteem and generates depressive symptoms: Studying mother-daughter dyads using a daily diary design with longitudinal follow-up. *Journal of Research in Personality, 71*, 72-79.

Smith, M. M., Sherry, S. B., Rnic, K., Saklofske, D. H., Enns, M. W., & Gralnick, T. (2016). Are perfectionism dimensions vulnerability factors for depressive symptoms after controlling for neuroticism? A meta-analysis of 10 longitudinal studies. *European Journal of Personality, 30*, 201-212.

Smith, M. M., Speth, T. A., Sherry, S. B., Saklofske, D. H., Stewart, S. H., & Glowacka, M. (2017). Is socially prescribed perfectionism veridical? A new take on the stressfulness of perfectionism. *Personality and Individual Differences, 110*, 115-118.

Steptoe, A., Tsuda, A., Tanaka, Y., & Wardle, J. (2007). Depressive symptoms, socio-economic background, sense of control, and cultural factors in university students from 23 countries. *International Journal of Behavioral Medicine, 14*, 97-107,

Stoeber, J., & Gaudreau, P. (2017). The advantages of partialling perfectionistic strivings and perfectionistic concerns: Critical issues and recommendations. *Personality and Individual Differences, 104*, 379-386.

Sturman, E. D., Flett, G. L., Hewitt, P. L., & Rudolph, S. G. (2009). Dimensions of perfectionism and self-worth contingencies in depression. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 27*, 213-231.

Wei, M., Mallinckrodt, B., Russell, D. W., & Abraham, W. T. (2004). Maladaptive perfectionism as a mediator and moderator between adult attachment and depressive mood. *Journal of Counseling Psychology, 51*, 201-212.

Table 1

Bivariate correlations, means, standard deviations, and alpha reliabilities

Variable	1	2	3	4	5	6	7
1. Socially prescribed perfectionism (time 1)	—						
2. Self-oriented perfectionism (time 1)	.46***	—					
3. Other-oriented perfectionism (time 1)	.25**	.40**	—				
4. Depressive symptoms (time 1)	.38***	.14	.09	—			
5. Interpersonal discrepancies (time 2)	.33***	-.06	-.16	.33***	—		
6. Social hopelessness (time 2)	.31***	.04	.02	.28**	.38***	—	
7. Depressive symptoms (time 2)	.22*	.12	.13	.42***	.43***	.41***	—
Alpha reliabilities (α)	.83	.84	.82	.82	.82	.90	.86
Mean	53.26	63.66	56.99	9.88	9.65	53.24	9.22
Standard deviation	14.53	15.15	13.67	6.03	3.32	15.12	6.46
Minimum	16.00	34.00	26.00	0.00	5.00	20.00	0.00
Maximum	89.00	97.00	97.00	36.00	18.00	85.00	32.00
Skewness	-0.11	0.37	0.21	0.88	0.65	-0.27	0.79
Kurtosis	-0.40	-0.83	-0.11	1.58	-0.20	-0.64	0.79

Note. Listwise deletion ($N = 127$). * $p < .05$; ** $p < .01$; *** $p < .001$.

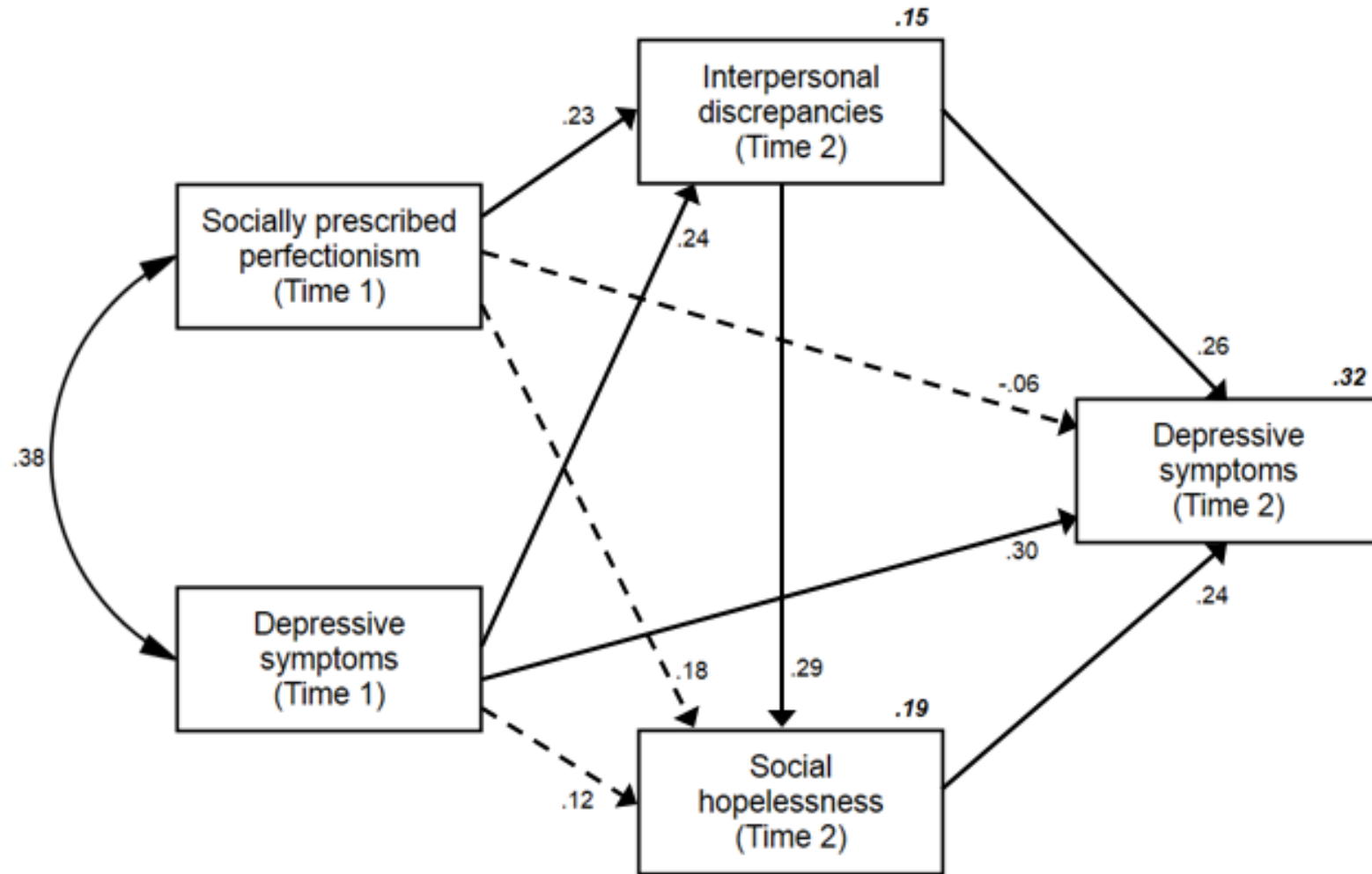


Figure 1. Path diagram depicting associations among variables. Rectangles represent observed variables. The double-headed black arrow represents a significant correlation ($p < .05$). Single headed dashed arrows represent non-significant direct effects ($p > .05$). Single-headed black arrows represent significant direct effects ($p < .05$). Bolded italicized numbers in the top right-hand corner of rectangles represent the amount of variance explained by exogenous variables. All estimates are standardized.