



Smith, Martin M. ORCID logoORCID: <https://orcid.org/0000-0002-4754-3032>, Sherry, Simon B., Mushquash, Aislin R., Saklofske, Donald H., Gautreau, Chantel M. and Nealis, Logan 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. pp. 72-79.

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Perfectionism Erodes Social Self-Esteem and Generates Depressive Symptoms:

Studying Mother-Daughter Dyads Using a Daily Diary Study With Longitudinal Follow-up¹

Martin. M. Smith^{a*}, Simon B. Sherry^{b,c}, Aislin R. Mushquash^d, Donald H. Saklofske^a, Chantel

M. Gautreau^b, & Logan J. Nealis^b

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^aDepartment of Psychology, The University of Western Ontario, 1151 Richmond Street, London, Ontario, Canada N6A 5C2

^bDepartment of Psychology and Neuroscience, Dalhousie University, 1355 Oxford Street, PO BOX 15000, Halifax, Nova Scotia, Canada B3H 4R2

^cDepartment of Psychiatry, Dalhousie University, 5909 Veteran's Memorial Lane, Halifax, Nova Scotia, Canada B3H 2E2

^dDepartment of Psychology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, Canada P7B 5E1

*Corresponding author. Tel.: +1-519-661-2100; fax: +1-519-661-3461

E-mail address: msmit454@uwo.ca (M. M. Smith).

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Highlights

- Tested the perfectionism social disconnection model in 218 mother-daughter dyads.
- Study involved a daily diary design with longitudinal follow-up.
- Daughters' perfectionism predicted daughters' depression by lowering daughters' esteem.
- Mothers' perfectionism predicted daughters' depression by lowering daughters' esteem.
- Clarified the characterological and the interpersonal context in which depression occurs.

Abstract

The perfectionism social disconnection model (PSDM) asserts socially prescribed perfectionism confers risk for depression by eroding social self-esteem. However, self-oriented perfectionism and other-oriented perfectionism are neglected in extant tests of the PSDM. Moreover, the PSDM attributes the source of depression to dispositional characteristics without considering interpersonal contexts. We expanded and tested the PSDM in 218 mother-daughter dyads using a daily diary design with longitudinal follow-up. Daughters completed measures of self-oriented and socially prescribed perfectionism (Wave 1), social self-esteem (Wave 2), and depression (Wave 1 and Wave 3). Mothers completed a measure of other-oriented perfectionism (Wave 1). Daughters' socially prescribed and self-oriented perfectionism, and mothers' other-oriented perfectionism, conferred vulnerability to daughters' depression by lowering daughters' social self-esteem.

Keywords: perfectionism, social self-esteem, depression, daily diary, longitudinal

1. Introduction

Perfectionism confers risk for depressive symptoms (Dunkley Sanislow, Grillo, & McGlashan, 2006; Shahar, Blatt, Zuroff, & Pilkonis, 2003; Smith et al., 2016). But why do perfectionists get depressed? The perfectionism social disconnection model (PSDM; Hewitt, Flett, Sherry, & Caelian, 2006) offers one compelling explanation—perfectionism impedes participating in and benefiting from close relationships, which in turn places perfectionists at risk for depressive symptoms (Sherry, Mackinnon, & Gautreau, 2016). Extant evidence supports the PSDM. Shahar, Blatt, Zuroff, Krupnick, and Sotsky (2004) studied patients receiving treatment for depression and found baseline perfectionism reduced the quality of the patient's social network, impaired the patient-therapist alliance, and slowed reductions in post-treatment depression. Similarly, Dunkley and colleagues (2006) reported decreased social support and increased negative social interactions accounted for the perfectionism-depressive symptom link. Likewise, other forms of social disconnection mediate the perfectionism-depressive symptom link including interpersonal discrepancies (Sherry et al., 2013), communication styles (Barnett & Johnson, 2016), and personality dependent interpersonal stressors (Békés et al., 2015; Cox, Clara, & Enns, 2009; Flett, Besser, & Hewitt, 2014).

However, there are still major gaps in our understanding of the perfectionism-depression link. Research on the PSDM omits self-oriented and other-oriented perfectionism (e.g., Barnett & Johnson, 2016; Sherry, Law, Hewitt, Flett, & Besser, 2008). And research on perfectionism and depressive symptoms typically focus on dispositional characteristics (e.g., perfectionistic traits)—without considering interpersonal contexts (e.g., parent-offspring relationships), despite evidence that interpersonal contexts are critically important to understanding depression (Joiner & Coyne, 1999). We addressed these limitations by extending and by testing the PSDM in a

sample of mother-daughter dyads using a daily diary design with longitudinal follow-up.

1.1. The perfectionism social disconnection model

Hewitt and Flett (1991) conceptualized perfectionism as a multidimensional personality trait composed of three dimensions: *self-oriented perfectionism* (demanding perfection of oneself), *other-oriented perfectionism* (demanding perfection of others), and *socially prescribed perfectionism* (perceiving others as demanding perfection). For people high on socially prescribed perfectionism a sense of being accepted by and liked by others is elusive (Mackinnon et al., 2011). And if, as Moretti and Higgins (1999) assert, we have an internal audience that includes intrapsychic representations of other people's opinions and expectations, then individuals with elevated socially prescribed perfectionism see their inner audience as disgruntled (Sherry et al., 2013). Indeed, establishing meaningful connections to others is difficult for people high on socially prescribed perfectionism, as other's love, approval, and acceptance are judged as forthcoming only if they achieve perfect outcomes (Hewitt & Flett, 1991; Hewitt et al., 2006). In sum, according to the PSDM, socially prescribed perfectionism generates feelings of being rejected and disliked by other people (i.e., low social self-esteem), which subsequently contributes to depressive symptoms (Hewitt et al., 2006). And the PSDM views socially prescribed perfectionism as the perfectionism dimension that leaves people most vulnerable to depression (Flett, Hewitt, & De Rosa, 1996; Hewitt et al., 2006). However, though clearly appropriate to accord socially prescribed perfectionism a prominent role in the PSDM, there is also an important role for self-oriented and other-oriented perfectionism in understanding perfectionists' interpersonal difficulties and depressive symptoms (Sherry et al., 2016).

1.2. Expanding the PSDM: A role for self-oriented perfectionism

Compared to socially prescribed perfectionism, self-oriented perfectionism shows weaker

associations with depressive symptoms (Smith et al., 2016). But self-oriented perfectionism still confers risk for depression across a wide range of populations (Hewitt & Flett, 1993; Smith et al., 2016). And, like socially prescribed perfectionism, self-oriented perfectionism is linked to low social self-esteem among female undergraduates (Blankstein, Dunkley, & Wilson, 2008; Sherry & Hall, 2009). Indeed, theory suggests self-oriented perfectionism leads to an imbalanced life wherein self-definition trumps relatedness (Sherry et al., 2016).

Specifically, relentlessly pursuing agentic goals, at the expense of communal goals, causes people with elevated self-oriented perfectionism to miss or to ignore chances for close relationships (Hewitt et al., 2006; Sherry et al., 2016). Likewise, people high on self-oriented perfectionism are overly competitive, which manifests in a win-at-all-costs interpersonal style (Sherry et al., 2016). As such, individuals high on self-oriented perfectionism have a self-preservation orientation in which competition, beating others, and being the absolute best are paramount (Flett, Hewitt, Blankstein, & Gray, 1998; Sherry, Hewitt, Flett, Lee-Baggley, & Hall, 2007). Hence, for people high on self-oriented perfectionism, other people are seen more as potential competitors than as potential collaborators (Sherry et al., 2016).

Similarly, for individuals with high self-oriented perfectionism, their sense of self-worth is contingent on achieving perfection (Struman, Flett, Hewitt, & Rudolph, 2009). Thus, people with elevated self-oriented perfectionism seek out others' acceptance and approval by doggedly striving to meet self-imposed perfectionistic goals. However, perfection is intangible, fleeting, and rare. Thus, individuals with elevated self-oriented perfectionism experience a high frequency of perceived failures and a low frequency of perceived successes. Accordingly, after repeatedly falling short of their self-imposed perfectionistic goals, people high on self-oriented perfectionism often feel deficient in the eyes of others (Sherry et al., 2016). Drawing on Horney

(1950), we can say individuals high on self-oriented perfectionism *move away* from other people due to their hyper-focus on agentic achievement, their neglect of communal goals, and their precarious sense of self-worth (Sherry et al., 2016; Struman et al., 2009).

1.3. Expanding the PSDM: A role for other-oriented perfectionism

Whereas self-oriented perfectionists *move away from* other people, other-oriented perfectionists *move against* other people (Horney, 1950). In fact, individuals with high other-oriented perfectionism denigrate others, are continually disappointed by others, and are perpetually in conflict with others (Hewitt & Flett, 1991; Sherry et al., 2016). However, other-oriented perfectionism shows inconsistent associations with depressive symptoms (Chen, Hewitt, & Flett, 2017). And theory suggests, for people high on other-oriented perfectionism, their tendency to externalize blame buffers against depressive symptoms (Chen et al., 2017).

Even so, the recipients of perfectionistic demands appear to suffer more than the originators of perfectionistic demands (Sherry et al., 2016; Smith et al., 2017). For instance, Hewitt, Flett, and Mikail (1995) found spouses of people with high other-oriented perfectionism had greater marital distress, whereas the partner high on other-oriented perfectionism was not themselves affected. Likewise, Smith and colleagues (2017) reported other-oriented perfectionism in influencers (mothers, fathers, romantic partners, and friends) predicted socially prescribed perfectionism in targets, which subsequently contributed to targets' stress. Thus, although individuals with high other-oriented perfectionism do not themselves suffer greater distress, evidence indicates they distress the people closest to them (Hewitt et al., 1995; Nealis, Sherry, Sherry, Stewart, & Macneil, 2015; Smith et al., 2017). In fact, being harshly judged vis-à-vis another person's unobtainable standards may lead people to feel rejected by and disliked by others (i.e., low social self-esteem), which in turn triggers depressive symptoms (Sherry et al.,

2016). And yet, although plausible, this contention is untested to date.

1.4. Testing the expanded PSDM using mother-daughter dyads

Against this background, we tested an often discussed (Blatt, 1995; Bruch, 1971; Sherry et al., 2016), but rarely studied, idea—depressive symptoms in daughters arise not only from socially prescribed perfectionism, but also self-oriented perfectionism and exposure to critical, pressuring, and demanding mothers. We focused on daughters since, from adolescence onward, women are twice as likely to be depressed (Mead, 2002). Furthermore, Blankstein, Dunkley, and Wilson (2008) found perfectionistic strivings, a composite of self-oriented perfectionism and personal standards, correlated negatively with social self-esteem among female, but not male, undergraduates. Moreover, daughters appear to become perfectionistic in response to criticism, pressure, and demands from mothers (Besser & Priel, 2005; Clark & Coker, 2009; Flett, Hewitt, Oliver, & Macdonald, 2002; Flett, Hewitt, & Singer, 1995; Soenens, Elliot, Goossens, Vansteenkiste, Luyten, & Duriez, 2005). And, maternal criticism, maternal pressure, and maternal demands are tied to depressive symptoms in daughters (Gibb, Uhrlass, Grassia, Benas, & McGeary, 2009; Rosenbaum Asarnow, Tompson, Woo, & Cantwell, 2001).

1.5. The present study

We expanded and tested the PSDM to provide an integrative theoretical framework explaining why daughters' socially prescribed perfectionism, daughters' self-oriented perfectionism, and mothers' other-oriented perfectionism confer risk for depressive symptoms in daughters. Given the rank-order stability of depressive symptoms (Prenoveau et al., 2011), we hypothesized depressive symptoms would display moderately-to-strongly stable autoregressive paths (e.g., depressive symptoms at Wave 1 predicting depressive symptoms at Wave 3). We controlled for baseline depressive symptoms to examine change in depressive symptoms, and

because future depressive symptoms are strongly predicted by past depressive symptoms (Judd, Schettler, & Akiskal, 2002). Moreover, depressive symptoms predict social self-esteem (Orth & Robins, 2013), making it necessary to test if social self-esteem is predicted by perfectionism and not merely a complication of daughters' depressive symptoms. We focused on low social self-esteem because this form of social disconnection is key to the phenomenology of perfectionists, with evidence suggesting such feelings of disharmony with, and exclusion from others, are common daily experiences for perfectionists (Sherry & Hall, 2009).

Additionally, among female undergraduates, socially prescribed perfectionism and self-oriented perfectionism display negative associations with social self-esteem (Blankstein et al., 2008; Flett et al., 1996; Sherry & Hall, 2009) and positive associations with depressive symptoms (Mushquash & Sherry, 2012; Sherry, Hewitt, Flett, & Harvey, 2003; Smith et al., 2016). Likewise, other-oriented perfectionism in one person contributes to distress in another person (Haring, Hewitt, & Flett, 2003; Hewitt & Flett, 1993; Hewitt et al., 1995; Smith et al., 2017). Hence, we also hypothesized daughters' socially prescribed perfectionism, daughters' self-oriented perfectionism, and mothers' other-oriented perfectionism would predict increased depressive symptoms in daughters' (Wave 3) via negative associations with daughters' social self-esteem (Wave 2). Regarding the anticipated indirect effect of daughters' socially prescribed perfectionism, a similar hypothesis was supported in Mackinnon et al. (2011) and Sherry and Hall (2009). Conversely, although informed by case histories (Bruch, 1971), theoretical models (Sherry et al., 2016), and recent findings (Smith et al., 2016, 2017), the indirect effects of daughters' self-oriented perfectionism and mothers' other-oriented perfectionism were considered more exploratory given that our study is the first to test these specific predictions.

Lastly, we aimed to methodologically advance research on perfectionism and depressive

symptoms. Typically, cross-sectional designs are used to study the perfectionism-depressive symptoms link (e.g., Flett, Besser, & Hewitt, 2005). However, cross-sectional designs cannot address directionality, and there are advantages to other designs. Longitudinal designs can take baseline levels of outcome variables into account and allow for stronger causal inferences. Daily diary designs have improved reliability via repeated assessments and have increased ecological validity while reducing recall bias (Laurenceau & Bolger, 2005). Even so, most daily diary studies on perfectionism (e.g., Sherry, Sherry, et al., 2014) rely on a once-daily reporting schedule, which increases the chance of recall bias relative to using multiple daily reports. Accordingly, to overcome these limitations, we combined a daily diary approach, assessing daughters twice daily, with a longitudinal follow-up.

2. Method

2.1. Participants

In line with the rules of thumb for sample sizes proposed by dyadic researchers (e.g., Kenny, Kashy, & Cook, 2006), we recruited 218 mother-daughter dyads to test our model (see Figure 1). Mothers had a mean age of 50.1 years ($SD = 4.9$). Most mothers were Caucasian (91.7%) and lived in Canada (84.4%). Daughters averaged 20.0 years of age. The majority of daughters were Caucasian (89.9%), lived in Canada (94.0%), and were from family households that earned more than \$60,000 per year (75.6%). On average, daughters were enrolled in their second year of university ($M = 2.1$, $SD = 1.2$). Additionally, on average, mothers and daughters emailed each other 2.3 times per week ($SD = 4.3$), texted each other 4.0 times per week ($SD = 2.6$), spoke on the phone 3.7 times per week ($SD = 2.3$), and saw each other in person 2.5 times per week ($SD = 3.0$). Some daughters lived with their mothers (21.2%) while other daughters lived in the same state/province (29.5%) or country (45.0%). The remaining daughters (3.7%)

lived in a different country than their mothers or did not indicate their proximity to their mothers (0.6%).

2.2. Measures

2.2.1. Other-oriented perfectionism

Other-oriented perfectionism in mothers was measured at Wave 1 using Hewitt and Flett's (1990) 8-item Other-Oriented Perfectionism Scale (OOP-90; "I think less of people I know when they make mistakes"). The OOP-90 is rated on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Stoeber (2014) reported the OOP-90 is strongly correlated ($r = .58$) with the Multidimensional Perfectionism Scale other-oriented perfectionism subscale (MPS-OOP; Hewitt & Flett, 1991). We used the OOP-90 as this measure captures the tendency to require perfection of others in a critical, pressuring, and demanding way (Nealis et al., 2015). The OOP-90 has demonstrated good reliability and validity (e.g., Hewitt & Flett, 1990; Nealis et al., 2015; Stoeber, 2014, 2015).

2.2.2. Socially prescribed perfectionism

Daughters' socially prescribed perfectionism was measured at Wave 1 using the 5-item short-form of Hewitt and Flett's (1991) Multidimensional Perfectionism Scale socially prescribed perfectionism subscale (MPS-SF-SPP; Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008; "Others expect nothing less than perfection from me"). The 5-item MPS-SF-SPP is strongly correlated with the original 15-item subscale ($r = .90$; Hewitt et al., 2008). The MPS-SF-SPP is rated on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*) and has shown good reliability and validity (e.g., Smith et al., 2017; Stoeber, in press).

2.2.3. Self-oriented perfectionism

Daughters' self-oriented perfectionism was measured at Wave 1 using the 5-item short-

form of Hewitt and Flett's (1991) Multidimensional Perfectionism Scale self-oriented perfectionism subscale (MPS-SF-SOP; "It is very important that I am perfect in everything I attempt;" Hewitt et al., 2008). The MPS-SF-SOP is strongly correlated with the original 15-item subscale ($r = .91$; Hewitt et al., 2008). The MPS-SF-SOP is rated on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Research supports the reliability and validity of the MPS-SF-SPP (e.g., Smith et al., 2017; Stoeber, in press).

2.2.4. Social self-esteem

Daughters' social self-esteem was measured at Wave 2 using the 4-item short-form of Heatherton and Polivy's (1991) State Self-Esteem Scale social self-esteem subscale (SSES-SF-SSE; "I was worried about looking like a fool;" Sherry & Hall, 2009). Sherry and Hall (2009) constructed the SSES-SF-SSE by selecting the four highest loading items from the original 7-item scale (see p. 898 of Heatherton & Polivy, 1991). The SSES-SF-SSE is strongly correlated with the original 7-item subscale ($r = .77$; Sherry & Hall, 2009). Daughters' responded to SSES-SF-SSE using a 5-point scale from 1 (*not at all*) to 5 (*extremely*). The SSES-SF-SSE has shown good psychometric properties (e.g., Sherry & Hall, 2009; Mackinnon et al., 2011).

2.2.5. Depressive symptoms

Daughters' depressive symptoms were measured at Wave 1 and Wave 3 using the 10-item short-form of Radolff's (1977) Center for Epidemiological Studies Depression Scale (CES-D-SF; "I felt depressed;" Cole, Rabin, Smith, & Kaufman, 2004). The CESD-SF is rated on a 4-point scale from 0 (*rarely or none of the time*) to 3 (*most or all of the time*) and is strongly correlated with the original 20-item subscale ($r = .94$; McGrath et al., 2012). The CES-D-SF also has shown good reliability and validity, with psychometric properties that compare favorably with the original 20-item subscale (McGrath et al., 2012).

2.3. Procedure

The second author's research ethics board approved our study. Daughters were recruited via ads posted in the Department of Psychology's participant pool as well as flyers posted around campus. Daughters were asked to provide contact information for a maternal figure (i.e., an adult woman in a maternal caretaking role, hereafter referred to as "mother"). Mothers included biological mothers (96.8%), adoptive mothers (1.4%), grandmothers (0.4%), aunts (0.4%), and guardians (1.0%). At Wave 1, daughters completed measures of socially prescribed perfectionism, self-oriented perfectionism, and depressive symptoms. Likewise, at Wave 1 mothers completed an online measure of other-oriented perfectionism. Daughters began Wave 2 one week after Wave 1 and completed an online measure of social self-esteem twice daily (eight hours after waking and just before going to bed). Daughters were sent reminder emails twice a day to complete their online surveys. Wave 3 began one week after Wave 2 and daughters' completed a follow-up depressive symptoms questionnaire in our laboratory. Daughters were compensated either \$25 or \$10 and three credit points towards a psychology class.

2.4. Data analytic strategy

We performed a missing value analysis, calculated descriptive statistics, and conducted tests of multivariate normality. Daughters' social self-esteem at Wave 2 was aggregated from the daily diary data for subsequent analyses. Our model (see Figure 1) was evaluated with path analysis using Mplus 7.2 (Muthén & Muthén, 1998-2012). The significance of direct and indirect effects was evaluated using bias-corrected bootstrapping with 20,000 resamples (Shrout & Bolger, 2002). If the 90% confidence interval for an indirect effect does not contain 0 within its lower and upper bounds, it suggests mediation (Efron & Tibshirani, 1994).

3. Results

3.1. Compliance with protocol and missing data analysis

Of the 218 daughters that completed Wave 1, 99.1% completed Wave 2 and 99.5% completed Wave 3. During Wave 2, daughters completed 2575 entries. Out of 14 possible daily diary entries, most daughters submitted 12 ($M = 11.81$, $SD = 2.54$); 52 entries were excluded as they were completed within 2 hours of each other. In total, 2523 diaries (98.0%) were retained. Response rates were high, ranging from a low of 85.3% on Day 7 to a high of 96.1% on Days 2 and 3. Wave 3 occurred approximately 21 days after Wave 1 ($M = 21.5$, $SD = 2.1$). Only 0.5% to 1.4% of data were missing across all three waves. Little's (1988) missing completely at random (MCAR) test was nonsignificant, $\chi^2(37, N = 218) = 37.38$, $p = .45$, suggesting our data were MCAR. Thus, missing data were handled using full information maximum likelihood.

3.2. Descriptive statistics

Means, standard deviations, Cronbach's alpha, and bivariate correlations are in Table 1. Following Cohen's (1992) guidelines from small, medium, and large effects ($r = .10$, $.30$, $.50$, respectively), daughters' socially prescribed perfectionism (Wave 1), daughters' self-oriented perfectionism (Wave 1), daughters' depressive symptoms (Wave 1), and mothers' other-oriented perfectionism (Wave 1) displayed small-to-moderate negative associations with daughters' social self-esteem (Wave 2). And daughters' social self-esteem (Wave 2) displayed a large negative association with daughters' follow-up depressive symptoms (Wave 3).

3.3. Path analysis

As expected, the auto-regressive path between daughters' depression at Wave 1 and daughters' depression at Wave 3 was highly stable: $B = 0.61$, $\beta = .57$ (90% CI: .458 to .664), $SE = .05$. Likewise, as hypothesized, after controlling for baseline depression, daughters' socially prescribed perfectionism ($B = 0.02$, $\beta = .04$ [90% CI, .010 to .089], $SE = .01$) and self-oriented

perfectionism ($B = 0.02$, $\beta = .05$ [90% CI: .023, .115], $SE = .01$), as well as mothers' other-oriented perfectionism ($B = 0.03$, $\beta = .03$ [90% CI: .002, .082], $SE = .01$), were indirectly associated with daughters' depression at Wave 3 via lower social self-esteem at Wave 2 (see Figure 1). Similarly, when we tested the same model, but with daughters' socially prescribed perfectionism and self-oriented perfectionism aggregated, results provided the same substantive implications.²

4. Discussion

Our daily diary study with longitudinal follow-up conceptually and methodologically advanced understanding of the perfectionism-depressive symptom link by expanding, testing, and supporting the perfectionism social disconnection model (PSDM) in mother-daughter dyads. Whereas the original PSDM (Hewitt et al., 2006) focused on socially prescribed perfectionism and social disconnection, our reformulated PSDM highlighted the contribution of self-oriented and other-oriented perfectionism to social disconnection and depressive symptoms. Likewise, whereas the original PSDM attributed the source of depressive symptoms to dispositional characteristics alone (perfectionistic traits), our expanded PSDM also acknowledged the contribution of interpersonal contexts (mothers' other-oriented perfectionism). Consistent with expectations, and research (Prenoveau et al., 2011), depressive symptoms exhibited strong rank-order stability and controlling for this stability allowed us to test the role of study variables in predicting change in depressive symptoms. As hypothesized, findings supported our reformulated PSDM (see Figure 1). Daughters' socially prescribed perfectionism, daughters'

²Daughters' aggregated socially prescribed and self-oriented perfectionism were indirectly associated with depression at Wave 3, via lower social self-esteem at Wave 2: $B = .04$, $\beta = .08$ [90% CI: .04, .14], $SE = .03$. Mothers' other-oriented perfectionism was indirectly associated with daughters' depression at Wave 3, via lower social self-esteem at Wave 2: $B = .09$, $\beta = .03$ [90% CI: .001, .080], $SE = .02$.

self-oriented perfectionism, and mothers' other-oriented perfectionism were indirectly associated with increased depressive symptoms, through social self-esteem.

4.1. Expanding and testing the PSDM in mother-daughter dyads

Daughters' self-oriented perfectionism and daughters' socially prescribed perfectionism displayed small positive correlations with mothers' other-oriented perfectionism. This finding is congruent with research suggesting daughters become perfectionistic in response to hypercritical, pressuring, and demanding mothers (Appleton, Hall, & Hill, 2010; Besser & Priel, 2005; Clark & Coker, 2009; Cook & Kearney, 2014; Soenens et al., 2005). Likewise, daughters' socially prescribed perfectionism and daughters' self-oriented perfectionism displayed moderate negative associations with daughters' social self-esteem. Thus, as with prior theory (Sherry et al., 2016) and research (Blankstein et al., 2008; Sherry & Hall, 2009), findings suggest daughters with high socially prescribed and self-oriented perfectionism are in a bind. On the one hand, they strive for other's approval and acceptance (Hewitt et al., 2006; Struman et al., 2009). On the other hand, they perceive the opposite from others—disapproval and rejection. Indeed, for daughters' high on socially prescribed perfectionism, feeling accepted by and liked by others is difficult as they see other people as perpetually dissatisfied (Hewitt & Flett, 1991; Hewitt et al., 2006). Likewise, for daughters' high on self-oriented perfectionism, establishing a sense of social self-esteem is hard, as an implacable pursuit of agentic achievement leads to an imbalanced life wherein chances for close relationships are missed or ignored (Sherry et al., 2007; Sherry et al., 2016). Furthermore, mothers' other-oriented perfectionism displayed small negative associations with daughters' social self-esteem. Hence, results also suggest maintaining a sense of connection with others is especially challenging for daughters with mothers high on other-oriented perfectionism.

Additionally, as hypothesized, daughters' socially prescribed perfectionism and

daughters' self-oriented perfectionism indirectly conferred risk for depressive symptoms through lower social self-esteem. These findings complement a wider literature suggesting socially prescribed and self-oriented perfectionism encapsulate central preoccupations for and core attributes of people vulnerable to feelings of social disconnection and depressive symptoms (Hewitt et al., 2006; Smith et al., 2016). Socially prescribed and self-oriented perfectionism appear to represent uniquely important, underlying personality traits that leave daughters vulnerable to depressive symptoms by setting psychosocial conditions (e.g., low social self-esteem) wherein depressive symptoms are more likely to occur.

Likewise, consistent with hypotheses, mothers' other-oriented perfectionism indirectly contributed to daughters' depressive symptoms via a negative association with daughters' social self-esteem at Wave 2. These findings indicate incorporating mother-daughter relations into the PSDM might incrementally add to our understanding of why some daughters have poor social self-esteem and why some daughters get depressed. Findings also support interpersonal models (Hewitt, Flett, & Mikail, 2017; Weissman et al., 2000), in that depressive symptoms in daughters appear to be, in part, associated with other-oriented perfectionism in mothers. That is, results are congruent with our assertion that mothers characterized by other-oriented perfectionism might make it difficult for daughters to develop a healthy view of themselves, including feeling like they are a person of value in the eyes of others (Bruch, 1979). And without a sense of being accepted by others, daughters become vulnerable to depression (Trzeniewski et al., 2006).

Considered together, our findings revealed perceiving pressure from others to be perfect (i.e., socially prescribed perfectionism), self-generated pressures to be perfect (i.e., self-oriented perfectionism) and critical, pressuring, and demanding mothers (i.e., mothers' other-oriented perfectionism) were associated with daughters' feeling rejected, deficient, and excluded—

feelings that are depressogenic (Baumeister, & Leary, 1995; Hewitt et al., 2006).

4.2. Limitations and future directions

Our sample involved mainly young, Caucasian, university-attending daughters and their middle-aged, Caucasian, community-dwelling mothers. Future research should test if our findings generalize to samples with more severe levels of perfectionism and depression (e.g., psychiatric samples). Similarly, future research should evaluate the extent to which our findings generalize to younger samples of mothers and daughters, as well as father-daughter, father-son, and mother-son dyads. Likewise, future research should explore familial interactions, as daughters' socially prescribed and self-oriented perfectionism may shape interactions with mothers (see Hewitt, Flett, & Mikail, 2017). Additionally, to reduce participant burden, we used the 4-item short-form of Heatherton and Polivy's (1991) social self-esteem subscale. Though this short-form evidenced acceptable reliability and validity in our study and in two others (Mackinnon et al., 2011; Sherry & Hall, 2009), less is known about its psychometric properties. Study variables were also measured using self-reports, which are potentially biased. Future studies might overcome this potential bias by collecting informant reports. Future research should also control for baseline levels of social self-esteem, thereby testing if changes in (and not merely the occurrence of low social self-esteem) mediates the perfectionism-depressive symptom relationship. Also, given that perfectionism and depression were measured as between-person variables, we were unable to incorporate within-person variability in social self-esteem into our model (see Preacher, Zyphur, & Zhang, 2010). Investigators could address this by including daily measures of perfectionism and depression alongside daily measures of social self-esteem. Moreover, future research might consider using a daughter-specific measure of other-oriented perfectionism, as it is unclear the extent to which mothers' high on other-oriented perfectionism

specifically demand perfection from their daughters. Lastly, based on theory (Hewitt et al. 2006) and research (Sherry et al., 2013, 2016), we tested a specific sequence of behaviors (see Figure 1). Even so, different sequences are possible. For instance, low social self-esteem in daughters might be an antecedent of, rather than a consequence of, daughters' socially prescribed perfectionism. Alternatively, mothers' other-oriented perfectionism might contribute to the development of daughters' perfectionism and depressive symptoms due to shared genetics and/or shared environmental factors.

4.3. Concluding remarks

Our daily diary study with a longitudinal follow-up provides a conceptually rich and a methodologically rigorous test of the PSDM that underscores the impact that mothers high on other-oriented perfectionism might have on daughters' social self-esteem and depressive symptoms. As expected, daughters' socially prescribed perfectionism, daughters' self-oriented perfectionism, and mothers' other-oriented perfectionism predicted increased depressive symptoms in daughters at Wave 3 via negative associations with daughters' social self-esteem at Wave 2. Researchers and clinicians who seek to understand, assess, or treat depressed perfectionists by focusing solely on socially prescribed perfectionism may miss vital information. We encourage researchers and clinicians to consider both the characterological and the interpersonal contexts in which perfectionists get depressed.

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Table 1

Means, standard deviations, alpha reliabilities, and bivariate correlations

Variable	1	2	3	4	5	6
1. Daughters' socially prescribed perfectionism (wave 1)	—					
2. Daughters' self-oriented perfectionism (wave 1)	.46***	—				
3. Daughters' depressive symptoms (wave 1)	.29***	.08	—			
4. Mothers' other-oriented perfectionism (wave 1)	.22**	.14*	.06	—		
5. Daughters' social self-esteem (wave 2)	-.39***	-.33***	-.47***	-.21**	—	
6. Daughters' depressive symptoms (wave 3)	.23***	.11	.68***	.18**	-.53***	—
Mean	3.78	4.70	1.82	1.69	1.87	4.70
Standard deviation	1.36	1.22	0.52	0.64	0.74	1.22
Alpha reliabilities (α)	.84	.88	.82	.92	.85	.88

Note. Missing data were handled using full information maximum likelihood ($N = 218$).

* $p < .05$; ** $p < .01$; *** $p < .001$.

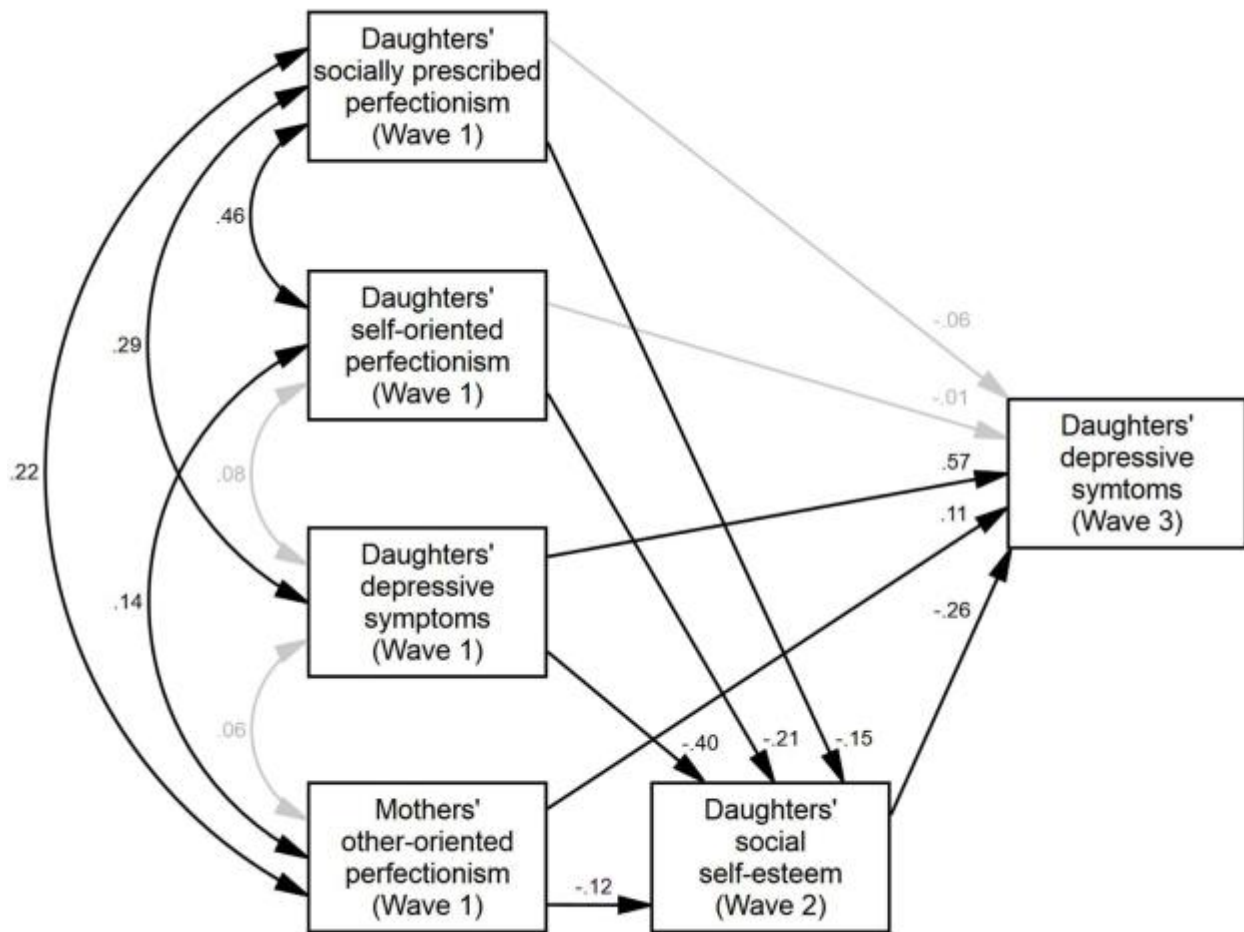


Figure 1. The path model for the perfectionism social disconnection model. Rectangles represent observed variables. Single-headed arrows represent hypothesized paths. Double-headed arrows represent hypothesized correlations. Significant standardized coefficients are indicated as black lines. Non-significant standardized coefficients are indicated as gray lines. The path model explained 53.1% of the variance in daughters' depressive symptoms (Wave 3). In the interest of clarity, error terms are not displayed.