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Social support as a mediator of the relationship between perfectionism and depression: A preliminary test of the social disconnection model

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ABSTRACT

Many studies show a general connection between perfectionism and depressive symptoms. However, despite increasing evidence that significant disruptions in interpersonal relationships are an important consequence of perfectionism, few studies have specifically examined the role of interpersonal disharmony in generating depressive symptoms among persons with high levels of perfectionism. To begin filling this void, the present study conducted a preliminary test of the social disconnection model (SDM; see Hewitt, Flett, Sherry, & Caelian, 2006). This model asserts that interpersonal dimensions of perfectionism, such as socially prescribed perfectionism (i.e., perceiving that others are demanding perfection of oneself), generate disconnection from the social environment that contributes to depressive symptoms. The current study tested and supported the SDM by showing that perceived social support significantly mediated the relationship between socially prescribed perfectionism and depressive symptoms. No association was found between socially prescribed perfectionism and received social support. The present study thus provides preliminary support for the SDM and suggests that a subjective sense of disconnection from other people represents one reason why persons with high levels of socially prescribed perfectionism are vulnerable to depressive symptoms.

1. Introduction

Research consistently implicates perfectionism in the pathogenesis of depressive symptoms (Dunkley, Blankstein, Zuroff, Lecce, & Hui, 2006; Flett, Besser, Hewitt, & Davis, 2007). Although differences exist in the conceptualization of perfectionism (e.g., Hewitt & Flett, 1991; Stoeber & Rambow, 2007), there is general agreement that several dimensions of perfectionism play a role in the onset and course of depressive symptoms (e.g., Bergman, Nyland, & Burns, 2007; Harris, Pepper, & Maack, 2008).

Although an impressive literature on perfectionism and depressive symptoms has emerged, there is still much to learn about the perfectionism-depressive symptoms link. For instance, little is currently known about how or why one commonly studied dimension of perfectionism—namely, socially prescribed perfectionism (SPP)—is related to depressive symptoms. In the current study, we begin to address this gap in our knowledge by testing the social disconnection model (SDM; Hewitt et al., 2006), a new model hypothesising that SPP is related to depressive symptoms because SPP generates disconnection from other people. Before the SDM is discussed in detail, background information is presented, including an outline of Hewitt and Flett's (1991) multidimensional model of trait perfectionism and a brief review of the extant literature on trait perfectionism and depressive symptoms.

1.1. A multidimensional model of trait perfectionism

There are several influential models of perfectionism (e.g., Dunkley, Zuroff, & Blankstein, 2003; Stoeber & Otto, 2007). The SDM draws on Hewitt and Flett's (1991) multidimensional model of trait perfectionism. This model clearly distinguishes between self-imposed and socially based aspects of perfectionism, a distinction regarded as key by several authors (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Sherry, Hewitt, Flett, & Harvey, 2003). Hewitt and Flett (1991) assert perfectionism may be conceptualized as a personality trait composed of three dimensions: self-oriented perfectionism (i.e., demanding perfection of oneself), other-oriented perfectionism (i.e., demanding perfection of others), and SPP (i.e., perceiving that others are demanding perfection of oneself). Evidence suggests these dimensions are differentially related to

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various outcomes (e.g., Flett et al., 2007). In proposing the SDM, Hewitt et al. (2006) built on research indicating that SPP is strongly, consistently, and uniquely connected to a preoccupation with other people and dysfunction in the social domain (Hewitt & Flett, 1991; Hewitt & Flett, 1993).

1.2. Trait perfectionism and depressive symptoms

Among dimensions of trait perfectionism, self-oriented perfectionism and SPP are believed to play important and differential roles in depressive symptoms. One leading and empirically supported hypothesis is that the relation between self-oriented perfectionism and depressive symptoms is dependent on achievement stressors such that individuals with high levels of self-oriented perfectionism are vulnerable to depressive symptoms when they experience achievement stressors (Enns & Cox, 2005; Hewitt & Flett, 1993). In contrast, although evidence has consistently connected SPP to depressive symptoms as a main effect (Hewitt & Flett, 1993; Hewitt, Flett, & Ediger, 1996), the factors leaving persons high on SPP vulnerable to depressive symptoms are not well understood and are in need of explication. In the current study, we propose the SDM as a model intended to address this shortcoming.

1.3. The social disconnection model

According to the SDM, SPP brings about depressive symptoms through the experience of subjective social disconnection (i.e., a felt sense of detachment from other people) and objective social disconnection (i.e., actual severed or impoverished relationships with other people). In other words, the SDM hypothesises that social disconnection mediates the relation between SPP and depressive symptoms. Three central pathways are thus postulated in the SDM: namely, SPP leads to depressive symptoms; SPP leads to social disconnection; and, social disconnection leads to depressive symptoms. Having discussed the SPP-depressive symptoms link above, the two remaining pathways are now considered.

1.3.1. Socially prescribed perfectionism and social disconnection

SPP is linked with many forms of relational dysfunction, including loneliness, marital discord, neediness, social hopelessness, and hostility (Flett, Hewitt, Garshowitz, & Martin, 1997; Hewitt et al., 2006). Building on this evidence, the SDM holds that individuals with high levels of SPP are prone to *subjective* social disconnection because their dysfunctional beliefs and interpersonal sensitivities bias their perceptions of others. For instance, persons high on SPP appear to believe they are constantly falling short of others' unrealistic expectations and report feeling helpless over their perceived inability to please others (Hewitt & Flett, 1991). Such perceptions are also complicated by the need for approval and sensitivity to criticism often accompanying SPP. Overall, persons high on SPP appear chronically predisposed toward a feeling of disharmony with, and disconnection from, other people.

Furthermore, the SDM hypothesises that SPP is related to experiences of *objective* social disconnection such as infrequent social contact or impoverished kinship networks. Although, to our knowledge, research showing a direct link between SPP and objective social disconnection (e.g., divorce) has yet to be conducted, there is consistent evidence that SPP is connected with interpersonally aversive behavior (Habke & Flynn, 2002). For example, Hewitt et al. (2006) reviewed evidence suggesting persons high on SPP engage in maladaptive relational patterns (e.g., interpersonal hostility) that leave them vulnerable to actual disconnections from their social networks (e.g., being ostracized).

1.3.2. Social disconnection and depressive symptoms

The SDM also draws on evidence linking social disconnection to depressive symptoms. A review of this extensive literature is beyond the scope of the current study. However, in brief, this literature suggests that viewing others as unsupportive, negative social exchanges, and other forms of social disconnection are conducive to depressive symptoms (e.g., Baumeister & Leary, 1995).

Taken together, the above research indicates that SPP may lead to social problems which contribute to depressive symptoms, especially when social problems involve unsatisfied needs for approval or acceptance. Consistent evidence of links among SPP, social problems, and depressive symptoms also suggests the need for a model such as the SDM that would bring greater coherence to our understanding of this pattern.

1.4. Aims and hypotheses

The objective of the present study was to test two mediational models derived from the SDM. In the first, objective social disconnection (operationalized as received social support or how frequently an individual has received various socially supportive behaviors) was hypothesized to mediate the SPP-depressive symptoms connection. In the second, subjective social disconnection (operationalized as perceived social support or the extent to which a person *feels* that her or his present relationships are supplying social support) was also hypothesized to mediate the SPP-depressive symptoms association.

The proposed mediational model (SPP → social support → depressive symptoms) is consistent with prior research indicating social support and other variables (e.g., hassles or coping) mediate the perfectionism-depressive symptoms link. These studies, which represent an important contribution, typically involve perfectionism conceptualized in terms of (a) dysfunctional perfectionistic attitudes (e.g., Shahar, Blatt, Zuroff, Krupnick, & Sotsky, 2004) or (b) a general latent perfectionism variable involving concern over mistakes, self-criticism, SPP, etc. (e.g., Dunkley et al., 2003). To our knowledge, the present study is the first to focus specifically on social support as a mediator of the SPP-depressive symptoms link. With research suggesting various models and measures of perfectionism are substantively different and are not interchangeable (e.g., Sherry et al., 2003), we believe a focus on SPP is warranted in the present study.

By including received social support in the current study, we sought to advance understanding of the links among perfectionism, social support, and depressive symptoms. To our knowledge, researchers in this area have examined mainly perceived social support (and similar variables) and received social support has yet to be examined. Whereas received social support focuses on overt behaviors (e.g., receiving a loan), perceived social support focuses on internal experiences (e.g., feeling closely attached to others). Received social support thus taps into a different aspect of social support, and studying this variable may offer something new to the literature on perfectionism, social support, and depressive symptoms.

Finally, self-oriented and other-oriented perfectionism were not anticipated to correlate with received and perceived social support. Self-oriented perfectionism is an *intra* personal dimension of trait perfectionism involving an extreme achievement focus and is therefore usually unrelated to interpersonal problems (Hewitt & Flett, 1991). Likewise, other-oriented perfectionism is often unassociated with interpersonal distress—at least for the person with high levels of other-oriented perfectionism. The entitlement and demandingness typical of other-oriented perfectionism tend to create distress for other people, but not for the person high on other-oriented perfectionism. Thus, only individuals high on SPP

were anticipated to report decreased levels of received and perceived social support.

2. Method

2.1. Participants and procedures

A sample of 222 undergraduates (169 women) taking psychology courses at University of British Columbia (UBC; Vancouver, Canada) was recruited from the undergraduate participant pool of the Department of Psychology. Participants averaged 19.15 years of age (SD = 2.84); 98% of participants reported their relationship status as single; 28% of participants were European; 62% were Asian; and, 10% were members of other ethnicities (e.g., Middle Eastern). Participants were recruited from the undergraduate research pool of UBC's Psychology Department.

2.2. Measures

2.2.1. Multidimensional perfectionism scale (MPS)

The MPS (Hewitt & Flett, 1991) involves three, 15-item subscales assessing self-oriented perfectionism, other-oriented perfectionism, and SPP. Participants offer their answer on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The validity and reliability of the MPS are well-established (Enns & Cox, 2002). For all measures, higher scores signify higher levels of a construct.

2.2.2. Inventory of socially supportive behaviors (ISSB)

The ISSB (Barrera, Sandler, & Ramsay, 1981) is a 40-item measure of received social support. Participants report how often they received various socially supportive behaviors (e.g., help with transportation) utilizing a 5-point scale ranging from 1 (not at all) to 5 (about every day). Studies support the reliability and validity of the ISSB (Haber, Cohen, Lucas, & Baltes, 2007).

2.2.3. Social provisions scale (SPS)

The SPS (Cutrona, 1989) is a widely used measure of perceived social support. Participants provide their answer on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Consistent with Dunkley et al. (2003), three, 4-item SPS subscales were used to measure perceived social support: attachment, reliable alliance, and guidance. These subscales were utilized as observed indicators of a perceived social support latent variable (see Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000). In completing the SPS, participants indicate the extent to which they perceive that their current relationships are supplying social support (e.g., "I feel a strong emotional bond with at least one other person."). Evidence supports the reliability and validity of the SPS (Dunkley et al., 2000).

2.2.4. Beck depression inventory (BDI)

The BDI (Beck, Steer, & Garbin, 1988) is a 21-item measure of depressive symptoms. When completing the BDI, participants indicate their level of depressive symptoms on a 4-point scale ranging from 0 (an item reflecting no depressive symptoms) to 3 (an item reflecting severe depressive symptoms). Two factors are consistently found in the BDI: cognitive and physiological symptoms (e.g., Shahar, Bareket, Joiner, & Rudd, 2006). Consistent with previous research (Potthoff, Holahan, & Joiner, 1995), these two factors were used as observed indicators of a depressive symptoms latent variable. Beck et al. (1988) present data supporting the BDI's validity and reliability.

3. Results

3.1. Descriptive statistics and bivariate correlations

As seen in Table 1, means for the MPS (Hewitt & Flett, 1991), ISSB (Finch et al., 1997), SPS (Dunkley et al., 2000), and BDI (Sherry et al., 2003) fell within one standard deviation of values from prior studies involving undergraduates, suggesting means from the present study are generally consistent with previous research involving comparable populations. The mean for the BDI total scale score was 10.52 (SD = 8.10). Coefficients alpha ranged from .70 to .95 (see Table 1).

SPP was negatively and significantly correlated with attachment, reliable alliance, and guidance. In addition, SPP was positively and significantly correlated with cognitive and physiological depressive symptoms. However, SPP and received social support were not significantly related. Bivariate correlations further indicated that neither self-oriented perfectionism nor other-oriented perfectionism was significantly linked to observed indicators of received social support, perceived social support, or depressive symptoms.

It was also found that received social support was positively and significantly related to attachment and guidance, but was unrelated to reliable alliance and cognitive and physiological depressive symptoms. Moreover, attachment, reliable alliance,

Table 1
Descriptive statistics for and bivariate correlations among the observed indicators of the social disconnection model

	Received social support	Attachment	Reliable alliance	Guidance	Cognitive depressive symptoms	Physiological depressive symptoms	*M*	SD	α
Self-oriented perfectionism	.08	−.10	−.08	−.04	.03	.04	68.82	14.53	.89
Other-oriented perfectionism	.09	−.05	.03	.05	−.02	.04	55.26	10.52	.74
Socially prescribed perfectionism	.00	−.32***	−.34***	−.30***	.37***	.31***	54.78	12.07	.84
Received social support	–	.32***	.12	.24***	.07	−.06	87.57	21.96	.95
Attachment		–	.61***	.75***	−.34***	−.25***	13.28	2.38	.73
Reliable alliance			–	.70***	−.34***	−.18**	14.34	1.96	.70
Guidance				–	−.35***	−.26***	14.15	2.20	.80
Cognitive depressive symptoms					–	.72***	6.26	5.14	.84
Physiological depressive symptoms						–	4.27	3.57	.75

Note: Attachment, reliable alliance, and guidance are observed indicators of the perceived social support latent variable; cognitive depressive symptoms and physiological depressive symptoms are observed indicators of the depressive symptoms latent variable. An r in the range of .10 represents a small effect size; an r in the range of .30 represents a medium effect size; an r in the range of .50 represents a large effect size.

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

and guidance were (a) positively and significantly linked with one another and (b) negatively and significantly linked with cognitive and physiological depressive symptoms. These depressive symptoms were also positively and significantly correlated.

3.2. Structural equation modeling (SEM)

AMOS 7.0 (Arbuckle, 2006) with maximum likelihood estimation was used for SEM analyses in the current study. Model fit was evaluated with multiple fit indices. Adequate fit is suggested by a chi-square/d*f* ratio (χ^2/d*f*) in the range of 2, a root mean square error of approximation (RMSEA) < .08, and a comparative fit index (CFI) and incremental fit index (IFI) > .95 (Kline, 2005).

3.2.1. Measurement model for the SDM

SPP was measured with three, 5-item observed indicators that were randomly selected from among the 15 SPP items of the MPS. As outlined above, the perceived social support latent variable was measured with three observed indicators and the depressive symptoms latent variable was measured with two observed indicators. Observed indicators loaded significantly onto their corresponding latent variables and standardized factor loadings ranged from .74 to .97 (see Table 2). These results suggest observed indicators adequately represented their corresponding latent variables. The measurement model also evidenced adequate fit, $\chi^2(17, N = 222) = 20.69$, $p > .05$; $\chi^2/df = 1.22$; CFI = 1.00; IFI = 1.00; RMSEA = .03 (90% CI: .00, .07).

3.2.2. Structural model for the SDM

The structural model for the SDM, including the proposed mediated effect, was tested following guidelines for conducting mediational analyses with SEM (Baron & Kenny, 1986). A model was first estimated to test if there was a significant path between SPP and depressive symptoms. This model evidenced acceptable fit, $\chi^2(4, N = 222) = 2.45$, $p > .05$; $\chi^2/df = 0.61$; CFI = 1.00; IFI = 1.00; RMSEA = .00 (90% CI: .00, .08). This model also showed a significant path between SPP and depressive symptoms, $\beta = .44$, $p < .001$.

A model was next estimated to examine if perceived social support mediated the relation between SPP and depressive symptoms (see Fig. 1). This model fit the data well: $\chi^2(17, N = 222) = 20.69$, $p > .05$; $\chi^2/df = 1.22$; CFI = 1.00; IFI = 1.00; RMSEA = .03 (90% CI: .00, .07).[1] As displayed in Fig. 1, the paths between (a) SPP and depressive symptoms, (b) SPP and perceived social support, and (c) perceived social support and depressive symptoms were significant. A Sobel test (Sobel, 1982) suggested perceived social support significantly mediated the path between SPP and depressive symptoms, $z = 3.10$, $p < .01$. And perceived social support mediated 28.1% of the total effect of SPP on depressive symptoms. After taking into account the influence of perceived social support, the path between SPP and depressive symptoms remained significant. This suggests (a) perceived social support partially mediated the SPP-depressive symptoms link and (b) other mediators may be needed to fully account for the SPP-depressive symptoms link.[2]

Table 2
Factor loadings for the measurement model for the social disconnection model

Latent variables and observed indicators	Unstandardized factor loadings	Standard error	Standardized factor loadings
Socially prescribed perfectionism			
Random 1	1.00[a]	–	.77
Random 2	0.90	.08	.80
Random 3	0.95	.08	.82
Perceived social support			
Attachment	1.00[a]	–	.82
Reliable alliance	0.77	.06	.77
Guidance	1.03	.07	.91
Depressive symptoms			
Cognitive depressive symptoms	1.00[a]	–	.97
Physiological depressive symptoms	0.53	.07	.74

Note: Random 1, random 2, and random 3 are observed indicators of the socially prescribed perfectionism latent variable; attachment, reliable alliance, and guidance are observed indicators of the perceived social support latent variable; cognitive depressive symptoms and physiological depressive symptoms are observed indicators of the depressive symptoms latent variable.

[a] Unstandardized factor loading constrained to 1.00 to achieve identifiability. All factor loadings were significant at $p < .001$.

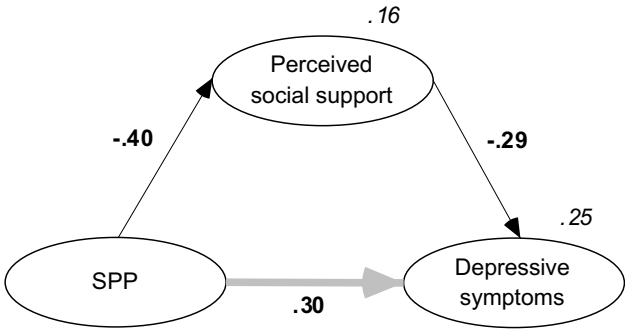

Fig. 1. The structural model for the social disconnection model. Ovals represent latent variables. In the interest of clarity, observed indicators of latent variables are not shown. The thick grey arrow represents the hypothesized mediated effect. Italicized numbers (e.g., .25) appearing in the upper right hand of endogenous variables (e.g., depressive symptoms) represent the proportion of variance accounted for by associated exogenous variables. Standardized path coefficients appear in bold. All paths were significant at $p < .001$.

4. Discussion

The present study involved a preliminary test of the SDM, a new model wherein SPP is hypothesized to lead to depressive symptoms through the experience of social disconnection. Among dimensions of trait perfectionism, only SPP was correlated with perceived social support, thereby confirming one prediction made in the current study. However, counter to expectations, SPP was not correlated with received social support, suggesting a pattern of specificity wherein SPP is connected to perceived, but not to received, social support. Consistent with the SDM, perceived social support was also shown to partially mediate the link between SPP and depressive symptoms. Results of the present study, and their implications for the SDM, are now discussed in more detail.

4.1. The social disconnection model

4.1.1. Socially prescribed perfectionism and depressive symptoms

As proposed in the SDM, SPP was positively associated with depressive symptoms (and its two observed indicators). This finding is congruent with theory and evidence suggesting that

[1] Fit indices for the measurement and structural model were similar, suggesting caution is needed in interpreting hypothesized directional effects (Anderson & Gerbing, 1988). Given research indicating SPP and social disconnection represent antecedents of depressive symptoms (Hewitt et al., 1996), we included hypothesized directional effects when testing the SDM.

[2] The SDM does *not* assert the SPP-depressive symptoms relation is moderated by social disconnection. However, exploratory moderated multiple regression analyses were conducted to examine if (a) either self-oriented perfectionism or SPP interacted with received social support to predict depressive symptoms and (b) either self-oriented perfectionism or SPP interacted with perceived social support to predict depressive symptoms. No evidence was found that the relation between perfectionism (i.e., self-oriented perfectionism and SPP) and depressive symptoms was conditional on received or perceived social support.

perceiving demands and pressures from, and scrutiny and criticism by, other people predisposes and maintains depressive symptoms (Hewitt & Flett, 1993; Sherry et al., 2003).

4.1.2. Socially prescribed perfectionism and social disconnection

The SDM also holds that persons with high levels of SPP engage in a pattern of distorted social appraisals and interpersonally aversive behaviors that hinder the development of stable and supportive relationships. Evidence for this proposition was mixed in the current study, with results suggesting that SPP was unrelated to received social support and negatively, moderately, and significantly related to perceived social support (and its three observed indicators).

These results suggest that, although SPP may not influence how likely one is to receive socially supportive behaviors, SPP may influence whether one feels supported by and/or satisfied with one's social network. For persons high on SPP, feeling supported by others may depend more on distorted social appraisals (e.g., misconstruing a helpful comment as criticism) than on actual environmental events (e.g., receiving a ride home from work). The chronic dissatisfaction typical of persons with high levels of SPP (e.g., body or career dissatisfaction; Sherry, Hewitt, Flett, & Lee-Baggley, 2007) may also express itself in the social domain. From this perspective, one might perform myriad socially supportive behaviors for a person with high levels of SPP—without him or her feeling supported by or satisfied with one's contribution.

Despite feeling disconnected from other people, individuals high on SPP may also avoid behaving in ways that attract social support. SPP is strongly linked with a tendency to conceal perceived imperfections (e.g., Hewitt et al., 2003) and this tendency may result in avoidance of verbal disclosures and/or behavioral cues that signal distress to and elicit support from others. Overall, however, there is a need to better understand the impact of SPP on received social support, and caution is needed in interpreting the null relationship observed between these variables in the present study.

Finally, self-oriented and other-oriented perfectionism were unrelated to either received or perceived social support. This finding, which was hypothesized, is consistent with Hewitt et al.'s (2003) assertion that SPP is the dimension of trait perfectionism most conducive to social disconnection. Indeed, feeling unsupported by, preoccupied with, and distressed about other people may be central to understanding the phenomenological experience of individuals with high levels of SPP.

4.1.3. Social disconnection and depressive symptoms

In the current study, received social support was unrelated to depressive symptoms (and its two observed indicators), whereas all three indicators of perceived social support were negatively and significantly linked with depressive symptoms (and its two observed indicators). This pattern of findings has been found in previous studies (e.g., Kaul & Lakey, 2003) and suggests that received and perceived social support may be differentially related to depressive symptoms, with a felt sense of detachment from other people potentially being more relevant to depressive symptoms.

4.1.4. Mediational models derived from the social disconnection model

In the present study, received social support was unrelated to SPP and depressive symptoms, thereby precluding meditational analyses. However, as predicted by the SDM, perceived social support was found to partially mediate the SPP-depressive symptoms relation. SPP thus appears conducive to a sense of disconnection from the social environment that is, in turn, related to depressive symptoms. Believing they *must* be perfect in order to deserve and receive support and acceptance from others, individuals high on SPP may regard support offered by friends, family, and others as tentative and as contingent on achieving certain outcomes (e.g., achieving high grades in school). It may thus be difficult for persons with high levels of SPP to establish and maintain a sense that others' support and acceptance are consistently available. In other words, individuals high on SPP are unlikely to perceive other people as offering the unconditional positive regard that Rogers (1957) saw as central to satisfying relationships and emotional well-being. Indeed, the current investigation, and several other studies (e.g., Dunkley et al., 2003), converge to suggest persons high on SPP appraise other people in their social environment as critical and unsupportive.

In terms of Erikson's (1968) theory, SPP may be seen as impeding the capacity of young adults (such as those in the present investigation) to develop *intimacy* with others and to avoid a sense of *isolation* from others. SPP may thus be understood as a risk factor for depressive symptoms that not only deprives people of the benefits of social connection, but also exposes them to the costs of social disconnection (see also Shahar & Priel, 2003).

SPP is linked to an extreme concern over others' evaluations and an exaggerated need for others' approval (Hewitt & Flett, 1991). Given such sensitivities, experiencing a sense of disharmony with and disconnection from others may be distressing to persons high on SPP. The SDM, and the results of the current study, may thus be understood as bringing greater coherence to our understanding of the SPP-depressive symptoms link by suggesting that SPP plays a role in generating a negative psychosocial milieu conducive to depressive symptoms.

4.2. Current limitations and future directions

Future studies should address limitations and explore possibilities not dealt with in the current investigation. For example, the present study involved a non-clinical sample of mostly female university students who described their relationship status as single. It remains to be seen if the present results generalize to other populations, such as persons with more severe levels of depression. In addition, our cross-sectional design does not illuminate the interplay among SPP, social disconnection, and depressive symptoms over time. Longitudinal or experimental designs are needed to test directional effects and to increase confidence in any causal inferences drawn. Furthermore, although the mediational sequence supported in the present study (see Fig. 1) is informed by theory and evidence (Hewitt et al., 2006), future studies are needed where this sequence is compared to other arrangements of these variables. Future studies are also needed to establish if SPP contributes incrementally to our understanding of social disconnection and depressive symptoms beyond other models and measures of perfectionism.

4.3. Overall conclusions

In sum, the SDM postulates that interpersonal dimensions of perfectionism, such as SPP, bring about experiences of disconnection from other people which, in turn, contribute to depressive symptoms. The present study provided preliminary support for the SDM by showing that perceived social support partially mediated the SPP-depressive symptoms link. It is hoped that the present study and the SDM in general provide a framework for additional research on the important topic of perfectionism and depressive symptoms.

References

Anderson, J., & Gerbing, D. (1988). Structural equation modeling in practice. *Psychological Bulletin, 103*, 411–423.

Arbuckle, J. (2006). *AMOS 7: A structural equation modeling program*. Chicago: Smallwaters.

Baron, R., & Kenny, D. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Barrera, M., Sandler, I., & Ramsay, T. (1981). Preliminary development of a scale of social support. *American Journal of Community Psychology, 9*, 435–447.

Baumeister, R., & Leary, M. (1995). The need to belong. *Psychological Bulletin, 117*, 497–529.

Beck, A., Steer, R., & Garbin, M. (1988). Psychometric properties of the Beck Depression Inventory. *Clinical Psychology Review, 8*, 77–100.

Bergman, A., Nyland, J., & Burns, L. (2007). Correlates with perfectionism and the utility of a dual process model. *Personality and Individual Differences, 43*, 389–399.

Cutrona, C. (1989). Ratings of social support by adolescents and adult informants. *Journal of Personality and Social Psychology, 57*, 723–730.

Dunkley, D., Blankstein, K., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress. *Journal of Counseling Psychology, 47*, 437–453.

Dunkley, D., Blankstein, K., Zuroff, D., Lecce, S., & Hui, D. (2006). Self-critical and personal standards factors of perfectionism located within the five-factor model of personality. *Personality and Individual Differences, 40*, 409–420.

Dunkley, D., Zuroff, D., & Blankstein, K. (2003). Self-critical perfectionism and daily affect. *Journal of Personality and Social Psychology, 84*, 234–252.

Enns, M., & Cox, B. (2002). The nature and assessment of perfectionism. In G. Flett & P. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 33–62). Washington, DC: American Psychological Association.

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

Erikson, E. (1968). *Identity: Youth and crisis*. New York: Norton.

Finch, J., Barrera, M., Okun, M., Bryant, W., Pool, G., & Snow-Turek, L. (1997). The factor structure of received social support. *Journal of Social and Clinical Psychology, 16*, 323–342.

Flett, G., Besser, A., Hewitt, P., & Davis, R. (2007). Perfectionism, silencing the self, and depression. *Personality and Individual Differences, 43*, 1211–1222.

Flett, G., Hewitt, P., Garshowitz, M., & Martin, T. (1997). Personality, negative social interactions, and depressive symptoms. *Canadian Journal of Behavioural Science, 29*, 28–37.

Frost, R., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449–468.

Haber, M., Cohen, J., Lucas, T., & Baltes, B. (2007). The relationship between self-reported received and perceived social support. *American Journal of Community Psychology, 39*, 133–144.

Habke, A., & Flynn, C. (2002). Interpersonal aspects of trait perfectionism. In G. Flett & P. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 151–180). Washington, DC: American Psychological Association.

Harris, P., Pepper, P., & Maack, D. (2008). The relationship between maladaptive perfectionism and depressive symptoms. *Personality and Individual Differences, 44*, 150–160.

Hewitt, P., & Flett, G. (1991). Perfectionism in the self and social contexts. *Journal of Personality and Social Psychology, 60*, 456–470.

Hewitt, P., & Flett, G. (1993). Dimensions of perfectionism, daily stress, and depression. *Journal of Abnormal Psychology, 102*, 58–65.

Hewitt, P., Flett, G., & Ediger, E. (1996). Perfectionism and depression: Longitudinal assessment of a specific vulnerability hypothesis. *Journal of Abnormal Psychology, 105*, 276–280.

Hewitt, P., Flett, G., Sherry, S., & Caelian, C. (2006). Trait perfectionism dimensions and suicidal behavior. In T. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 215–235). Washington, DC: American Psychological Association.

Hewitt, P., Flett, G., Sherry, S., Habke, M., Parkin, M., Lam, R., et al. (2003). The interpersonal expression of perfectionism. *Journal of Personality and Social Psychology, 84*, 1303–1325.

Kaul, M., & Lakey, B. (2003). Where is the support in perceived support? *Journal of Social and Clinical Psychology, 22*, 59–78.

Kline, R. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Potthoff, J., Holahan, C., & Joiner, T. (1995). Reassurance seeking, stress generation, and depressive symptoms. *Journal of Personality and Social Psychology, 68*, 664–670.

Rogers, C. (1957). The necessary and sufficient conditions of psychotherapeutic personality change. *Journal of Consulting Psychology, 21*, 95–103.

Shahar, G., Bareket, L., Joiner, T., & Rudd, M. (2006). In severely suicidal young adults, hopelessness, depressive symptoms, and suicidal ideation constitute a single syndrome. *Psychological Medicine, 36*, 913–922.

Shahar, G., Blatt, S., Zuroff, D., Krupnick, J., & Sotsky, S. (2004). Perfectionism impedes social relations and response to brief treatment for depression. *Journal of Social and Clinical Psychology, 23*, 140–154.

Shahar, G., & Priel, B. (2003). Active vulnerability, adolescent distress, and the mediating/suppressing role of life events. *Personality and Individual Differences, 35*, 199–218.

Sherry, S., Hewitt, P., Flett, G., & Harvey, M. (2003). Perfectionism dimensions, perfectionistic attitudes, dependent attitudes, and depression in psychiatric patients and university students. *Journal of Counseling Psychology, 50*, 373–386.

Sherry, S., Hewitt, P., Flett, G., & Lee-Baggley, D. (2007). Perfectionism and undergoing cosmetic surgery. *European Journal of Plastic Surgery, 29*, 349– 354.

Sobel, M. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290–312). Washington, DC: American Sociological Association.

Stoeber, J., & Otto, K. (2007). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10*, 295–319.

Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students. *Personality and Individual Differences, 42*, 1379–1389.