Perfectionistic Self-Presentation and Trait Perfectionism in Social Problem-Solving Ability and Depressive Symptoms

Avi Besser
Department of Behavioral Sciences
Center for Research in Personality, Life Transitions, and Stressful Life Events
Sapir Academic College, Israel

Gordon L. Flett
York University
Toronto, Ontario, Canada

Paul L. Hewitt
University of British Columbia
Vancouver, British Columbia, Canada

This study examined social problem solving and perfectionistic self-presentation, and assessed whether social problem solving mediates the association between perfectionism and depression. A sample of 200 community members completed measures of perfectionistic self-presentation, trait perfectionism, social problem-solving ability, and depression. Correlational analyses confirmed that perfectionistic self-presentation and socially prescribed perfectionism are both associated with a negative problem-solving orientation. Tests of mediating effects revealed that negative problem-solving ability mediates the associations of socially prescribed perfectionism and perfectionistic self-presentation with depressive symptoms, particularly among women. The findings support further exploration of mediational models linking perfectionism, problem-solving ability, and depression and suggest that people who display high perfectionistic self-presentation are particularly vulnerable to stress and distress and should benefit from problem-solving training.

Over the past 30 years, there has been sustained and growing interest in the study of individual differences in the ability to solve personal problems (see Heppner, Witty, & Dixon, 2004). In part, this interest reflects the results of several studies that have found that social problem-solving ability is a consistent correlate of positive mental health (D’Zurilla, 1986; Heppner, 1978; Nezu, 1987). In addition, the general importance of problem solving to problems in living is widely acknowledged. Most individuals are frequently faced with a number of environmental circumstances that require effective

1Gordon Flett was supported by the Canada Research Chair Program. The authors acknowledge Einat Biton and Natali Lev of Sapir Academic College for their invaluable assistance with data collection.
2Correspondence concerning this article should be addressed to Avi Besser, Department of Behavioral Sciences, Sapir Academic College, D. N. Hof Ashkelon, 79165 Israel. E-mail: besser@mail.sapir.ac.il
responses (D’Zurilla & Goldfried, 1971; Spivack, Platt, & Shure, 1976), and ineffective problem-solving responses in these situations may seriously impair a person’s ability to cope with his or her environment and may lead to severe emotional distress (Butler & Meichenbaum, 1981; D’Zurilla & Goldfried, 1971).

The current paper examines the association between perfectionism and social problem-solving ability. One theme found in the literature on the topic of problem solving is that personality factors such as perfectionism may serve as antecedents of a negative problem-solving orientation. For instance, research has explored the link between problem-solving appraisals and Type A behavior (Heppner, Kampa, & Brunning, 1987), and a negative problem-solving orientation has been linked with several personality factors, including an external locus of control (Heppner & Petersen, 1982; Nezu, 1985), sociotropy (Haaga, Fine, Terrill, Stewart, & Beck, 1995), and a depressive attributional style (Heppner, Baumgardner, & Jackson, 1985; Spence, Sheffield, & Donovan, 2002).

Attempts to examine perfectionism and problem-solving ability are complicated at both the conceptual and empirical levels because perfectionism is a multidimensional construct. For example, Frost and associates developed a measure entitled the Multidimensional Perfectionism Scale (see Frost & Marten, 1990; Frost, Marten, Lahart, & Rosenblate, 1990). This scale consists of six subscales that measure personal aspects of perfectionism (i.e., personal standards, concern for mistakes, doubts about actions, organization) and the familial aspects of perfectionism (i.e., high parental expectations, parental criticism). Frost and associates (DiBartolo, Frost, Chang, LaSota, & Grills, 2004; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Frost et al., 1990) have shown that the concern-for-mistakes subscale is the perfectionism dimension that is linked most consistently with depressive symptoms.

Similarly, Hewitt and Flett (1991b, 2004) developed another measure of perfectionism that is also called the Multidimensional Perfectionism Scale (MPS). This scale measures three dimensions of perfectionism—self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. Whereas self-oriented perfectionism entails a relentless striving for personal standards of perfection, other-oriented perfectionism involves a focus on the capabilities of others. As such, other-oriented perfectionism is associated with hostility and extrapunitive tendencies toward others, rather than negative self-judgments (Hewitt & Flett, 1991b).

The third dimension of perfectionism—socially prescribed perfectionism—is the aspect of perfectionism that is most consistently related to maladjustment. Socially prescribed perfectionism entails the belief that others have high expectations and perfectionistic motives for one’s own
behavior, as well as the belief that others will be satisfied only when these standards are attained. Socially prescribed perfectionism is associated with a wide variety of psychological problems, including depression, anxiety, stress, suicidal tendencies, and personality disorders (Dean & Range, 1996; Dean, Range, & Goggin, 1996; Flett, Besser, & Hewitt, 2005; Frost et al., 1993; Hewitt & Flett, 1991a, 1991b, 1993; Hewitt, Flett, & Endler, 1995; Sherry, Hewitt, Flett, & Harvey, 2003).

Perfectionism and Social Problem-Solving Ability

Flett, Hewitt, Blankstein, Solnik, and Van Brunschot (1996) introduced the idea that perfectionists may suffer from deficits in social problem solving because they are highly defensive and believe that problems must be perfectly resolved. These researchers conducted initial empirical investigations of dimensions of perfectionism and problem-solving ability. Their first study examined associations between the MPS (Hewitt & Flett, 1991b) and the original version of the Social Problem-Solving Inventory (SPSI; see D’Zurilla & Nezu, 1990).

The SPSI provides two general measures of problem-solving orientation and specific problem-solving skills. The problem-solving orientation scale consists of three subscales measuring orientation in terms of cognitive, emotional, and behavioral responses. The problem-solving skill subscale consists of four subscales measuring phases of the problem-solving process, including problem definition, the generation of alternative solutions, decision making, and solution implementation. The main hypothesis guiding this initial research was that socially prescribed perfectionism includes elements of helplessness and hopelessness that are antithetical to the problem-solving process, and this ought to contribute to a negative problem-solving orientation.

In their first study, Flett et al. (1996) analyzed data from 168 undergraduate students and found that socially prescribed perfectionism was the only perfectionism trait dimension that was significantly associated with indexes of negative problem orientation ($r_s$ ranging from $-0.34$ to $-0.39$). In addition, both self-oriented perfectionism and other-oriented perfectionism were associated with positive appraisals of overall problem-solving ability.

In their second study, Flett et al. (1996) re-examined the link between trait dimensions of perfectionism and scores on the SPSI in a sample of 114 university students. Participants also completed measures of anxiety and depression. Once again, socially prescribed perfectionism was found to be associated with the negative problem-solving orientation subscales ($r_s$ ranging from $-0.26$ to $-0.32$). As for problem-solving skills, other-oriented perfectionism, but not self-oriented perfectionism, was associated with more
positive appraisals of problem-solving skills. Partial correlational analyses involving the measures of anxiety and depression showed that the link between socially prescribed perfectionism and negative problem-solving orientation could still be detected after controlling for the link between negative problem-solving orientation and psychological distress.

As part of the discussion of their findings, Flett et al. (1996) suggested the need for future studies to examine whether social problem-solving ability contributes to the association between perfectionism and psychological distress. They suggested that perfectionists with poor problem-solving orientations would be especially susceptible to distress because they would experience high levels of prolonged stress. The possibility that poor problem solving underscores the link between perfectionism and elevated levels of distress is in keeping with observations (e.g., Nezu & Ronan, 1988) that problem solving functions as part of a complex process, alongside other variables. The roles of coping and problem-solving variables as mediators or moderators of the link between perfectionism and psychological distress were incorporated into a theoretical model of perfectionism, stress, and coping that was described by Hewitt and Flett (2002).

Subsequent research by Chang (1998) addressed the link between perfectionism and social problem solving as part of a broader study of predictors of suicide risk in Caucasian and Asian American college students. A sample of 148 participants completed the SPSI–Revised (D’Zurilla, Nezu, & Maydeu-Olivares, 1996) and Frost et al.’s (1990) MPS. This revised problem-solving measure assesses negative problem-solving orientation, positive problem-solving orientation, rational problem solving, an impulsive/careless problem-solving style, and an avoidance style. They found that the high personal standards factor was not significantly associated with the problem-solving measures. However, measures of concern for mistakes, parental criticism, and doubts about action were positively associated with a negative problem-solving orientation, with the caveat that some correlations did not attain significance because of a stringent Bonferroni correction.

A more recent investigation by Chang (2002) evaluated an integrative model in which both perfectionism and social problem solving were hypothesized to have additive and interactive effects in predicting depression and suicide ideation. A sample of 385 university students in the midwestern United States completed Frost et al. ’s (1990) MPS and the short form of the SPSI–Revised, as well as measures of depression and suicide ideation. Analyses focused on total scores on the social problem-solving measure and on Frost et al. ’s MPS. Thus, the results were not presented for the separate perfectionism dimensions. A small, negative association between perfectionism and problem-solving ability was reported ($r = -.13, p < .05$). Chang also found that perfectionism and problem-solving ability did, indeed, interact to
As expected, students jointly characterized by elevated perfectionism and lower problem-solving ability had elevated levels of depression and suicide ideation.

Cheng (2001) examined perfectionism and problem-solving ability in a sample of 138 university students from Hong Kong. Participants completed a brief 11-item perfectionism measure comprised of items from Frost et al.’s (1990) subscales assessing concern over mistakes and doubts about actions. They also completed Heppner and Petersen’s (1982) Problem-Solving Inventory, and measures of hopelessness and depression. Cheng reported a significant link between perfectionism and perceived deficits in problem solving ($r = .30$).

Finally, in a more recent investigation, Argus and Thompson (2008) examined associations among perfectionism, social problem-solving ability, perceived mindfulness, and depression in a clinical sample. This study found little evidence of any link between perfectionistic self-standards and social problem-solving ability, but it did find that perceived deficits in social problem-solving ability were associated with perceived discrepancies between perfectionistic standards and the attainment of these standards. Other results of this study confirmed a link between depression and negative perceptions of social problem-solving ability. Extensive research has attested to the role of negative problem-solving orientations in depression (see Nezu, Nezu, & Clark, 2008). Nezu et al.’s recent review of this literature led Argus and Thompson (2008) to conclude that intervention focused on fostering a more positive orientation toward problem solving is an important way of reducing levels of depression and vulnerability to subsequent bouts of depression.

The Present Study

To our knowledge, further tests of the association between perfectionism and social problem-solving ability have not been reported. The current study is designed to extend existing research in several ways. First, we seek to re-examine the association between trait perfectionism and social problem-solving ability in a community sample of Israeli adults. Perfectionism was assessed using Hewitt and Flett’s (1991b) MPS. Flett et al.’s (1996) studies are the only ones thus far to use this particular perfectionism measure in conjunction with a social problem-solving measure, and that research was conducted with university students in Canada.

Our interest in re-examining the link between social problem solving and levels of self-oriented, other-oriented, and socially prescribed perfectionism stem, in part, from certain inconsistencies in the findings of the two studies.
described by Flett et al. (1996). Specifically, self-oriented perfectionism was
significantly associated with positive appraisals of problem-solving skills in
their first study, but not in their second study. It is important to re-examine
this issue in light of the growing controversy about the extent to which
self-oriented perfectionism has an adaptive aspect (see Bieling, Israeli,
Smith, & Antony, 2003).

Another unique feature of the current study is its focus on a relatively
new aspect of the perfectionism construct known as perfectionistic self-
presentation (see Hewitt et al., 2003). Perfectionistic self-presentation is
based on the premise that certain perfectionists are highly invested in covering up their mistakes and are preoccupied with trying to present themselves as perfect (i.e., self-promotion) or defensively minimizing the number of mistakes that are on display for others to see. Hewitt et al. hypothesized that there are stable individual differences in the tendency to engage in perfectionistic self-presentation. The Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003) was developed to assess three aspects of perfectionistic self-presentation; namely, perfectionistic self-promotion, unwillingness to display imperfections, and unwillingness to disclose imperfections to others. This third dimension would involve avoidance of personal communication about issues that could reveal the perfectionist’s flaws.

Initial research has indicated that perfectionistic self-presentation is, indeed, a multidimensional construct (Hewitt et al., 2003). Although perfectionistic self-presentation is significantly correlated with trait perfectionism, a perfectionistic self-presentational style predicts unique variance in psychological distress after taking into account the variance attributable to perfectionism, as assessed by the respective MPSs. That is, perfectionistic self-presentation predicts unique variance over and above the variance attributable to maladaptive trait dimensions of perfectionism, such as socially prescribed perfectionism (see Hewitt et al., 2003; Sherry, Hewitt, Flett, Lee-Bagley, & Hall, 2007). This outcome follows, given that not all individuals who feel a great pressure from imposed expectations will respond necessarily by trying to seem perfect when in public.

Other research with the PSPS (Hewitt et al., 2003) has indicated that perfectionistic self-presentation is associated with low levels of appearance self-esteem (Hewitt, Flett, & Ediger, 1995), personality dysfunction (Sherry et al., 2007), self-conscious anxiety among students in dating relationships and relationship difficulties in married couples (Flett, Hewitt, Shapiro, & Rayman, 2000–2001; Habke, Hewitt, & Flett, 1999), and tendencies toward self-silencing and reduced emotional expressiveness (Geller, Cockell, Hewitt, Goldner, & Flett, 2000). Patients with eating disorders are also characterized by highly perfectionistic self-presentations (Cockell et al., 2002). Elevations in perfectionistic self-presentation are correlated with facets of the anxiety
sensitivity construct, including a fear of expressing publicly observable symptoms of anxiety (Flett, Greene, & Hewitt, 2004).

Although the association between perfectionistic self-presentation and perceived problem-solving ability has not been investigated in previous research, perfectionistic self-presentation should be associated with a negative problem-solving orientation for many reasons. Problem-solving orientation was defined by Nezu, Nezu, and Lombardo (2004) as “a set of relatively stable cognitive-affective schemas that represent a person’s generalized beliefs, attitudes, and emotional reactions about problems in living and one’s ability to successfully cope with such problems” (p. 277).

By definition, people who are highly perfectionistic in their self-presentation are characterized as highly neurotic and defensive individuals who feel that they must overcompensate for deficits in their own selves by portraying a false image and trying to appear as perfect as possible. Hewitt et al. (2003) suggested that perfectionistic self-presentation is a highly neurotic style that is a way of overcompensating for feelings of inferiority. This suggestion is consistent with the views outlined by classic theorists, such as Adler (1956) and Horney (1950). A possible link between perfectionistic self-presentation and deficits in problem solving can be extrapolated from Horney’s (1945) seminal analysis of inner conflict. Horney (1945) described a neurotic style of individuals with a profound fear of disclosure and of being identified as frauds, who engage in bluffing and pretense as a projection of an ideal self. She suggested that this neurotic style and associated fear of disclosure are not conducive to “constructive work” (p. 45) and would work in opposition to behaviors (including problem solving) that could result in exposure and public humiliation if efforts prove to be unsuccessful.

Given that perfectionistic self-presentation has been empirically linked with diminished self-esteem (Hewitt, Flett, & Ediger, 1995), as well as the fact that perfectionistic self-presentation is a highly neurotic orientation and neuroticism is linked with negative appraisals of problem-solving ability (Elliott, Herrick, MacNair, & Harkins, 1994), it follows that perfectionistic self-presentation is most likely associated with negative problem-solving appraisals. This defensiveness may also be reflected in a negative orientation toward personal problems, because the existence of these problems and acknowledgment of these problems would only serve to highlight imperfections in the self, perhaps in ways that make these personal imperfections more visible to significant others.

Another unique aspect of the current investigation is that our sample included enough men and women to conduct meaningful tests of possible gender differences. In general, gender differences have seldom been tested in the perfectionism literature (for a related discussion, see Blankstein, Lumley, & Crawford, 2007). In the current instance, it is quite conceivable
that there are gender differences in the importance and relevance of perfectionistic self-presentation.

Previous research on perfectionistic self-presentation, including the original research performed by Hewitt et al. (2003), has not systematically evaluated gender differences. This lack of any systematic focus on gender differences is unfortunate, given that issues related to presentation of self, image construction, and appearance are seemingly more relevant for females (see Pliner, Chaiken, & Flett, 1990), and it has been observed that there are clear differences in self-presentational norms for females and males (see Leary, 1996). In addition, there is some evidence suggesting that self-presentation varies in significance for adolescent girls, as compared to adolescent boys (see Elliott, 1982).

Although this issue has not been tested often, those few studies in which gender differences have been explored have yielded evidence that perfectionistic self-presentation may have different nomological networks in men and women. For instance, Habke et al. (1999) found that perfectionistic self-presentation is associated with self-reports of diminished dyadic adjustment among women, but not among their male partners. Similarly, Sherry, Hewitt, Lee-Baggley, Flett, and Besser (2004) reported that perfectionistic self-presentation is significantly correlated with thoughts about cosmetic surgery among university women, but not among university men. This clearly illustrates the need to incorporate a focus on possible gender differences.

A central goal of the current study is to test a mediation model that links perfectionism, social problem-solving ability, and depression. Given that negative perceptions of social problem-solving ability are consistently linked with depression (see Nezu et al., 2008), it follows that personality variables linked consistently with depression (e.g., socially prescribed perfectionism or SPP) may be associated with distress, in part, because of deficits in social problem-solving ability and related processes (e.g., cognitive-emotional regulation strategies; see Rudolph, Flett, & Hewitt, 2007).

A main hypothesis guiding our study is that perfectionism is associated with negative appraisals of social problem-solving ability and that these negative appraisals of problem-solving ability mediate the link between perfectionism and depressive symptoms. This hypothesis is extrapolated from other research showing that maladaptive coping styles, in general, mediate the link between maladaptive dimensions of perfectionism and psychological distress (e.g., Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Dunkley, Zuroff, & Blankstein, 2003; O’Connor & O’Connor, 2003) and related research suggesting that negative self-appraisals mediate the link between perfectionism and depression (Rice, Ashby, & Slaney, 1998). According to the theoretical suggestions outlined by Hewitt and Flett (2002), perfectionism is associated with distress, in part, because certain
perfectionists respond to stress with maladaptive coping and problem-solving tendencies that perpetuate and exacerbate negative affect and related symptoms of distress.

Method

Participants

Our sample consisted of 200 Israeli community sample participants (100 men, 100 women). They responded to our call for volunteers to take part in a study of “attitudes, attributions, and mood.” Participants were a community sample of young adults in their mid-20s ($M = 24.2$ years, $SD = 2.8$). All participants had more than 12 years of formal education ($M = 12.4$ years, $SD = 0.9$).

Measures

Multidimensional Perfectionism Scale (MPS). The MPS (Hewitt & Flett, 1991b, 2004) has three subscales of 15 items each. Respondents rated statements reflecting self-oriented perfectionism (e.g., “One of my goals is to be perfect in everything I do”), other-oriented perfectionism (e.g., “I have high expectations for the people who are important to me”), and socially prescribed perfectionism (e.g., “My family expects me to be perfect”) on a 7-point scale. Extensive evidence has confirmed the multidimensionality of this instrument, as well as the reliability and validity of the subscales (Flett, Sawatzky, & Hewitt, 1995; Frost et al., 1993; Hewitt & Flett, 1991b, 2004; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991).

Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003). The PSPS is a 27-item multidimensional scale that assesses an individual’s need to appear perfect to others (Hewitt et al., 2003). The PSPS has three subscales that assess perfectionistic self-promotion (i.e., need to appear perfect to others; e.g., “I strive to look perfect to others”), nondisplay of imperfection (i.e., need to avoid appearing imperfect to others; e.g., “I do not care about making mistakes in public,” reverse-scored), and nondisclosure of imperfection (i.e., need to avoid disclosing imperfections to others; e.g., “Admitting failure to others is the worst possible thing”). Extensive research has attested to the reliability and validity of the PSPS (Hewitt et al., 2003).

Perfectionistic self-presentation has been linked with other relevant constructs, such as public self-consciousness, fear of negative evaluation, and a
sense of impostorism (Ferrari & Thompson, 2006; Hewitt et al., 2003). It has also been associated significantly with self-concealment, as might be expected, but not to the degree that perfectionistic self-presentation and self-concealment are redundant with each other (see Hewitt et al., 2003).

Research has indicated that the three PSPS factors have adequate levels of internal consistency and are significantly correlated with the MPS factors, but the PSPS factors account for a significant degree of unique variance in measures of self-esteem (Hewitt et al., 1995). The authors also reported that the three PSPS factors had high levels of test–retest reliability over a 2-month period, with test–retest correlations ranging from .74 to .84.

**Social Problem-Solving Inventory** (SPSI; D’Zurilla & Nezu, 1990; D’Zurilla et al., 1996). The SPSI is a 70-item, multidimensional measure of self-perceived problem-solving ability. The SPSI was selected for use in this study, instead of briefer measures, to facilitate comparisons of the current results with those reported by Flett et al. (1996).

The SPSI is comprised of two major scales, referred to as the Problem Orientation Scale (POS) and the Problem-Solving Skills Scale (PSSS). The POS consists of three subscales measuring cognitive orientation (e.g., “When I am faced with a difficult problem, I usually believe that I will be able to solve the problem on my own if I try hard enough”), emotion orientation (e.g., “I am generally able to remain ‘cool, calm, and collected’ when I am solving problems”), and behavior orientation (e.g., “I usually confront my problems ‘head on,’ instead of trying to avoid them”).

The PSSS consists of four subscales measuring problem definition and formulation (e.g., “When I am faced with a large, complex problem, I often try to break it down into smaller problems that I can solve one at a time”), generation of alternative solutions (e.g., “When I am attempting to solve a problem, I often try to be creative and think of original or unconventional solutions”), decision making (e.g., “When making decisions, I generally use a systematic method for judging and comparing alternatives”), and solution implementation and verification (e.g., “After carrying out a solution to a problem, I usually try to analyze what went right and what went wrong”).

The POS and the PSSS can also be combined to provide a summary score for the entire SPSI.

Although the SPSI is a relatively new instrument, initial evidence has attested to the validity and reliability of the measure as a whole, as well as that of its subscales (see D’Zurilla & Nezu, 1990). For instance, the 3-week test–retest reliabilities for the POS, PSSS, and SPSI were .87 or greater, and the alpha coefficients were .92 or greater.

**Center for Epidemiological Studies Depression Scale** (CES-D; Radloff, 1977). The CES-D is a well-known 20-item inventory with items that measure the affective and somatic symptoms of depression. Scores range
from 0 to 60, with higher scores indicating more severe depression. Although the scale is typically used as a continuous measure, a score of 16 or higher is regarded as the clinical cutoff for at least a mild case of depression (Radloff, 1977). The CES-D is well suited for administration to adults from the general population. Respondents indicate the frequency with which they have experienced each symptom over the past week on a 4-point scale ranging from 0 to 3.

The CES-D has acceptable levels of internal consistency and convergent validity. Extensive evidence from a variety of samples attests to the psychometric properties of the CES-D (see Eaton, Muntaner, Smith, Tien, & Ybarra, 2004).

Procedure

Participants were initially contacted through advertisements in public places asking for volunteers to take part in a study on “attitudes, attributions, and mood.” Participants were young Israeli adults who were from the area in southern Israel in which they were recruited. Participants completed the questionnaire package individually. The order of presentation of the questionnaires was randomized.

Results

Descriptive Analyses

Means and standard deviations for each of the measures for men, women, and the total sample are shown in Table 1. The data presented in Table 1 represent some normative information for the use of these measures in Israel, since measures such as the PSPS have not been studied extensively thus far.

As shown in Table 1, there were no significant differences in mean scores on the MPS (Hewitt & Flett, 1991b, 2004). In contrast, men had significantly higher scores on the PSPS (Hewitt et al., 2003) subscales assessing perfectionistic self-promotion and the need to avoid disclosing imperfections. There was only one significant gender difference in mean scores on the SPSI (D’Zurilla & Nezu, 1990), and there was no significant gender difference in mean scores on the CES-D (Radloff, 1977) scale. Note that the total sample CES-D mean of 16.99 exceeds the threshold of 16 that is used as a cutoff for mild depression.
Table 1

Descriptive Statistics: Means for the Total Sample, Men, and Women

<table>
<thead>
<tr>
<th></th>
<th>Total (n = 200)</th>
<th>Women (n = 100)</th>
<th>Men (n = 100)</th>
<th>t(198)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Multidimensional Perfectionism Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-oriented perfectionism</td>
<td>69.88 (15.90)</td>
<td>70.70 (16.83)</td>
<td>69.06 (14.96)</td>
<td>0.73, ns</td>
</tr>
<tr>
<td>Socially prescribed perfectionism</td>
<td>50.21 (13.75)</td>
<td>48.70 (14.63)</td>
<td>51.72 (12.71)</td>
<td>−1.56, ns</td>
</tr>
<tr>
<td>Other-oriented perfectionism</td>
<td>58.97 (8.15)</td>
<td>58.84 (7.87)</td>
<td>39.09 (8.46)</td>
<td>−0.22, ns</td>
</tr>
<tr>
<td>Perfectionistic Self-Presentation Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nondisclosure of imperfection</td>
<td>22.15 (8.42)</td>
<td>20.27 (8.50)</td>
<td>24.03 (7.94)</td>
<td>−3.23***</td>
</tr>
<tr>
<td>Nondisplay of imperfection</td>
<td>38.76 (10.94)</td>
<td>39.19 (11.56)</td>
<td>38.36 (10.33)</td>
<td>0.54, ns</td>
</tr>
<tr>
<td>Perfectionism self-promotion</td>
<td>38.48 (11.53)</td>
<td>36.70 (12.53)</td>
<td>40.26 (10.19)</td>
<td>−2.20*</td>
</tr>
</tbody>
</table>

Social Problem-Solving Inventory subscales

|                                | Total (n = 200) | Women (n = 100) | Men (n = 100) | t(198) |
|                                | M               | SD              | M             | SD     |        |
| Cognition                      | 27.20 (6.28)    | 26.53 (6.23)    | 27.86 (6.30)  | −1.50, ns |
| Emotion                        | 22.78 (7.33)    | 23.22 (7.39)    | 23.24 (7.29)  | −0.89, ns |
| Behavior                       | 24.58 (8.61)    | 25.51 (8.30)    | 23.64 (8.84)  | 1.54, ns |
| Definition and formulation     | 26.06 (6.72)    | 27.01 (6.72)    | 25.10 (6.62)  | 2.03* |
| Generation of alternatives     | 24.62 (6.24)    | 25.43 (5.79)    | 23.80 (6.60)  | 1.86, ns |
| Decision making                | 25.70 (6.19)    | 26.28 (5.92)    | 25.12 (6.43)  | 1.33, ns |
| Solution implementation and verification | 24.78 (5.89)    | 25.30 (5.64)    | 24.26 (6.12)  | 1.25, ns |

Depression

|                                | Total (n = 200) | Women (n = 100) | Men (n = 100) | t(198) |
|                                | M               | SD              | M             | SD     |        |
| CES-D                          | 16.99 (10.93)   | 18.35 (11.35)   | 15.64 (10.38) | 1.76, ns |

% = > 16 cutoff

51% 54% 47%

Note: CES-D = Center for Epidemiological Studies Depression scale.

*p < .05, two-tailed. **p < .01, two-tailed.
Correlational Analyses

Table 2 presents the correlations and Cronbach’s alpha internal consistency coefficients for the study variables for the sample as a whole. Table 2 also presents the correlations of the perfectionism construct and the depression scores with the SPSI subscales. Table 3 summarizes the correlations obtained for men, as compared those obtained for women. Finally, Table 4 lists the correlations between depression and the various dimensions of perfectionism for men, women, and the total sample.

As shown in Table 2, all of the measures used in the current study had acceptable levels of internal consistency. Most importantly, the PSPS subscales were found to have adequate reliability, with alpha coefficients ranging from .83 to .85. These values are comparable to those reported by Hewitt et al. (2003) for North American samples.

With regard to problem-solving orientation, it can be seen that the perfectionism findings applied to all three subscales (i.e., cognition, emotion, behavior). Similarly, the association between self-oriented perfectionism and higher problem-solving skills applied to all four SPSI subscales. It was also found that the small, but significant associations involving the PSPS nondisplay of imperfections subscale also applied to the four problem-solving skills subscales.

Of the three subscales of the PSPS and MPS (predictors), only the socially prescribed perfectionism subscale was found to be correlated with all of the problem-solving orientations (i.e., cognition, emotion, and behavior subscales; mediators), and all three subscales were correlated with depression (outcomes). Accordingly, these are the variables that meet the requirements for testing for mediation (Baron & Kenny, 1986). Therefore, the other MPS personality dimensions and other SPSI subscales were excluded from subsequent analyses.

The data in Table 3 show that the general pattern of correlations was similar for men and women, though there were some differences. Most notably, self-oriented perfectionism was positively associated with five indexes of social problem-solving ability among men, but there were fewer significant correlations among women and the significant associations that were observed among women tended to be smaller in magnitude. The

3Mediation is indicated by the following criteria: (a) there must be a significant association between the predictor and criterion variables; and (b) in an equation including both the mediator and the criterion variables, there must be a significant association between the predictor and mediator, and the mediator must be a significant predictor of the criterion variables. If the significant direct relationship between the predictor and the criterion variables in the equation (including both the mediator and the predictor variable) declines, the obtained pattern is consistent with the mediation hypothesis (Baron & Kenny, 1986).
### Table 2

<table>
<thead>
<tr>
<th>Perfectionism</th>
<th>SOP</th>
<th>OOP</th>
<th>SPP</th>
<th>PSP</th>
<th>NDSI</th>
<th>NDI</th>
<th>CES-D</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognition</td>
<td>.01</td>
<td>-.13</td>
<td>-.40***</td>
<td>-.26***</td>
<td>.33***</td>
<td>.34***</td>
<td>.33***</td>
<td>-.50***</td>
</tr>
<tr>
<td>Emotion</td>
<td>.07</td>
<td>-.20**</td>
<td>-.40***</td>
<td>-.33***</td>
<td>.34***</td>
<td>.35***</td>
<td>.36***</td>
<td>-.48***</td>
</tr>
<tr>
<td>Behavior</td>
<td>.11</td>
<td>.32***</td>
<td>-.21**</td>
<td>-.24***</td>
<td>.30***</td>
<td>.34***</td>
<td>.35***</td>
<td>-.43***</td>
</tr>
<tr>
<td>Definition and formulation</td>
<td>.36***</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.07</td>
<td>.09</td>
<td>.14*</td>
<td>.09</td>
</tr>
<tr>
<td>Generation of alternatives</td>
<td>.24***</td>
<td>.04</td>
<td>.04</td>
<td>.04</td>
<td>.07</td>
<td>.09</td>
<td>.14*</td>
<td>.09</td>
</tr>
<tr>
<td>Decision making</td>
<td>.25***</td>
<td>.10</td>
<td>.11</td>
<td>.10</td>
<td>.07</td>
<td>.09</td>
<td>.14*</td>
<td>.08</td>
</tr>
<tr>
<td>Solution implementation and verification</td>
<td>.87</td>
<td>.76</td>
<td>.84</td>
<td>.85</td>
<td>.83</td>
<td>.83</td>
<td>.91</td>
<td>.83</td>
</tr>
</tbody>
</table>

Note. N = 200. SOP = self-oriented perfectionism; OOP = other-oriented perfectionism; SPP = socially prescribed perfectionism; PSP = perfectionistic self-promotion; NDSI = nondisclosure of imperfection; NDI = nondisplay of imperfection; CES-D = Center for Epidemiological Studies Depression scale; SPSI = Social Problem-Solving Inventory.

* * p < .05, two-tailed. ** p < .01, two-tailed. *** p < .001, two-tailed.
Table 3

Correlations Among Perfectionism and Perfectionistic Self-Presentation and Problem-Solving Subscales and Depression by Gender

<table>
<thead>
<tr>
<th>SPSI subscales</th>
<th>Women (N = 100)</th>
<th>Men (N = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfectionism</td>
<td>Perfectionistic self-presentation</td>
</tr>
<tr>
<td></td>
<td>SOP</td>
<td>OOP</td>
</tr>
<tr>
<td>Cognition</td>
<td>-.11</td>
<td>-.10</td>
</tr>
<tr>
<td>Emotion</td>
<td>-.18*</td>
<td>-.21*</td>
</tr>
<tr>
<td>Behavior</td>
<td>-.06</td>
<td>-.07</td>
</tr>
<tr>
<td>Definition and formulation</td>
<td>.26**</td>
<td>.15</td>
</tr>
<tr>
<td>Generation of alternatives</td>
<td>.26**</td>
<td>.21*</td>
</tr>
<tr>
<td>Decision making</td>
<td>.17*</td>
<td>.07</td>
</tr>
<tr>
<td>Solution implementation and verification</td>
<td>.15</td>
<td>.12</td>
</tr>
</tbody>
</table>

Note. SOP = self-oriented perfectionism; OOP = other-oriented perfectionism; SPP = socially prescribed perfectionism; PSP = perfectionism self-promotion; NDSI = nondisclosure of imperfection; NDI = nondisplay of imperfection; CES-D = Center for Epidemiological Studies Depression scale; SPSI = Social Problem-Solving Inventory.

*p < .05, two-tailed. **p < .01, two-tailed. ***p < .001, two-tailed.
significant negative correlations between perfectionistic self-presentation and social problem-solving ability tended to be stronger for women and certain associations were only evident among women. For instance, the PSPS dimension assessing the need to avoid displaying imperfection was associated with all four problem-solving skills subscales, but these associations were not significantly correlated among men. Similarly, depression was negatively associated with three of the problem-solving skills subscales among women, but not among men.

The data in Table 4 show that the correlations between perfectionism and depression among men and women were comparable, though the correlations were somewhat stronger among women. In general, the results show that socially prescribed perfectionism and the dimensions of perfectionistic self-presentation were significantly associated with depression.

### Trait Perfectionism Versus Perfectionistic Self-Presentation

A related issue of importance is the extent to which trait perfectionism and perfectionistic self-presentation can be distinguished in this context. Table 5 displays the correlations between socially prescribed perfectionism and the three PSPS factors for women and men. It can be seen for women

| Correlations Among Perfectionism and Perfectionistic Self-Presentation and Depression |
|---------------------------------|---------------------------------|
|                                  | Perfectionism                   | Perfectionistic self-presentation |
|                                 | SOP    | OOP   | SPP    | PSP    | NDSI  | NDI    |
| CES-D sample as a whole (N = 200) | .08    | .04   | .28*** | .18**  | .15*  | .28*** |
| CES-D women (n = 100)            | .07    | .11   | .31**  | .24**  | .20*  | .30**  |
| CES-D men (n = 100)              | .08    | -.03  | .28**  | .14    | .16   | .24*   |

*Note.* SOP = self-oriented perfectionism; OOP = other-oriented perfectionism; SPP = socially prescribed perfectionism; PSP = perfectionism self-promotion; NDSI = nondisclosure of imperfection; NDI = nondisplay of imperfection; CES-D = Center for Epidemiological Studies Depression scale. *p < .05, two-tailed. **p < .01, two-tailed. ***p < .001, two-tailed.
that the correlations between socially prescribed perfectionism and the PSPS subscales ranged from .56 to .67. As for men, the correlations between socially prescribed perfectionism and the PSPS subscales ranged from .41 to .61.

The predictive utility of trait perfectionism and perfectionistic self-presentation was explored in a series of regression analyses with depression and problem-solving orientation measures as outcomes. The overall pattern of findings supports the uniqueness of trait socially prescribed perfectionism and facets of perfectionistic self-presentation. For instance, when predicting depression and with socially prescribed perfectionism and the PSPS dimensions entered simultaneously as predictors, it was found for women that the significant predictors were socially prescribed perfectionism ($\beta = .29$, $t = 2.17$, $p < .04$; and nondisplay of imperfection ($\beta = .33$), $t = 1.99$, $p < .05$.

A similar pattern of results was found for men. Socially prescribed perfectionism was a significant predictor ($\beta = .28$, $t = 2.26$, $p < .03$; and the same PSPS facet, nondisplay of imperfection, was marginally significant ($\beta = .28$, $t = 1.72$, $p < .09$. Analyses of the problem-solving measure also yield evidence of the predictive nature of trait perfectionism and perfectionistic self-presentation. For instance, when predicting scores on the SPSI cognition subscale, it was found for women that significant predictors were socially prescribed perfectionism ($\beta = -.33$, $t = -2.69$, $p < .01$; and nondisplay of imperfection ($\beta = -.56$, $t = -3.72$, $p < .0001$. It was found for men that significant predictors were nondisplay of imperfection ($\beta = -.36$, $t = -2.54$, $p < .012$; nondisclosure of imperfection ($\beta = -.30$, $t = -2.76$, $p < .007$; and socially prescribed perfectionism ($\beta = -.40$, $t = -3.74$, $p < .0001$. 

Table 5

<table>
<thead>
<tr>
<th>Perfectionistic self-presentation</th>
<th>Socially prescribed perfectionism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfectionism self-promotion</td>
<td>Women ($n = 100$)</td>
</tr>
<tr>
<td></td>
<td>.67***</td>
</tr>
<tr>
<td>Nondisclosure of imperfection</td>
<td>Men ($n = 100$)</td>
</tr>
<tr>
<td></td>
<td>.61***</td>
</tr>
<tr>
<td>Nondisplay of imperfection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.56***</td>
</tr>
<tr>
<td></td>
<td>.51***</td>
</tr>
<tr>
<td></td>
<td>.65***</td>
</tr>
<tr>
<td></td>
<td>.41***</td>
</tr>
</tbody>
</table>

***$p < .001$. 

that the correlations between socially prescribed perfectionism and the PSPS subscales ranged from .56 to .67. As for men, the correlations between socially prescribed perfectionism and the PSPS subscales ranged from .41 to .61.
Mediation Models

Structural equation modeling (SEM) was employed to examine our proposed mediational model. Analyses were conducted using the Version 4.01 of the AMOS program (Arbuckle, 1999). Model fit was assessed using the following indexes: chi square divided by degrees of freedom ($\chi^2/df$), non-normed fit index (NNFI; Bentler & Bonett, 1980), comparative fit index (CFI; Bentler, 1990), and root mean square error of approximation (RMSEA; Steiger, 1980).

Although a nonsignificant $p$ value has traditionally been used as a criterion for not rejecting an SEM, this criterion is overly strict and is too sensitive for models containing many variables (Kelloway, 1998). Therefore, in the present study, alternative criteria that reflect real-world conditions were also used. A model in which $\chi^2/df$ was $\leq 5$, CFI and NNFI were greater than .90, and RMSEA was between .00 and .08 (Hu & Bentler, 1998, 1999) was deemed acceptable. These moderately stringent acceptance criteria clearly reject inadequate or poorly specified models, while accepting for consideration models that meet real-world criteria for reasonable fit and representation of the data (Kelloway, 1998).

In addition, to test the mediating effects further, statistics were computed to examine the significance of the indirect relationships via the hypothesized mediator. As indicated earlier, correlations among the variables and their means and standard deviations are presented in Table 2.

First, we used SEM to examine the direct effect of perfectionistic self-presentation, a latent construct defined by three indicators: perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection (Predictor 1) or of the observed variable SPP (Predictor 2) on depression (outcome). Next, we used SEM to examine the mediational models in which the mediating role of social problem-solving ability was a latent construct defined by three indicators: cognition, emotion, and behavior (mediator). Models were run separately for men and for women.

Direct-Effect Models

The direct-effect models of the effect of perfectionistic self-presentation on depression fit the data well: women, $\chi^2(2) = 1.97$, $\chi^2/df = 0.94$ (NNFI = .99, CFI = .10, RMSEA = .0000); men, $\chi^2(2) = 1.51$, $\chi^2/df = 0.47$ (NNFI = .99, CFI = .10, RMSEA = .0000). Perfectionistic Self-Presentation predicted higher levels of depression: women, $\beta = .28$, $t = 2.73$, $p < .006$; men, $\beta = .24$, $t = 2.21$, $p < .027$. This model explained 8% and 6% of the variance in depression among women and men, respectively.
The direct-effect models of the effect of socially prescribed perfectionism on depression indicates that socially prescribed perfectionism predicted higher levels of depression: women, $\beta = .31, t = 3.23, p < .001$; men, $\beta = .28, t = 2.85, p < .004$. This model explained 10% and 8% of the variance in depression among women and men, respectively.

Mediational Effect Models

The mediating effect of social problem-solving ability in the association between perfectionistic self-presentation and depression fit the data well: women, $\chi^2(12, N = 100) = 12.56$, $\chi^2/df = 1.05$ (NNFI = .97, CFI = 1.00, RMSEA = .002); men, $\chi^2(12, N = 100) = 28.81$, $\chi^2/df = 2.40$ (NNFI = .93, CFI = .96, RMSEA = .04). As shown in Figure 1, perfectionistic self-

Figure 1. The mediating role of problem-solving ability in the association between perfectionistic self-presentation and depression. The model on the left is for women and the model on the right is for men. Rectangles indicate measured variables and large circles represent latent constructs. Small circles reflect residuals (e) or disturbances (d); bold numbers above or near endogenous variables represent the amount of variance explained ($R^2$). Unidirectional arrows depict hypothesized directional or causal links/associations. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. The dotted path (c') indicates a significant drop in Path (c) when problem-solving ability (a and b) is included in the model.
presentation predicted more negative appraisals of social problem-solving ability: women, $\beta = -0.48$, $t = -4.19$, $p < .0001$; men, $\beta = -0.58$, $t = -4.59$, $p < .0001$. These negative appraisals, in turn, were associated with higher levels of depression: women, $\beta = -0.64$, $t = -5.95$, $p < .006$; men, $\beta = -0.45$, $t = -3.68$, $p < .0001$. This model explained 24% and 40%, respectively, of the variance in social problem-solving ability and depression among women; and 34% and 19%, respectively, of the variance in social problem-solving ability and depression among men.

The reduction of the association between perfectionistic self-presentation and depression, once we controlled for social problem-solving ability, was significant according to diverse statistical tests (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). The results for men were Sobel’s $Z = 3.42$, $p < .0006$ (Sobel, 1982); Goodman (I) test = 3.39, $p < .0007$; Goodman (II) test = 3.46, $p < .0005$. The results for women were Sobel’s $Z = 2.87$, $p < .004$; Goodman (I) test = 2.83, $p < .005$; Goodman (II) test = 2.92, $p < .004$. An estimate of the indirect effect of perfectionistic self-presentation on depression through social problem-solving ability was found to be significant: women, $p < .001$, $SE = 0.19$, CI = 0.30–0.94; men, $p < .002$, $SE = 0.23$, CI = 0.25–0.94.4 According to these analyses, perceived social problem-solving ability almost completely (though not necessarily exclusively) mediates the association between perfectionistic self-presentation and elevated levels of depression in both men and women.

The hypothesized mediating effect of social problem-solving ability in the association between socially prescribed perfectionism and depression fit the data well: women, $\chi^2(4, N = 100) = 4.37$, $\chi^2/df = 1.09$ (NNFI = .98, CFI = .99, RMSEA = .003); men, $\chi^2(4, N = 100) = 21.86$, $\chi^2/df = 5.45$ (NNFI = .91, CFI = .92, RMSEA = .07). As shown in Figure 2, socially prescribed perfectionism predicted lower levels of social problem-solving ability: women, $\beta = -0.49$, $t = -4.94$, $p < .0001$; men, $\beta = -0.33$, $t = -3.27$, $p < .001$. These lower levels, in turn, were associated with higher levels of depression: women, $\beta = -0.63$, $t = -5.87$, $p < .0001$; men, $\beta = -0.39$, $t = -3.83$.

4Although Baron and Kenny’s (1986) recommendations are influential and are cited extensively, some recent criticisms have been raised (see MacKinnon et al., 2002), especially concerning their use of Sobel’s (1982) large-sample test to evaluate the significance of indirect associations. Therefore, we evaluated the proposed mediational model by studying the sampling variability of estimates of the indirect association using the bootstrap framework recently implemented by Shrout and Bolger (2002) and Mallinckrodt, Abrahm, Wei, & Russell (2006) for mediation in SEM. Using options in AMOS, we implemented this procedure in the mediational models, which involved drawing 1,000 bootstrapping samples. We found that 100% of the bootstrap samples converged for all of the models analyzed. The 95% confidence intervals (CIs) and the CIs based on the bias-corrected bootstrap for the direct and indirect associations in our models are consistent with the conclusion that the direct and indirect associations are significantly different from 0. These results suggest that our procedure led to stable estimates of the distributions.
This model explained 24% and 40%, respectively, of the variance in social problem-solving ability and depression in women; and 11% and 21%, respectively, of the variance in social problem-solving ability and depression in men.

The reduction of the association between socially prescribed perfectionism and depression, once we controlled for social problem-solving ability, was significant according to diverse statistical tests (see MacKinnon et al., 2002). The results for women were Sobel's $Z = 3.78$, $p < .0002$; Goodman (I) test $= 3.75$, $p < .0002$; Goodman (II) test $= 3.81$, $p < .00014$. The results for men were Sobel's $Z = 2.49$, $p < .013$; Goodman (I) test $= 2.44$, $p < .015$; Goodman (II) test $= 2.54$, $p < .011$. An estimate of the indirect effect of socially prescribed perfectionism on depression through social problem-solving ability was found to be significant: women, $p < .0001$, $SE = 0.06$, CI $= 0.16$–0.38; men, $p < .002$, $SE = 0.04$, CI $= 0.05$–0.19 (see Footnote 4).

According to these analyses, perceived social problem-solving ability almost completely (though not necessarily exclusively) mediated the association between socially prescribed perfectionism and high levels of depression in both women and men.
Discussion

The purpose of the current study was to extend the existing research on perfectionism and self-reported problem-solving ability by examining the link between perfectionism and problem-solving ability in a community sample of Israeli adults. This study adopted a broader focus than previous research on this topic by including measures of perfectionistic self-presentation, in addition to trait measures of perfectionism. The current study also incorporated a focus on gender differences and included empirical tests of whether social problem-solving ability mediates the links between perfectionism dimensions (i.e., trait perfectionism, perfectionistic self-presentation) and depression.

Consistent with past research with university students, our results (for the total sample) confirmed that socially prescribed perfectionism is associated with a negative problem-solving orientation. Socially prescribed perfectionism was correlated significantly with a negative problem-solving orientation in terms of the overall scale, as well as all three SPSI subscales (i.e., affect, behavior, and cognition).

In contrast, self-oriented and other-oriented perfectionism are not associated with the problem-solving orientation measures. The obtained association between a negative problem orientation and socially prescribed perfectionism is generally in keeping with observations that emphasize the importance of viewing an individual's problem-solving ability from a social-cognitive perspective (see Bandura, 1986; D'Zurilla & Nezu, 1990). Some investigators (e.g., Nezu et al., 2004; Spence et al., 2002) have concluded that a negative problem-solving orientation may actually constitute a cognitive diathesis for depression, in part because a negative problem-solving orientation incorporates negative cognitive and motivational reactions to life problems. Our results suggest that individuals with high levels of socially prescribed perfectionism and a negative problem-solving orientation may be particularly at risk.

The data from our total sample also show that self-oriented perfectionism is associated with positive appraisals, in terms of the SPSI subscales assessing actual problem-solving skills, especially among men. This clarifies earlier research by Flett et al. (1996), who reported that this association was evident in only one of their two studies with university students. The current findings are in accordance with previous research linking self-oriented perfectionism with learned resourcefulness and self-control in university students (Flett, Hewitt, Blankstein, & O'Brien, 1991). Our new data are interesting and potentially important in light of accumulating evidence that self-oriented perfectionism can sometimes be adaptive in nonclinical samples (see Bieling et al., 2003; Slaney, Rice, & Ashby, 2002).
Although self-oriented perfectionism is sometimes associated with positive outcomes in students, this is not always the case. An experimental investigation showed that students with high self-oriented perfectionism had negative cognitive and affective responses to failure feedback on an ego-involving performance task (Besser, Flett, & Hewitt, 2004). Moreover, other evidence from studies involving psychiatric patients has suggested that self-oriented perfectionism is associated with dispositional self-criticism (Hewitt & Flett, 1993), and self-oriented perfectionism combined with the experience of life stress is often associated with depression (see Flett, Hewitt, Blankstein, & Mosher, 1995; Hewitt & Flett, 1993; Hewitt, Flett, & Ediger, 1996). Perhaps it is the presence of positive problem-solving skills and resourcefulness that sometimes protects certain self-oriented perfectionists from maladjustment.

A unique finding of the current study is that perfectionistic self-presentation is robustly associated with a negative problem-solving orientation. All dimensions of perfectionistic self-presentation were linked with overall scores on the measure of negative problem-solving orientation, as well as the affect, cognition, and behavior subscales. Thus, perfectionistic self-presenters seem to have cognitive, emotional, and behavioral characteristics and responses that tend to undermine their ability to solve personal problems. Examination of the PSPS subscales indicated in the total sample that the nondisplay of imperfections subscale had the strongest link with the measures of problem-solving orientation, but all three PSPS had significant associations with the problem-solving orientation subscales. In contrast, weaker results were evident with the problem-solving skills measure, with the nondisclosure of imperfections subscale being the only PSPS subscale linked with deficient problem-solving skills.

Although past research has not examined the possibility that perfectionistic self-presentation may be associated with maladaptive problem-solving and coping orientations, the pervasive link between perfectionistic self-presentation and poor problem-solving orientation in the current study was expected, given that acknowledging and confronting personal problems in a task-focused manner is not in keeping with the perfectionist’s need to avoid disclosing personal mistakes and shortcomings. Also, perfectionistic self-presentation can be considered an extremely neurotic form of self-presentation, and neurotic tendencies in general have been linked with negative appraisals of problem-solving ability (Elliott et al., 1994). The obtained associations between perfectionistic self-presentation and various indexes of negative problem orientation are consistent with more general findings suggesting that perfectionistic self-presenters are at risk for psychological problems, and that they have negative self-evaluative tendencies and diminished self-esteem (see Hewitt et al., 2003).
In light of Horney's (1945) suggestion that those who are preoccupied with a fear of disclosure may be unwilling to engage proactively in behaviors that could entail exposure to humiliation and ridicule, it is possible that the link between perfectionistic self-presentation and negative problem-solving orientation is actually a reflection of a more general avoidance tendency, and disengagement from activities and situations that could reveal flaws in the self. As a recent study by Hewitt, Habke, Lee-Baggley, Sherry, and Flett (2008) indicated, this defensiveness and avoidance can have very negative implications for people with high levels of perfectionistic self-presentation who are receiving treatment. The tendency to distance and disengage is reflected in a poorer therapeutic alliance, as might be expected if there is limited self-disclosure.

It remains to be established in future behavioral investigations whether individuals with high levels of perfectionistic self-presentation are actually less able to solve problems, or if this is merely their perception. It is quite possible that perfectionistic self-presenters have a problem in terms of cognitive appraisals of their own problem-solving abilities, rather than actual skill deficits. Perhaps this is a result of their evaluating themselves according to exceptionally stringent criteria. Previous research by Blankstein, Flett, and Johnston (1992) found that depressed university students gave negative appraisals of their problem-solving ability, even though their scores on the Means–End Problem-Solving Test indicated no actual deficits in the quality of their solutions to problems.

As expected, our results show that higher levels of depression are associated with socially prescribed perfectionism, perfectionistic self-presentation, and a negative problem-solving orientation. In this study, the most robust association with depression involved the cognitive subscale tapping problem-solving orientation and depression. A key aspect of the current study involved tests of a mediational model linking perfectionism, social problem-solving ability, and depression. Our analyses confirm that social problem-solving ability does, indeed, mediate the link between perfectionism and depressive symptoms. Perfectionism is defined in one analysis as a construct comprised of the three facets of perfectionistic self-presentation versus socially prescribed perfectionism in another analysis. Thus, people with high levels of socially prescribed perfectionism and perfectionistic self-presentation are prone to depression, in part, because they have a negative problem-solving orientation in terms of their cognitive, emotional, and behavioral problem-solving orientations.

Analyses were conducted separately for men and women, and support was obtained for the mediational model in both instances. However, it was also evident that the model was substantially stronger for women, and the associations between the predictor and the mediator and between the
mediator and the outcome variable for women and men were very different. Although these results should be replicated and examined in longitudinal studies, the results of our analyses suggest that perfectionism and perceived deficits in social problem-solving ability may play a greater role in women’s experience of depressive symptoms. These findings further underscore the need to consider possible gender differences in terms of the nomological network of the perfectionism construct.

**Implications of the Current Findings**

The current findings involving individual differences in perfectionism have several implications of theoretical and practical importance. At the theoretical level, the current findings support recent conceptualizations and empirical attempts to examine coping moderators and mediators of the association between perfectionism and maladjustment (see Dunkley et al., 2003; Hewitt & Flett, 2002; Hewitt, Flett, & Endler, 1995; O’Connor & O’Connor, 2003). In addition, it is evident that our results varied as a function of the perfectionism dimension in question, and this further underscores the usefulness of conceptualizing and assessing perfectionism as a multidimensional construct.

At the practical level, the current findings have clear implications for the social problem-solving process. Our results indicate that distressed individuals who are characterized by the interpersonal aspects of perfectionism are likely to benefit substantially from problem-solving interventions designed to increase their sense of efficacy in dealing with important life problems. In general, problem-solving therapy for depression has proven quite effective (see Bell & D’Zurilla, 2009).

At the same time, it is reasonable to expect that these same perfectionists will be quite defensive, especially if they have the perfectionistic self-presentation style. They may react quite strongly to potentially embarrassing situations. They may also react poorly to unrealistic problem-solving goals that they perceive as unattainable or overly demanding. Clearly, a key task for therapists is to get beyond this defensiveness, to help foster a more adaptive approach to problem solving.

Research on the effectiveness of problem-solving interventions in adolescents has found that a preventive program that emphasizes problem solving is initially successful in reducing levels of depression (see Hussian & Lawrence, 1981; Nezu, 1986), but the successes of this intervention may not necessarily be maintained over time (e.g., Spence, Sheffield, & Donovan, 2003). Our findings suggest that certain perfectionists may benefit greatly from prevention programs focused on improving their problem-solving
orientation and problem-solving skills, but it would be substantially better if such preventive efforts also incorporated an emphasis on the potential deleterious effects of various dimensions of perfectionism.

Limitations of the Current Study

The limitations of the current study must be acknowledged. First and foremost, it will be important in subsequent research to incorporate a longitudinal element, so that it can be determined whether dimensions of perfectionism interact with poor problem-solving ability to predict vulnerability to psychological distress. Given evidence that social problem solving moderates the link between stress and depression (see Nezu & Ronan, 1985, 1988; Spence et al., 2002), as well as the moderational role of life stress in perfectionism and depression (see Hewitt & Flett, 2002), it is clear that future longitudinal investigations in this area should also focus on individual differences in the experience and appraisal of negative life events and life problems.

Another issue that should be evaluated is whether certain findings are specific to the experience of depressive symptoms or generalize to other forms of psychological distress. It is quite likely that perfectionism and deficient problem solving both contribute to various forms of maladjustment. In fact, it is important to acknowledge that the general model linking perfectionism and problem-solving deficits should be relevant to an understanding of suicidal tendencies, given the established link between problem-solving deficits and suicidality (see Clum & Febbraro, 1994, 2004). In this regard, Chang (2002) found that the interaction of perfectionism and problem solving was more predictive of suicide ideation than it was of depressive symptoms. Forman, Berk, Henrique, Brown, and Beck (2004) showed that deficits in problem solving are linked with repeated suicide attempts.

Finally, the current results are based solely on self-report measures, and more rigorous methods could be incorporated into future investigations. Research on perfectionism is just beginning to include observer ratings, and most existing data are based on self-reports (for a discussion, see Flett et al., 2005). Future research should examine whether similar findings are detected when various types of data (e.g., observer ratings) are utilized. In this regard, existing research has suggested that observers (peers and clinicians) can reliably assess individual differences in perfectionistic self-presentation (see Hewitt et al., 2003).

In summary, the results of the present study attest to the usefulness of examining perfectionism and perceptions of social problem solving. We
found that socially prescribed perfectionism and all dimensions of perfectionistic self-presentation are associated with reports of poorer problem-solving orientation. In addition, our results support the view that social problem solving mediates the link between perfectionism and depression. Our results also provide some indication of the need for a nuanced approach that takes possible gender differences into account because the mediational model was more predictive for women.

Overall, these findings demonstrate the usefulness of investigating individual differences in perfectionists’ self-perceptions of problem-solving ability, and suggest the need for intervention strategies that are designed to enhance the perceived problem-solving abilities of individuals who feel that they must be perfect when in public and who feel a great pressure to meet the perfectionistic expectations of other people. More positive perceptions of problem-solving ability should play a key role in alleviating some of the psychological distress experienced by certain perfectionists.

References


PERFECTIONISM AND SOCIAL PROBLEM-SOLVING ABILITY


events on the development of depressive symptoms in adolescence?


<table>
<thead>
<tr>
<th><strong>Toppan Best-set Premedia Limited</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal Code: JASP</td>
</tr>
<tr>
<td>Article No: 653</td>
</tr>
<tr>
<td>Page Extent: 24</td>
</tr>
</tbody>
</table>