

1 **Perfectionistic Self-Presentation and Trait Perfectionism in**
2 **Social Problem-Solving Ability and Depressive Symptoms¹**

3
4 AVI BESSER²

5 *Department of Behavioral Sciences*
6 *Center for Research in Personality, Life*
7 *Transitions, and Stressful Life Events*
8 *Sapir Academic College, Israel*
9

GORDON L. FLETT

York University
Toronto, Ontario, Canada

10 PAUL L. HEWITT

11 *University of British Columbia*
12 *Vancouver, British Columbia, Canada*
13

14 This study examined social problem solving and perfectionistic self-presentation,
15 and assessed whether social problem solving mediates the association between per-
16 fectionism and depression. A sample of 200 community members completed mea-
17 sures of perfectionistic self-presentation, trait perfectionism, social problem-solving
18 ability, and depression. Correlational analyses confirmed that perfectionistic self-
19 presentation and socially prescribed perfectionism are both associated with a nega-
20 tive problem-solving orientation. Tests of mediating effects revealed that negative
21 problem-solving ability mediates the associations of socially prescribed perfection-
22 ism and perfectionistic self-presentation with depressive symptoms, particularly
23 among women. The findings support further exploration of mediational models
24 linking perfectionism, problem-solving ability, and depression and suggest that
25 people who display high perfectionistic self-presentation are particularly vulnerable
26 to stress and distress and should benefit from problem-solving training.

27
28 Over the past 30 years, there has been sustained and growing interest in
29 the study of individual differences in the ability to solve personal problems
30 (see Heppner, Witty, & Dixon, 2004). In part, this interest reflects the results
31 of several studies that have found that social problem-solving ability is a
32 consistent correlate of positive mental health (D'Zurilla, 1986; Heppner,
33 1978; Nezu, 1987). In addition, the general importance of problem solving to
34 problems in living is widely acknowledged. Most individuals are frequently
35 faced with a number of environmental circumstances that require effective
36

37 ¹Gordon Flett was supported by the Canada Research Chair Program. The authors
38 acknowledge Einat Biton and Natali Lev of Sapir Academic College for their invaluable
39 assistance with data collection.

40 ²Correspondence concerning this article should be addressed to Avi Besser, Department of
41 Behavioral Sciences, Sapir Academic College, D. N. Hof Ashkelon, 79165 Israel. E-mail:
42 besser@mail.sapir.ac.il

2123

Journal of Applied Social Psychology, 2010, **40**, 8, pp. 2123–2156.

© 2010 Copyright the Authors

Journal compilation © 2010 Wiley Periodicals, Inc.

1 responses (D’Zurilla & Goldfried, 1971; Spivack, Platt, & Shure, 1976), and
2 ineffective problem-solving responses in these situations may seriously
3 impair a person’s ability to cope with his or her environment and may lead
4 to severe emotional distress (Butler & Meichenbaum, 1981; D’Zurilla &
5 Goldfried, 1971).

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

17 Attempts to examine perfectionism and problem-solving ability are com-
18 plicated at both the conceptual and empirical levels because perfectionism is
19 a multidimensional construct. For example, Frost and associates developed a
20 measure entitled the Multidimensional Perfectionism Scale (see Frost &
21 Marten, 1990; Frost, Marten, Lahart, & Rosenblate, 1990). This scale con-
22 sists of six subscales that measure personal aspects of perfectionism (i.e.,
23 personal standards, concern for mistakes, doubts about actions, organiza-
24 tion) and the familial aspects of perfectionism (i.e., high parental expecta-
25 tions, parental criticism). Frost and associates (DiBartolo, Frost, Chang,
26 LaSota, & Grills, 2004; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993;
27 Frost et al., 1990) have shown that the concern-for-mistakes subscale is the
28 perfectionism dimension that is linked most consistently with depressive
29 symptoms.

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

39 The third dimension of perfectionism—socially prescribed
40 perfectionism—is the aspect of perfectionism that is most consistently related
41 to maladjustment. *Socially prescribed perfectionism* entails the belief that
42 others have high expectations and perfectionistic motives for one’s own

1 behavior, as well as the belief that others will be satisfied only when these
2 standards are attained. Socially prescribed perfectionism is associated with a
3 wide variety of psychological problems, including depression, anxiety, stress,
4 suicidal tendencies, and personality disorders (Dean & Range, 1996; Dean,
5 Range, & Goggin, 1996; Flett, Besser, & Hewitt, 2005; Frost et al., 1993;
6 Hewitt & Flett, 1991a, 1991b, 1993; Hewitt, Flett, & Endler, 1995; Sherry,
7 Hewitt, Flett, & Harvey, 2003).

8 9 Perfectionism and Social Problem-Solving Ability

10
11 Flett, Hewitt, Blankstein, Solnik, and Van Brunschot (1996) introduced
12 the idea that perfectionists may suffer from deficits in social problem solving
13 because they are highly defensive and believe that problems must be perfectly
14 resolved. These researchers conducted initial empirical investigations of
15 dimensions of perfectionism and problem-solving ability. Their first study
16 examined associations between the MPS (Hewitt & Flett, 1991b) and the
17 original version of the Social Problem-Solving Inventory (SPSI; see
18 D'Zurilla & Nezu, 1990).

19 The SPSI provides two general measures of problem-solving orientation
20 and specific problem-solving skills. The problem-solving orientation scale
21 consists of three subscales measuring orientation in terms of cognitive, emo-
22 tional, and behavioral responses. The problem-solving skill subscale consists
23 of four subscales measuring phases of the problem-solving process, including
24 problem definition, the generation of alternative solutions, decision making,
25 and solution implementation. The main hypothesis guiding this initial
26 research was that socially prescribed perfectionism includes elements of help-
27 lessness and hopelessness that are antithetical to the problem-solving process,
28 and this ought to contribute to a negative problem-solving orientation.

29 In their first study, Flett et al. (1996) analyzed data from 168 under-
30 graduate students and found that socially prescribed perfectionism was the
31 only perfectionism trait dimension that was significantly associated with
32 indexes of negative problem orientation (r s ranging from $-.34$ to $-.39$). In
33 addition, both self-oriented perfectionism and other-oriented perfectionism
34 were associated with positive appraisals of overall problem-solving ability.

35 In their second study, Flett et al. (1996) re-examined the link between trait
36 dimensions of perfectionism and scores on the SPSI in a sample of 114
37 university students. Participants also completed measures of anxiety and
38 depression. Once again, socially prescribed perfectionism was found to be
39 associated with the negative problem-solving orientation subscales (r s
40 ranging from $-.26$ to $-.32$). As for problem-solving skills, other-oriented
41 perfectionism, but not self-oriented perfectionism, was associated with more

2126 BESSER ET AL.

1 positive appraisals of problem-solving skills. Partial correlational analyses
2 involving the measures of anxiety and depression showed that the link
3 between socially prescribed perfectionism and negative problem-solving ori-
4 entation could still be detected after controlling for the link between negative
5 problem-solving orientation and psychological distress.

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

19 Subsequent research by Chang (1998) addressed the link between perfec-
20 tionism and social problem solving as part of a broader study of predictors of
21 suicide risk in Caucasian and Asian American college students. A sample of
22 148 participants completed the SPSI-Revised (D'Zurilla, Nezu, & Maydeu-
23 Olivares, 1996) and Frost et al.'s (1990) MPS. This revised problem-solving
24 measure assesses negative problem-solving orientation, positive problem-
25 solving orientation, rational problem solving, an impulsive/careless problem-
26 solving style, and an avoidance style. They found that the high personal
27 standards factor was not significantly associated with the problem-solving
28 measures. However, measures of concern for mistakes, parental criticism,
29 and doubts about action were positively associated with a negative problem-
30 solving orientation, with the caveat that some correlations did not attain
31 significance because of a stringent Bonferroni correction.

32 A more recent investigation by Chang (2002) evaluated an integrative
33 model in which both perfectionism and social problem solving were hypoth-
34 esized to have additive and interactive effects in predicting depression and
35 suicide ideation. A sample of 385 university students in the midwestern
36 United States completed Frost et al.'s (1990) MPS and the short form of the
37 SPSI-Revised, as well as measures of depression and suicide ideation. Analy-
38 ses focused on total scores on the social problem-solving measure and on
39 Frost et al.'s MPS. Thus, the results were not presented for the separate
40 perfectionism dimensions. A small, negative association between perfection-
41 ism and problem-solving ability was reported ($r = -.13, p < .05$). Chang also
42 found that perfectionism and problem-solving ability did, indeed, interact to

1 predict significant unique variance in both depression and suicide ideation.
2 As expected, students jointly characterized by elevated perfectionism and
3 lower problem-solving ability had elevated levels of depression and suicide
4 ideation.

5 Cheng (2001) examined perfectionism and problem-solving ability in a
6 sample of 138 university students from Hong Kong. Participants completed
7 a brief 11-item perfectionism measure comprised of items from Frost et al.'s
8 (1990) subscales assessing concern over mistakes and doubts about actions.
9 They also completed Heppner and Petersen's (1982) Problem-Solving Inventory,
10 and measures of hopelessness and depression. Cheng reported a significant
11 link between perfectionism and perceived deficits in problem solving
12 ($r = .30$).

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

27 28 The Present Study

29
30 To our knowledge, further tests of the association between perfectionism
31 and social problem-solving ability have not been reported. The current study
32 is designed to extend existing research in several ways. First, we seek to
33 re-examine the association between trait perfectionism and social problem-
34 solving ability in a community sample of Israeli adults. Perfectionism was
35 assessed using Hewitt and Flett's (1991b) MPS. Flett et al.'s (1996) studies
36 are the only ones thus far to use this particular perfectionism measure in
37 conjunction with a social problem-solving measure, and that research was
38 conducted with university students in Canada.

39 Our interest in re-examining the link between social problem solving and
40 levels of self-oriented, other-oriented, and socially prescribed perfectionism
41 stem, in part, from certain inconsistencies in the findings of the two studies

1 described by Flett et al. (1996). Specifically, self-oriented perfectionism was
2 significantly associated with positive appraisals of problem-solving skills in
3 their first study, but not in their second study. It is important to re-examine
4 this issue in light of the growing controversy about the extent to which
5 self-oriented perfectionism has an adaptive aspect (see Bieling, Israeli,
6 Smith, & Antony, 2003).

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

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

33 Other research with the PSPS (Hewitt et al., 2003) has indicated that
34 perfectionistic self-presentation is associated with low levels of appearance
35 self-esteem (Hewitt, Flett, & Ediger, 1995), personality dysfunction (Sherry
36 et al., 2007), self-conscious anxiety among students in dating relationships
37 and relationship difficulties in married couples (Flett, Hewitt, Shapiro, &
38 Rayman, 2000–2001; Habke, Hewitt, & Flett, 1999), and tendencies toward
39 self-silencing and reduced emotional expressiveness (Geller, Cockell, Hewitt,
40 Goldner, & Flett, 2000). Patients with eating disorders are also characterized
41 by highly perfectionistic self-presentations (Cockell et al., 2002). Elevations
42 in perfectionistic self-presentation are correlated with facets of the anxiety

1 sensitivity construct, including a fear of expressing publicly observable symp-
2 toms of anxiety (Flett, Greene, & Hewitt, 2004).

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

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

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

38 Another unique aspect of the current investigation is that our sample
39 included enough men and women to conduct meaningful tests of possible
40 gender differences. In general, gender differences have seldom been tested
41 in the perfectionism literature (for a related discussion, see Blankstein,
42 Lumley, & Crawford, 2007). In the current instance, it is quite conceivable

2130 BESSER ET AL.

1 that there are gender differences in the importance and relevance of perfec-
2 tionistic self-presentation.

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

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

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

31 A main hypothesis guiding our study is that perfectionism is associated
32 with negative appraisals of social problem-solving ability and that these
33 negative appraisals of problem-solving ability mediate the link between per-
34 fectionism and depressive symptoms. This hypothesis is extrapolated from
35 other research showing that maladaptive coping styles, in general, mediate
36 the link between maladaptive dimensions of perfectionism and psychologi-
37 cal distress (e.g., Dunkley, Blankstein, Halsall, Williams, & Winkworth,
38 2000; Dunkley, Zuroff, & Blankstein, 2003; O'Connor & O'Connor, 2003)
39 and related research suggesting that negative self-appraisals mediate the
40 link between perfectionism and depression (Rice, Ashby, & Slaney, 1998).
41 According to the theoretical suggestions outlined by Hewitt and Flett
42 (2002), perfectionism is associated with distress, in part, because certain

1 perfectionists respond to stress with maladaptive coping and problem-
2 solving tendencies that perpetuate and exacerbate negative affect and
3 related symptoms of distress.

4 5 Method

6 7 *Participants*

8
9 Our sample consisted of 200 Israeli community sample participants (100
10 men, 100 women). They responded to our call for volunteers to take part in
11 a study of “attitudes, attributions, and mood.” Participants were a commu-
12 nity sample of young adults in their mid-20s ($M = 24.2$ years, $SD = 2.8$). All
13 participants had more than 12 years of formal education ($M = 12.4$ years,
14 $SD = 0.9$).

15 16 *Measures*

17
18 *Multidimensional Perfectionism Scale (MPS)*. The MPS (Hewitt & Flett,
19 1991b, 2004) has three subscales of 15 items each. Respondents rated state-
20 ments reflecting self-oriented perfectionism (e.g., “One of my goals is to be
21 perfect in every thing I do”), other-oriented perfectionism (e.g., “I have high
22 expectations for the people who are important to me”), and socially pre-
23 scribed perfectionism (e.g., “My family expects me to be perfect”) on a
24 7-point scale. Extensive evidence has confirmed the multidimensionality of
25 this instrument, as well as the reliability and validity of the subscales (Flett,
26 Sawatzky, & Hewitt, 1995; Frost et al., 1993; Hewitt & Flett, 1991b, 2004;
27 Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991).

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

39 Perfectionistic self-presentation has been linked with other relevant con-
40 structs, such as public self-consciousness, fear of negative evaluation, and a

2132 BESSER ET AL.

1 sense of impostorism (Ferrari & Thompson, 2006; Hewitt et al., 2003). It has
2 also been associated significantly with self-concealment, as might be
3 expected, but not to the degree that perfectionistic self-presentation and
4 self-concealment are redundant with each other (see Hewitt et al., 2003).

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

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

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

24 The PSSS consists of four subscales measuring problem definition and
25 formulation (e.g., “When I am faced with a large, complex problem, I often
26 try to break it down into smaller problems that I can solve one at a time”),
27 generation of alternative solutions (e.g., “When I am attempting to solve a
28 problem, I often try to be creative and think of original or unconventional
29 solutions”), decision making (e.g., “When making decisions, I generally use a
30 systematic method for judging and comparing alternatives”), and solution
31 implementation and verification (e.g., “After carrying out a solution to a
32 problem, I usually try to analyze what went right and what went wrong”).
33 The POS and the PSSS can also be combined to provide a summary score for
34 the entire SPSI.

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

40 *Center for Epidemiological Studies Depression Scale* (CES-D; Radloff,
41 1977). The CES-D is a well-known 20-item inventory with items that
42 measure the affective and somatic symptoms of depression. Scores range

1 from 0 to 60, with higher scores indicating more severe depression. Although
2 the scale is typically used as a continuous measure, a score of 16 or higher is
3 regarded as the clinical cutoff for at least a mild case of depression (Radloff,
4 1977). The CES-D is well suited for administration to adults from the general
5 population. Respondents indicate the frequency with which they have experi-
6 enced each symptom over the past week on a 4-point scale ranging from
7 0 to 3.

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

12 13 *Procedure*

14
15 Participants were initially contacted through advertisements in public
16 places asking for volunteers to take part in a study on “attitudes, attributions,
17 and mood.” Participants were young Israeli adults who were from the area in
18 southern Israel in which they were recruited. Participants completed the
19 questionnaire package individually. The order of presentation of the ques-
20 tionnaires was randomized.

21 22 Results

23 24 *Descriptive Analyses*

25
26 Means and standard deviations for each of the measures for men,
27 women, and the total sample are shown in Table 1. The data presented in
28 Table 1 represent some normative information for the use of these mea-
29 sures in Israel, since measures such as the PSPS have not been studied
30 extensively thus far.

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

1 Table 1

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

	Total (n = 200)		Women (n = 100)		Men (n = 100)		t(198)
	M	SD	M	SD	M	SD	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Note. CES-D = Center for Epidemiological Studies Depression scale.
 *p < .05, two-tailed. **p < .01, two-tailed.

1 *Correlational Analyses*

2
3 Table 2 presents the correlations and Cronbach's alpha internal consistency coefficients for the study variables for the sample as a whole. Table 2
4 also presents the correlations of the perfectionism construct and the depression scores with the SPSI subscales. Table 3 summarizes the correlations
5 obtained for men, as compared those obtained for women. Finally, Table 4
6 lists the correlations between depression and the various dimensions of perfectionism for men, women, and the total sample.
7

8
9 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.
10
11

12
13 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.
14
15

16
17 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).³ Therefore, the other MPS personality dimensions and other SPSI subscales were excluded from subsequent analyses.
18
19
20
21

22
23 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
24
25
26
27
28
29
30

31
32
33
34
35
36
37 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).
38
39
40
41
42
43

1 Table 2
 2 *Correlations Among Perfectionism and Perfectionistic Self-Presentation and Problem-Solving Subscales and Depression*

	Perfectionism			Perfectionistic self-presentation				α
	SOP	OOP	SPP	PSP	NDSI	NDI	CES-D	
3 SPSI subscales								
4 Cognition	.01	-.13	-.40***	-.26***	-.33***	-.43***	-.50***	.79
5 Emotion	-.07	-.20**	-.40***	-.33***	-.34***	-.49***	-.48***	.83
6 Behavior	.11	-.21**	-.24***	-.30***	-.35***	-.43***	-.36***	.91
7 Definition and formulation	.32***	.02	-.10	.02	-.14*	-.09	-.03	.86
8 Generation of alternatives	.36***	.04	-.07	.09	-.18**	-.09	-.14*	.81
9 Decision making	.24***	.04	-.16*	-.00	-.18**	-.14*	-.08	.77
10 Solution implementation and verification	.25***	.10	-.11	.07	-.14*	-.08	-.14*	.76
11 α	.87	.76	.84	.85	.83	.83	.91	

12 *Note.* $N = 200$. SOP = self-oriented perfectionism; OOP = other-oriented perfectionism; SPP = socially prescribed perfectionism;
 13 PSP = perfectionistic self-promotion; NDSI = nondisclosure of imperfection; NDI = nondisplay of imperfection; CES-D = Center
 14 for Epidemiological Studies Depression scale; SPSI = Social Problem-Solving Inventory.
 15 * $p < .05$, 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

	Women (N = 100)										Men (N = 100)											
	Perfectionism					Perfectionistic self- presentation					Perfectionism					Perfectionistic self- presentation						
	SOP	OOP	SPP	PSP	NDSI	NDI	CES-D	SOP	OOP	SPP	PSP	NDSI	NDI	CES-D	SOP	OOP	SPP	PSP	NDSI	NDI	CES-D	
SPSI subscales																						
Cognition	-.11	-.10	-.42***	-.35***	-.33***	-.48***	.15	-.17*	-.41***	-.21*	-.41***	-.37***	-.57***	-.17*	-.41***	-.21*	-.41***	-.37***	-.42***	-.42***	-.42***	-.42***
Emotion	-.18*	-.21*	-.47***	-.34***	-.30**	-.43***	.09	-.20*	-.33***	-.35***	-.44***	-.56***	-.52***	-.20*	-.33***	-.35***	-.44***	-.56***	-.43***	-.43***	-.43***	-.43***
Behavior	-.06	-.07	-.36***	-.30**	-.21*	-.40***	.29**	-.32**	-.10	-.28**	-.47***	-.49***	-.53***	-.32**	-.10	-.28**	-.47***	-.49***	-.23*	-.23*	-.23*	-.23*
Definition and formulation	.26**	.15	-.15	.10	.03	.02	.04	.38***	-.09	-.03	-.28**	-.22*	.04	-.09	-.03	-.28**	-.22*	-.22*	-.16	-.16	-.16	-.16
Generation of alternatives	.26**	.21*	-.18*	.15	-.00	-.02	.46***	-.10	.09	.07	-.30**	-.17*	-.17*	-.10	.09	.07	-.30**	-.17*	-.15	-.15	-.15	-.15
Decision making	.17*	.07	-.31***	.01	-.09	-.13	.32**	.00	.01	.00	-.25**	-.15	-.26**	.00	.01	.00	-.25**	-.15	.08	.08	.08	.08
Solution implementation and verification	.15	.12	-.16	.06	-.04	-.11	.36***	.09	-.04	.11	-.20*	-.07	-.17*	.09	-.04	.11	-.20*	-.07	-.15	-.15	-.15	-.15

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.

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22

Table 4

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.

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

Table 5

Correlations Between Socially Prescribed Perfectionism and Perfectionistic Self-Presentation

Perfectionistic self-presentation	Socially prescribed perfectionism	
	Women (<i>n</i> = 100)	Men (<i>n</i> = 100)
Perfectionism self-promotion	.67***	.61***
Nondisclosure of imperfection	.56***	.51***
Nondisplay of imperfection	.65***	.41***

****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.

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 ($\beta = -.40$), $t = -3.74$, $p < .0001$.

1 *Mediational Models*

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

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

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

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

32
33 *Direct-Effect Models*

34
35 The direct-effect models of the effect of perfectionistic self-presentation
36 on depression fit the data well: women, $\chi^2(2) = 1.97$, $\chi^2/df = 0.94$
37 (NNFI = .99, CFI = .10, RMSEA = .0000); men, $\chi^2(2) = 1.51$, $\chi^2/df = 0.47$
38 (NNFI = .99, CFI = .10, RMSEA = .0000). Perfectionistic Self-Presentation
39 predicted higher levels of depression: women, $\beta = .28$, $t = 2.73$, $p < .006$; men,
40 $\beta = .24$, $t = 2.21$, $p < .027$. This model explained 8% and 6% of the variance in
41 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-

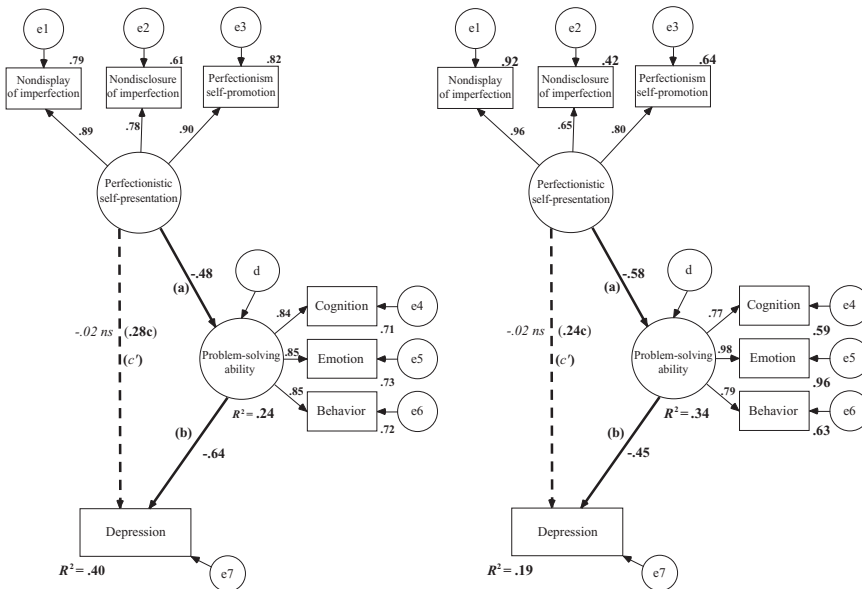


Figure 1. The mediating role of problem-solving ability in the association between perfectionistic self-presentation and depression. The model on the left is for women and the model on the right is for men. Rectangles indicate measured variables and large circles represent latent constructs. Small circles 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.

2142 BESSER ET AL.

1 presentation predicted more negative appraisals of social problem-solving
2 ability: women, $\beta = -.48$, $t = -4.19$, $p < .0001$; men, $\beta = -.58$, $t = -4.59$,
3 $p < .0001$. These negative appraisals, in turn, were associated with higher
4 levels of depression: women, $\beta = -.64$, $t = -5.95$, $p < .006$; men, $\beta = -.45$,
5 $t = -3.68$, $p < .0001$. This model explained 24% and 40%, respectively, of the
6 variance in social problem-solving ability and depression among women; and
7 34% and 19%, respectively, of the variance in social problem-solving ability
8 and depression among men.

9 The reduction of the association between perfectionistic self-presentation
10 and depression, once we controlled for social problem-solving ability, was
11 significant according to diverse statistical tests (see MacKinnon, Lockwood,
12 Hoffman, West, & Sheets, 2002). The results for men were Sobel's $Z = 3.42$,
13 $p < .0006$ (Sobel, 1982); Goodman (I) test = 3.39, $p < .0007$; Goodman (II)
14 test = 3.46, $p < .0005$. The results for women were Sobel's $Z = 2.87$, $p < .004$;
15 Goodman (I) test = 2.83, $p < .005$; Goodman (II) test = 2.92, $p < .004$. An
16 estimate of the indirect effect of perfectionistic self-presentation on depres-
17 sion through social problem-solving ability was found to be significant:
18 women, $p < .001$, $SE = 0.19$, $CI = 0.30- 0.94$; men, $p < .002$, $SE = 0.23$,
19 $CI = 0.25- 0.94$.⁴ According to these analyses, perceived social problem-
20 solving ability almost completely (though not necessarily exclusively) medi-
21 ates the association between perfectionistic self-presentation and elevated
22 levels of depression in both men and women.

23 The hypothesized mediating effect of social problem-solving ability in
24 the association between socially prescribed perfectionism and depression fit
25 the data well: women, $\chi^2(4, N = 100) = 4.37$, $\chi^2/df = 1.09$ (NNFI = .98,
26 CFI = .99, RMSEA = .003); men, $\chi^2(4, N = 100) = 21.86$, $\chi^2/df = 5.45$
27 (NNFI = .91, CFI = .92, RMSEA = .07). As shown in Figure 2, socially
28 prescribed perfectionism predicted lower levels of social problem-solving
29 ability: women, $\beta = -.49$, $t = -4.94$, $p < .0001$; men, $\beta = -.33$, $t = -3.27$,
30 $p < .001$. These lower levels, in turn, were associated with higher levels of
31 depression: women, $\beta = -.63$, $t = -5.87$, $p < .0001$; men, $\beta = -.39$, $t = -3.83$,
32

33 ⁴Although Baron and Kenny's (1986) recommendations are influential and are cited exten-
34 sively, some recent criticisms have been raised (see MacKinnon et al., 2002), especially concern-
35 ing their use of Sobel's (1982) large-sample test to evaluate the significance of indirect
36 associations. Therefore, we evaluated the proposed mediational model by studying the sampling
37 variability of estimates of the indirect association using the bootstrap framework recently
38 implemented by Shrout and Bolger (2002) and Mallinckrodt, Abraham, Wei, & Russell (2006)
39 for mediation in SEM. Using options in AMOS, we implemented this procedure in the medi-
40 ational models, which involved drawing 1,000 bootstrapping samples. We found that 100% of the
41 bootstrap samples converged for all of the models analyzed. The 95% confidence intervals (CIs)
42 and the CIs based on the bias-corrected bootstrap for the direct and indirect associations in our
43 models are consistent with the conclusion that the direct and indirect associations are signifi-
44 cantly different from 0. These results suggest that our procedure led to stable estimates of the
45 distributions.

PERFECTIONISM AND SOCIAL PROBLEM-SOLVING ABILITY 2143

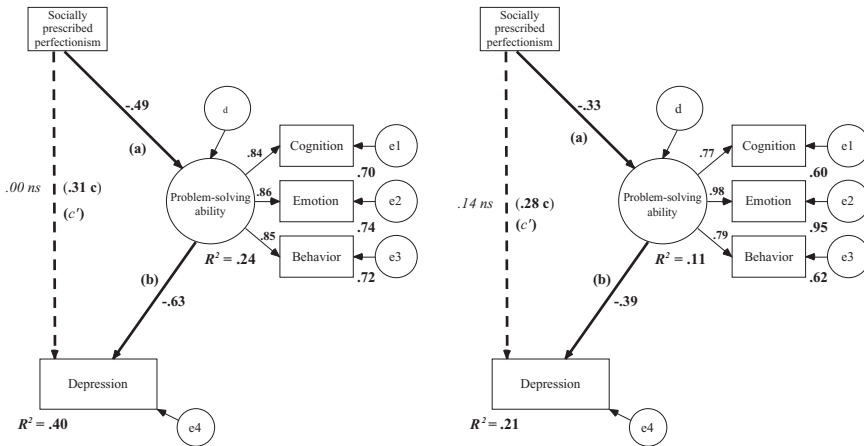


Figure 2. The mediating role of social problem-solving ability in the association between socially prescribed perfectionism and depression. The model on the left is for women and the model on the right is for men. Rectangles indicate measured variables and large circles represent latent constructs. Small 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.

$p < .0001$. 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

1
2
3 The purpose of the current study was to extend the existing research on
4 perfectionism and self-reported problem-solving ability by examining the
5 link between perfectionism and problem-solving ability in a community
6 sample of Israeli adults. This study adopted a broader focus than previous
7 research on this topic by including measures of perfectionistic self-
8 presentation, in addition to trait measures of perfectionism. The current
9 study also incorporated a focus on gender differences and included empirical
10 tests of whether social problem-solving ability mediates the links between
11 perfectionism dimensions (i.e., trait perfectionism, perfectionistic self-
12 presentation) and depression.

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

19 In contrast, self-oriented and other-oriented perfectionism are not asso-
20 ciated with the problem-solving orientation measures. The obtained associa-
21 tion between a negative problem orientation and socially prescribed
22 perfectionism is generally in keeping with observations that emphasize the
23 importance of viewing an individual's problem-solving ability from a social-
24 cognitive perspective (see Bandura, 1986; D'Zurilla & Nezu, 1990). Some
25 investigators (e.g., Nezu et al., 2004; Spence et al., 2002) have concluded that
26 a negative problem-solving orientation may actually constitute a cognitive
27 diathesis for depression, in part because a negative problem-solving orienta-
28 tion incorporates negative cognitive and motivational reactions to life prob-
29 lems. Our results suggest that individuals with high levels of socially
30 prescribed perfectionism and a negative problem-solving orientation may be
31 particularly at risk.

32 The data from our total sample also show that self-oriented perfectionism
33 is associated with positive appraisals, in terms of the SPSI subscales assessing
34 actual problem-solving skills, especially among men. This clarifies earlier
35 research by Flett et al. (1996), who reported that this association was evident
36 in only one of their two studies with university students. The current findings
37 are in accordance with previous research linking self-oriented perfectionism
38 with learned resourcefulness and self-control in university students (Flett,
39 Hewitt, Blankstein, & O'Brien, 1991). Our new data are interesting and
40 potentially important in light of accumulating evidence that self-oriented
41 perfectionism can sometimes be adaptive in nonclinical samples (see Bieling
42 et al., 2003; Slaney, Rice, & Ashby, 2002).

1 Although self-oriented perfectionism is sometimes associated with posi-
2 tive outcomes in students, this is not always the case. An experimental
3 investigation showed that students with high self-oriented perfectionism
4 had negative cognitive and affective responses to failure feedback on an
5 ego-involving performance task (Besser, Flett, & Hewitt, 2004). Moreover,
6 other evidence from studies involving psychiatric patients has suggested that
7 self-oriented perfectionism is associated with dispositional self-criticism
8 (Hewitt & Flett, 1993), and self-oriented perfectionism combined with the
9 experience of life stress is often associated with depression (see Flett, Hewitt,
10 Blankstein, & Mosher, 1995; Hewitt & Flett, 1993; Hewitt, Flett, & Ediger,
11 1996). Perhaps it is the presence of positive problem-solving skills and
12 resourcefulness that sometimes protects certain self-oriented perfectionists
13 from maladjustment.

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

28 Although past research has not examined the possibility that perfection-
29 istic self-presentation may be associated with maladaptive problem-solving
30 and coping orientations, the pervasive link between perfectionistic self-
31 presentation and poor problem-solving orientation in the current study was
32 expected, given that acknowledging and confronting personal problems in a
33 task-focused manner is not in keeping with the perfectionist's need to avoid
34 disclosing personal mistakes and shortcomings. Also, perfectionistic self-
35 presentation can be considered an extremely neurotic form of self-
36 presentation, and neurotic tendencies in general have been linked with
37 negative appraisals of problem-solving ability (Elliott et al., 1994). The
38 obtained associations between perfectionistic self-presentation and various
39 indexes of negative problem orientation are consistent with more general
40 findings suggesting that perfectionistic self-presenters are at risk for psycho-
41 logical problems, and that they have negative self-evaluative tendencies and
42 diminished self-esteem (see Hewitt et al., 2003).

2146 BESSER ET AL.

1 In light of Horney's (1945) suggestion that those who are preoccupied
2 with a fear of disclosure may be unwilling to engage proactively in behaviors
3 that could entail exposure to humiliation and ridicule, it is possible that the
4 link between perfectionistic self-presentation and negative problem-solving
5 orientation is actually a reflection of a more general avoidance tendency, and
6 disengagement from activities and situations that could reveal flaws in the
7 self. As a recent study by Hewitt, Habke, Lee-Baggley, Sherry, and Flett
8 (2008) indicated, this defensiveness and avoidance can have very negative
9 implications for people with high levels of perfectionistic self-presentation
10 who are receiving treatment. The tendency to distance and disengage is
11 reflected in a poorer therapeutic alliance, as might be expected if there is
12 limited self-disclosure.

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

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

39 Analyses were conducted separately for men and women, and support
40 was obtained for the mediational model in both instances. However, it was
41 also evident that the model was substantially stronger for women, and
42 the associations between the predictor and the mediator and between the

1 mediator and the outcome variable for women and men were very different.
2 Although these results should be replicated and examined in longitudinal
3 studies, the results of our analyses suggest that perfectionism and perceived
4 deficits in social problem-solving ability may play a greater role in women's
5 experience of depressive symptoms. These findings further underscore the
6 need to consider possible gender differences in terms of the nomological
7 network of the perfectionism construct.

8
9 *Implications of the Current Findings*

10
11 The current findings involving individual differences in perfectionism
12 have several implications of theoretical and practical importance. At the
13 theoretical level, the current findings support recent conceptualizations and
14 empirical attempts to examine coping moderators and mediators of the asso-
15 ciation between perfectionism and maladjustment (see Dunkley et al., 2003;
16 Hewitt & Flett, 2002; Hewitt, Flett, & Endler, 1995; O'Connor & O'Connor,
17 2003). In addition, it is evident that our results varied as a function of the
18 perfectionism dimension in question, and this further underscores the useful-
19 ness of conceptualizing and assessing perfectionism as a multidimensional
20 construct.

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

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

35 Research on the effectiveness of problem-solving interventions in adoles-
36 cents has found that a preventive program that emphasizes problem solving
37 is initially successful in reducing levels of depression (see Hussian &
38 Lawrence, 1981; Nezu, 1986), but the successes of this intervention may not
39 necessarily be maintained over time (e.g., Spence, Sheffield, & Donovan,
40 2003). Our findings suggest that certain perfectionists may benefit greatly
41 from prevention programs focused on improving their problem-solving

1 orientation and problem-solving skills, but it would be substantially better if
2 such preventive efforts also incorporated an emphasis on the potential
3 deleterious effects of various dimensions of perfectionism.

4
5 *Limitations of the Current Study*
6

7 The limitations of the current study must be acknowledged. First and
8 foremost, it will be important in subsequent research to incorporate a long-
9itudinal element, so that it can be determined whether dimensions of
10 perfectionism interact with poor problem-solving ability to predict vulner-
11ability to psychological distress. Given evidence that social problem solving
12 moderates the link between stress and depression (see Nezu & Ronan, 1985,
13 1988; Spence et al., 2002), as well as the moderational role of life stress in
14 perfectionism and depression (see Hewitt & Flett, 2002), it is clear that
15 future longitudinal investigations in this area should also focus on indi-
16vidual differences in the experience and appraisal of negative life events and
17 life problems.

18 Another issue that should be evaluated is whether certain findings are
19 specific to the experience of depressive symptoms or generalize to other
20 forms of psychological distress. It is quite likely that perfectionism and
21 deficient problem solving both contribute to various forms of maladjust-
22ment. In fact, it is important to acknowledge that the general model linking
23 perfectionism and problem-solving deficits should be relevant to an under-
24standing of suicidal tendencies, given the established link between problem-
25solving deficits and suicidality (see Clum & Febraro, 1994, 2004). In this
26 regard, Chang (2002) found that the interaction of perfectionism and
27 problem solving was more predictive of suicide ideation than it was of
28 depressive symptoms. Forman, Berk, Henriques, Brown, and Beck (2004)
29 showed that deficits in problem solving are linked with repeated suicide
30 attempts.

31 Finally, the current results are based solely on self-report measures, and
32 more rigorous methods could be incorporated into future investigations.
33 Research on perfectionism is just beginning to include observer ratings, and
34 most existing data are based on self-reports (for a discussion, see Flett et al.,
35 2005). Future research should examine whether similar findings are detected
36 when various types of data (e.g., observer ratings) are utilized. In this regard,
37 existing research has suggested that observers (peers and clinicians) can
38 reliably assess individual differences in perfectionistic self-presentation (see
39 Hewitt et al., 2003).

40 In summary, the results of the present study attest to the usefulness of
41 examining perfectionism and perceptions of social problem solving. We

1 found that socially prescribed perfectionism and all dimensions of perfec-
2 tionistic self-presentation are associated with reports of poorer problem-
3 solving orientation. In addition, our results support the view that social
4 problem solving mediates the link between perfectionism and depression.
5 Our results also provide some indication of the need for a nuanced approach
6 that takes possible gender differences into account because the mediational
7 model was more predictive for women.

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

16 17 References

- 18
19 Adler, A. (1956). The neurotic dispositions. In H. L. Ansbacher & R. R.
20 Ansbacher (Eds.), *The individual psychology of Alfred Adler* (pp. 239–
21 262). New York: Harper.
- 22 Arbuckle, J. L. (1999). *AMOS: A structural equation modeling program*.
23 Chicago: Small Waters.
- 24 Argus, G., & Thompson, M. (2008). Perceived social problem solving ability,
25 perfectionism, and mindful awareness in clinical depression: An explor-
26 atory study. *Cognitive Therapy and Research*, 32, 745–757.
- 27 Bandura, A. (1986). *Social foundations of thought and action: A social*
28 *cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- 29 Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable
30 distinction in social psychological research: Conceptual, strategic, and
31 statistical considerations. *Journal of Personality and Social Psychology*,
32 51, 1173–1182.
- 33 Bell, A. C., & D’Zurilla, T. J. (2009). Problem-solving therapy for depression:
34 A meta-analysis. *Clinical Psychology Review*, 29, 348–353.
- 35 Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psycho-*
36 *logical Bulletin*, 107, 238–246.
- 37 Bentler, P. M., & Bonett, D. G. 1980. Significance tests and goodness-of-fit in
38 the analysis of covariance structures. *Psychological Bulletin*, 88, 588–606.
- 39 Besser, A., Flett, G. L., & Hewitt, P. L. (2004). Perfectionism, cognition,
40 and affect in response to performance failure versus success. *Journal of*
41 *Rational-Emotive and Cognitive-Behavior Therapy*, 22, 297–324.

2150 BESSER ET AL.

- 1 Bieling, P. J., Israeli, A., Smith, J., & Antony, M. M. (2003). Making the
2 grade: The behavioral consequences of perfectionism in the classroom.
3 *Personality and Individual Differences, 35*, 163–178.
- 4 Blankstein, K. R., Flett, G. L., & Johnston, M. E. (1992). Depression,
5 problem-solving appraisals, and problem-solving ability. *Journal of Clinical*
6 *Psychology, 48*, 749–759.
- 7 Blankstein, K. R., Lumley, C. H., & Crawford, A. (2007). Perfectionism,
8 hopelessness, and suicide ideation: Revisions to diathesis-stress and spe-
9 cific vulnerability models. *Journal of Rational-Emotive and Cognitive-*
10 *Behavior Therapy, 25*, 279–319.
- 11 Butler, L., & Meichenbaum, D. (1981). The assessment of interpersonal
12 problem-solving skills. In P. C. Kendall & S. D. Hollon (Eds.), *Assess-*
13 *ment strategies for cognitive-behavioral interventions* (pp. 197–225). San
14 Diego, CA: Academic Press.
- 15 Chang, E. C. (1998). Cultural differences, perfectionism, and suicidal risk in
16 a college population: Does social problem-solving still matter? *Cognitive*
17 *Therapy and Research, 22*, 237–254.
- 18 Chang, E. C. (2002). Examining the link between perfectionism and psycho-
19 logical maladjustment: Social problem-solving as a buffer. *Cognitive*
20 *Therapy and Research, 26*, 581–595.
- 21 Cheng, S. K. (2001). Life stress, problem-solving, perfectionism, and depressive
22 symptoms in Chinese. *Cognitive Therapy and Research, 25*, 303–310.
- 23 Clum, G. A., & Febbraro, G. A. R. (1994). Stress, social support, and
24 problem-solving appraisal/skills: Prediction of suicide severity within a
25 college sample. *Assessment, 16*, 69–83.
- 26 Clum, G. A., & Febbraro, G. A. R. (2004). Social problem-solving and
27 suicide risk. In E. C. Chang, T. J. D’Zurilla, & L. J. Sanna (Eds.), *Social*
28 *problem-solving: Theory, research, and training* (pp. 67–72). Washington,
29 DC: American Psychological Association.
- 30 Cockell, S. J., Hewitt, P. L., Seal, B., Sherry, S. B., Goldner, E. M., Flett, G.
31 L., et al. (2002). Trait and self-presentational dimensions of perfectionism
32 among women with anorexia nervosa. *Cognitive Therapy and Research,*
33 *26*, 745–758.
- 34 Dean, P. J., & Range, L. M. (1996). The escape theory of suicide and
35 perfectionism in college students. *Death Studies, 20*, 415–424.
- 36 Dean, P. J., Range, L. M., & Goggin, W. C. (1996). The escape theory of
37 suicide in college students: Testing a model that includes perfectionism.
38 *Suicide and Life-Threatening Behavior, 26*, 181–186.
- 39 DiBartolo, P. M., Frost, R. O., Chang, P., LaSota, M., & Grills, A. E. (2004).
40 Shedding light on the relationship between personal standards and psy-
41 chopathology: The case for contingent self-worth. *Journal of Rational-*
42 *Emotive and Cognitive-Behavior Therapy, 22*, 237–250.

- 1 Dunkley, D. M., Blankstein, K. R., Halsall, J., Williams, M., & Winkworth,
2 G. (2000). The relation between perfectionism and distress: Hassles,
3 coping, and perceived social support as mediators and moderators.
4 *Journal of Counseling Psychology, 47*, 437–453.
- 5 Dunkley, D. M., Zuroff, D. C., & Blankstein, K. R. (2003). Self-critical
6 perfectionism and daily affect: Dispositional and situational influences on
7 stress and coping. *Journal of Personality and Social Psychology, 84*, 234–
8 252.
- 9 D’Zurilla, T. J. (1986). *Problem-solving therapy: A social competence*
10 *approach to clinical intervention*. New York: Springer.
- 11 D’Zurilla, T. J., & Goldfried, M. R. (1971). Problem-solving and behavior
12 modification. *Journal of Abnormal Psychology, 78*, 107–126.
- 13 D’Zurilla, T. J., & Nezu, A. M. (1990). Development and preliminary evalu-
14 ation of the Social Problem-Solving Inventory (SPSI). *Psychological*
15 *Assessment: A Journal of Consulting and Clinical Psychology, 2*, 156–163.
- 16 D’Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (1996). *Manual for the*
17 *Social Problem-Solving Inventory—Revised*. Unpublished manuscript,
18 State University of New York at Stony Brook, Stony Brook, NY.
- 19 Eaton, W. W., Muntaner, C., Smith, C., Tien, A., & Ybarra, M. (2004).
20 Center For Epidemiologic Studies Depression Scale: Review and revision
21 (CESD and CESDR). In M. E. Maruish (Ed.), *The use of psychological*
22 *testing for treatment planning and outcomes assessment* (3rd ed., pp. 363–
23 378). Mahwah, NJ: Lawrence Erlbaum.
- 24 Elliott, G. C. (1982). Self-esteem and self-presentation among the young as a
25 function of age and gender. *Journal of Youth and Adolescence, 11*, 135–
26 153.
- 27 Elliott, T. R., Herrick, S. M., MacNair, R. R., & Harkins, S. W. (1994).
28 Personality correlates of self-appraised problem-solving orientation:
29 Problem orientation and trait affectivity. *Journal of Personality Assess-*
30 *ment, 63*, 489–505.
- 31 Ferrari, J. R., & Thompson, T. (2006). Impostor fears: Links with self-
32 presentational concerns and self-handicapping behaviors. *Personality and*
33 *Individual Differences, 40*, 341–352.
- 34 Flett, G. L., Besser, A., & Hewitt, P. L. (2005). Perfectionism, ego defense
35 styles, and depression: A comparison of self versus informant ratings.
36 *Journal of Personality, 73*, 1355–1396.
- 37 Flett, G. L., Greene, A., & Hewitt, P. L. (2004). Dimensions of perfectionism
38 and anxiety sensitivity. *Journal of Rational-Emotive and Cognitive-*
39 *Behavior Therapy, 22*, 37–55.
- 40 Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Mosher, S. W. (1995).
41 Perfectionism, life events, and depressive symptoms: A test of a diathesis-
42 stress model. *Current Psychology, 14*, 112–137.

2152 BESSER ET AL.

- 1 Flett, G. L., Hewitt, P. L., Blankstein, K. R., & O'Brien, S. (1991). Perfectionism and learned resourcefulness in depression and self-esteem.
2 *Personality and Individual Differences*, *12*, 61–68.
- 3
4 Flett, G. L., Hewitt, P. L., Blankstein, K. R., Solnik, M., & Van Brunschot,
5 M. (1996). Perfectionism, social problem-solving ability, and psychological
6 distress. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*,
7 *14*, 245–275.
- 8 Flett, G. L., Hewitt, P. L., Shapiro, B., & Rayman, J. (2000–2001). Perfectionism, beliefs, and adjustment in dating relationships. *Current Psychology*,
9 *20*, 289–311.
- 10
11 Flett, G. L., Sawatzky, D. L., & Hewitt, P. L. (1995). Dimensions of perfectionism and goal commitment: A further comparison of two perfectionism
12 measures. *Journal of Psychopathology and Behavioral Assessment*, *17*,
13 111–124.
- 14
15 Forman, E. M., Berk, M. S., Henriques, G. R., Brown, G. K., & Beck, A. T.
16 (2004). History of multiple suicide attempts as a behavioral marker of
17 severe psychopathology. *American Journal of Psychiatry*, *161*, 437–
18 443.
- 19 Frost, R. O., Heimberg, R., Holt, C., Mattia, J., & Neubauer, A. (1993). A
20 comparison of two measures of perfectionism. *Personality and Individual
21 Differences*, *14*, 119–126.
- 22 Frost, R., & Marten, P. (1990). Perfectionism and evaluative threat. *Cognitive Therapy and Research*, *14*, 559–572.
- 23
24 Frost, R. O., Marten, P. A., Lahart, C., & Rosenblate, R. (1990). The
25 dimensions of perfectionism. *Cognitive Therapy and Research*, *14*, 449–
26 468.
- 27 Geller, J., Cockell, S. J., Hewitt, P. L., Goldner, E. M., & Flett, G. L. (2000).
28 Inhibited expression of negative emotions and interpersonal orientation
29 in anorexia nervosa. *International Journal of Eating Disorders*, *28*, 8–
30 19.
- 31 Haaga, D. A. F., Fine, J. A., Terrill, D. R., Stewart, B. L., & Beck, A. T.
32 (1995). Social problem-solving deficits, dependency, and depressive
33 symptoms. *Cognitive Therapy and Research*, *19*, 147–158.
- 34 Habke, A. M., Hewitt, P. L., & Flett, G. L. (1999). Perfectionism and sexual
35 satisfaction in intimate relationships. *Journal of Psychopathology and
36 Behavioral Assessment*, *21*, 307–322.
- 37 Heppner, P. P. (1978). A review of the problem-solving literature and its
38 relationship to the counseling process. *Journal of Counseling Psychology*,
39 *25*, 366–375.
- 40 Heppner, P. P., Baumgardner, A. H., & Jackson, S. A. (1985). Problem-
41 solving, self-appraisal, depression, and attributional style: Are they
42 related? *Cognitive Therapy and Research*, *9*, 105–113.

- 1 Heppner, P. P., Kampa, M., & Brunning, L. (1987). The relationship between
2 problem-solving self-appraisal and indices of physical and psychological
3 health. *Cognitive Therapy and Research*, *11*, 155–168.
- 4 Heppner, P. P., & Petersen, C. H. (1982). The development and implications
5 of a personal problem-solving inventory. *Journal of Counseling Psychol-*
6 *ogy*, *29*, 66–75.
- 7 Heppner, P. P., Witty, T. E., & Dixon, W. A. (2004). Problem-solving
8 appraisal and human adjustment: A review of 20 years of research using
9 the Problem-Solving Inventory. *Counseling Psychologist*, *32*, 344–428.
- 10 Hewitt, P. L., & Flett, G. L. (1991a). Dimensions of perfectionism in unipolar
11 depression. *Journal of Abnormal Psychology*, *100*, 98–101.
- 12 Hewitt, P. L., & Flett, G. L. (1991b). Perfectionism in the self and social
13 contexts: Conceptualization, assessment, and association with psychopa-
14 thology. *Journal of Personality and Social Psychology*, *60*, 456–470.
- 15 Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress,
16 and depression: A test of the specific vulnerability hypothesis. *Journal of*
17 *Abnormal Psychology*, *102*, 58–65.
- 18 Hewitt, P. L., & Flett, G. L. (2002). Perfectionism and stress in psychopa-
19 thology. In G. L. Flett & P. L. Hewitt (Eds.). *Perfectionism: Theory,*
20 *research, and treatment* (pp. 255–284). Washington, DC: American
21 Psychological Association.
- 22 Hewitt, P. L., & Flett, G. L. (2004). *The Multidimensional Perfectionism*
23 *Scale: Technical manual*. Toronto, Ontario, Canada: Multi-Health
24 Systems.
- 25 Hewitt, P. L., Flett, G. L., & Ediger, E. (1995). Perfectionism traits and
26 perfectionistic self-presentation in eating disorder attitudes, characteris-
27 tics, and symptoms. *International Journal of Eating Disorders*, *18*, 327–
28 336.
- 29 Hewitt, P. L., Flett, G. L., & Ediger, E. (1996). Perfectionism and depression:
30 Longitudinal assessment of a specific vulnerability hypothesis. *Journal of*
31 *Abnormal Psychology*, *105*, 276–280.
- 32 Hewitt, P. L., Flett, G. L., & Endler, N. S. (1995). Perfectionism, coping, and
33 depression symptomatology in a clinical sample. *Clinical Psychology and*
34 *Psychotherapy*, *2*, 47–58.
- 35 Hewitt, P. L., Flett, G. L., Sherry, S. B., Habke, M., Parkin, M., Lam, R. W.,
36 et al. (2003). The interpersonal expression of perfection: Perfectionistic
37 self-presentation and psychological distress. *Journal of Personality and*
38 *Social Psychology*, *84*, 1303–1325.
- 39 Hewitt, P. L., Flett, G. L., Turnbull-Donovan, W., & Mikail, S. (1991). The
40 Multidimensional Perfectionism Scale: Reliability, validity, and psycho-
41 metric properties in psychiatric samples. *Psychological Assessment: A*
42 *Journal of Consulting and Clinical Psychology*, *3*, 464–468.

2154 BESSER ET AL.

- 1 Hewitt, P. L., Habke, A. M., Lee-Baggley, D. L., Sherry, S. B., & Flett, G. L.
2 (2008). The impact of perfectionistic self-presentation on the cognitive,
3 affective, and physiological experience of a clinical interview. *Psychiatry*,
4 *71*, 93–122.
- 5 Horney, K. (1945). *Our inner conflicts*. New York: Norton.
- 6 Horney, K. (1950). *Neurosis and human growth: The struggle towards self-*
7 *realization*. New York: Norton.
- 8 Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure
9 modeling: Sensitivity and underparamaterized model misspecification.
10 *Psychological Methods*, *3*, 424–453.
- 11 Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance
12 structure analysis: Conventional criteria versus new alternatives. *Struc-*
13 *tural Equation Modeling*, *6*, 1–55.
- 14 Hussian, R. A., & Lawrence, P. S. (1981). Social reinforcement of activity
15 and problem-solving training in the treatment of depressed institutional-
16 ized elderly patients. *Cognitive Therapy and Research*, *5*, 57–69.
- 17 Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A*
18 *researcher's guide*. Newbury Park, CA: Sage.
- 19 Leary, M. R. (1996). *Self-presentation: Impression management and interper-*
20 *sonal behavior*. Boulder, CO: Westview.
- 21 MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., &
22 Sheets, V. (2002). A comparison of methods to test mediation and other
23 intervening variable effects. *Psychological Methods*, *7*, 83–104.
- 24 Mallinckrodt, B., Abraham, T. W., Wei, M., & Russell, D. W. (2006).
25 Advance in testing statistical significance of mediation effects. *Journal of*
26 *Counseling Psychology*, *53*, 372–378.
- 27 Nezu, A. M. (1985). Differences in psychological distress between effective
28 and ineffective problem solvers. *Journal of Counseling Psychology*, *32*,
29 135–138.
- 30 Nezu, A. M. (1986). Efficacy of a social problem-solving therapy approach
31 for unipolar depression. *Journal of Consulting and Clinical Psychology*, *54*,
32 196–202.
- 33 Nezu, A. M. (1987). A problem-solving formulation of depression: Literature
34 review and proposal of a pluralistic model. *Clinical Psychology Review*, *7*,
35 121–144.
- 36 Nezu, A. M., Nezu, C. M., & Clark, M. A. (2008). Social problem solving
37 as a risk factor for depression. In K. S. Dobson & D. J. A. Dozois
38 (Eds.), *Risk factors in depression* (pp. 263–286). New York: Academic
39 Press.
- 40 Nezu, A. M., Nezu, C. M., & Lombardo, E. (2004). *Cognitive-behavioral case*
41 *formulation and treatment design: A problem-solving approach*. New York:
42 Springer.

- 1 Nezu, A. M., & Ronan, G. F. (1985). Life stress, current problems, problem
2 solving, and depressive symptoms: An integrative model. *Journal of Con-*
3 *sulting and Clinical Psychology*, 53, 693–697.
- 4 Nezu, A. M., & Ronan, G. F. (1988). Social problem-solving as a moderator
5 of stress-related depressive symptoms: A prospective analysis. *Journal of*
6 *Counseling Psychology*, 35, 134–138.
- 7 O'Connor, R. C., & O'Connor, D. B. (2003). Predicting hopelessness and
8 psychological distress: The role of perfectionism and coping. *Journal of*
9 *Counseling Psychology*, 50, 363–372.
- 10 Pliner, P., Chaiken, S., & Flett, G. L. (1990). Gender differences in concern
11 with body weight and physical appearance over the lifespan. *Personality*
12 *and Social Psychology Bulletin*, 16, 263–273.
- 13 Radloff, L. S. (1977). A self-report depression scale for research in the
14 general population. *Applied Psychological Measurement*, 1, 385–401.
- 15 Rice, K. G., Ashby, J. S., & Slaney, R. B. (1998). Self-esteem as a mediator
16 between perfectionism and depression: A structural equations analysis.
17 *Journal of Counseling Psychology*, 45, 304–314.
- 18 Rudolph, S. G., Flett, G. L., & Hewitt, P. L. (2007). Perfectionism and
19 deficits in cognitive emotion regulation. *Journal of Rational-Emotive and*
20 *Cognitive-Behavior Therapy*, 25, 343–357.
- 21 Sherry, S. B., Hewitt, P. L., Flett, G. L., & Harvey, M. (2003). Perfectionism
22 dimensions, perfectionistic attitudes, dependent attitudes, and depression
23 in psychiatric patients and university students. *Journal of Counseling Psy-*
24 *chology*, 50, 373–386.
- 25 Sherry, S. B., Hewitt, P. L., Flett, G. L., Lee-Baggley, D. L., & Hall, P. A.
26 (2007). Trait perfectionism and perfectionistic self-presentation in person-
27 ality pathology. *Personality and Individual Differences*, 42, 477–490.
- 28 Sherry, S. B., Hewitt, P. L., Lee-Baggley, D. L., Flett, G. L., & Besser, A.
29 (2004). Perfectionism and thoughts about having cosmetic surgery per-
30 formed. *Journal of Applied Biobehavioral Research*, 9, 244–257.
- 31 Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonex-
32 perimental studies: New procedures and recommendations. *Psychological*
33 *Methods*, 7, 422–445.
- 34 Slaney, R. B., Rice, K. G., & Ashby, J. S. (2002). A programmatic approach
35 to measuring perfectionism: The Almost Perfect Scales. In G. L. Flett &
36 P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp.
37 63–88). Washington, DC: American Psychological Association.
- 38 Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural
39 equations models. In S. Leinhardt (Ed.), *Sociological methodology, 1982*
40 (pp. 290–312). San Francisco: Jossey-Bass.
- 41 Spence, S. H., Sheffield, J., & Donovan, C. (2002). Problem-solving orienta-
42 tion and attributional style: Moderators of the impact of negative life

2156 BESSER ET AL.

- 1 events on the development of depressive symptoms in adolescence?
2 *Journal of Clinical Child Psychology*, 31, 219–229.
- 3 Spence, S. H., Sheffield, J. K., & Donovan, C. L. (2003). Preventing adoles-
4 cent depression: An evaluation of the Problem-Solving for Life Program.
5 *Journal of Consulting and Clinical Psychology*, 71, 3–13.
- 6 Spivack, G., Platt, J. J., & Shure, M. B. (1976). *The problem-solving approach*
7 *to adjustment*. San Francisco: Jossey-Bass.
- 8 Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix.
9 *Psychological Bulletin*, 87, 245–251.

Toppan Best-set Premedia Limited	
Journal Code: JASP	Proofreader: Emily
Article No: 653	Delivery date: 8 June 2010
Page Extent: 24	