NISS

A Model of the Relationship of Sex-Role Orientation to Social Problem-Solving

Xiaolei Wang

Technical Report Number 168
May 2007

National Institute of Statistical Sciences
19 T. W. Alexander Drive
PO Box 14006
Research Triangle Park, NC 27709-4006
www.niss.org

A Model of the Relationship of Sex-Role Orientation to Social Problem-Solving

Xiaolei Wang

National Institute of Statistical Sciences

The original work is published in *Sex Roles*, available at www.springerlink.com (DOI: 10.1007/s11199-007-9285-2).

The author would like to thank Dr. Joan Newman, Dr. David Dai, Dr. Matthew Martens, and the reviewers of this article for their critical feedback and valuable suggestions for improvement.

Correspondence concerning this article should be addressed to

Xiaolei Wang

1990 K St. NW, Suite 500

National Institute of Statistical Sciences

Washington, DC 20006

Tel: (202)-403-6108

Email: xwang@niss.org

A Model of the Relationship of Sex Role Orientation to Social Problem-Solving

Abstract

The study developed and empirically tested an integrated model that examined the relationships between sex-role orientations and the two conceptually related coping behaviors, namely, response styles and social problem-solving, using structural equation modeling. A total of 181 (129 females and 52 males) undergraduate students from a large public university in the northeast United States completed the Bem-Sex Role Inventory, the Response Style Questionnaire and the Rational Problem Solving scale of the Social Problem-Solving Inventory-Revised. Results showed that masculinity was related to social problem-solving. Sex-role orientations were not related to response styles. Both ruminative response style and distractive response style were positively related to rational problem-solving.

Key words: sex-role orientation; social problem-solving; response style; structure equation modeling

A Model of the Relationship of Sex Role Orientation to Social Problem-Solving

Introduction

The purpose of the study was to develop and empirically validate an integrated model that investigates the relationships between sex-role orientations, response styles and social problem-solving, using the technique of structural equation modeling. Data on these constructs were collected from responses to three questionnaires: the Bem-Sex Role Inventory, the Response Style Questionnaire and the Rational Problem Solving scale of the Social Problem-Solving Inventory-Revised. The present study is important for two reasons. First, few empirical studies have provided integrated models that examine the relations of sex-role orientations to the two conceptually related coping behaviors, namely, response style and social problem-solving; although separate and parallel streams of literature have provided support for the associations of response styles and social problem-solving to adjustment, and separate and parallel streams of literature have documented the relations of sex-role orientations to response styles and social problem-solving. Second, the studies conducted to examine the relations of sex-role orientations to response styles and social problem-solving have shown inconsistent and inconclusive findings. For example, some studies find support for the association between distraction and problem-solving, while other studies do not.

People of all ages encounter various types of problems in everyday life, including personal, interpersonal and even broader community and societal problems (D'Zurlla, Nezu, & Maydeu-Oliveres, 2004; Spivack, Platt & Shure, 1976; Stark, Spirito, Williams, & Guevremont, 1989). The capacity and adequacy of identifying effective solutions for these problems, known as social problem-solving ability, has been suggested to relate to psychological functioning and behavioral competence (D'Zurlla et al., 2004; Hartup, 1982, 1983; Jahoda, 1953; Kelly, 1982;

Nezu, Nezu, & Perri, 1989; Spivack et al., 1976). Similarly, most people experience stressful events (Schneiders, 1960; Stark et al., 1989) and “mild-to-moderate” episodes of negative emotionality (Nolen-Hoeksema, 1987, p.274), together with the problems of everyday living. Thus, coping style, or the way an individual responds to moods and stressful situations, has been suggested to associate with functioning and adjustment as well (Nolen-Hoeksema, 1987, 1990; Nolen-Hoeksema, Morrow, & Fredrickson, 1993).

Studies have been conducted to examine the relationships between adjustments and various psychological and social constructs or processes including social problem-solving and response styles. Many of the studies have been concerned with depression, which has often been viewed in the literature as a key component of maladjustment.

Social Problem-Solving

D’Zurilla and his associates (D’Zurilla & Goldfried, 1971; D’Zurilla & Nezu, 1982; D’Zurilla et al., 2004) propose social problem-solving as a broad problem-solving construct occurring “within the natural social environment” (D’Zurilla & Nezu, 2007, p.12). Social problem-solving ability is assumed to be a general response set, including problem-solving orientations and problem-solving styles, which can be applied to all types of problems, from personal problems such as emotional or health problems, to interpersonal problems such as conflicts with friend or family members, to even broader societal problems such as racial discrimination and gender stereotypes.

Specially, social problem-solving is defined as a cognitive-behavioral process of identifying effective solutions to resolve “specific problems encountered in everyday living”, which “(a) makes available a variety of potentially effective response alternatives for dealing with the problematic situation and (b) increases the probability of selecting the most effective

response from among these various alternatives" (D'Zurilla et al., 2004, p.12; D'Zurilla & Nezu, 1982; Nezu, 1987). D'Zurilla and his associates further propose two distinct but interrelated processes of social problem-solving, problem-orientation and problem-solving style (also referred to as "problem-solving proper" in D'Zurilla & Nezu, 1990). Problem orientation refers to one's cognitive, emotional and motivational set concerning problems as well as his/her own problem-solving abilities. Problem-solving style refers to the activities and skills that one attempted, in order to understand the problem and identify effective solutions. The model advances four major skills, namely, problem definition and formulation, generation of alternatives, decision making, and solution implementation and verification. Problem definition and formulation refers to the assessment and analysis of a problem into concrete and specific terms and the specification of realistic goals and objectives. Generation of alternatives refers to brainstorming as many appropriate solution options as possible, so that the best solution is included in the bank of possible alternatives. Decision making refers to the evaluation of all the possible solutions in regard to the consequences and the selection of the best or the most effective solution. Solution implementation and verification refers to monitoring and evaluating the actual outcome of the chosen solution after its implementation.

Theories of social problem-solving propose that social problem-solving ability is associated with adjustment, such as behavioral competence, psychological functioning and negative emotionality (D'Zurilla & Nezu, 1982, 2007). This proposal has received good empirical support. For example, some studies using the Social Problem-Solving Inventory find that social problem-solving, particularly the dimensions of positive problem orientation and rational problem-solving, is positively related to the use of active problem-focused coping, positive mood in routine and stressed situations, and academic performance (see D'Zurilla &

Nezu, 2007). Other studies use performance measures of social problem-solving, including the Means-Ends Problem-Solving (MEPS) procedures. Means-Ends Problem-Solving (MEPS) procedures entail the two major processes of defining the problems and conceptualizing appropriate and effective means/solutions (Platt, Scura, & Hanson, 1973; Platt & Spivack, 1975; Spivack, et al, 1976). In MEPS, participants are presented with the beginnings and endings of social problem situations, and are asked to describe in writing what they would do in that situation. These studies using MEPS procedures also find the associations between problem-solving deficits and depression. Specifically, depressed students provide fewer and less effective solutions than non-depressed students (Gotlib & Asarnow, 1979; Marx & Schultz, 1991; Marx, Williams, & Claridge, 1992; Nezu, 1985, 1986).

Response Styles

Researchers have described similar coping theories with different names, for example, those of Carver, Scheier, and Weintraub (1989), Forkman and Lazarus (1980), and Nolen-Hoeksema and her colleagues (1987, 1990). The present study is mainly concerned with Nolen-Hoekseman's coping theory, called theory of response styles.

Response styles are defined as the cognitive-behavioral responses to cope with stressful events and negative emotionality, for example, depressive episodes (Nolen-Hoeksema, 1987, 1990). Response style theory proposes two dimensions of response styles, namely, ruminative response style and distractive response style, by which individuals cope with stressful events and external demands. The rumination dimension includes thoughts and behaviors that focuses on how negative one feels or how stressful the situation is, or focuses on the causes and consequences of the stressful events or the negative emotionality. Examples include focusing on how unmotivated one feels ("I just don't feel like doing anything"), wondering why one is

feeling depressed (“What is wrong with me that I feel this way”), and worrying about the consequences of behaviors (“I can’t get my work done when I am feeling this way”) (Nolen-Hoeksema et al., 1993, p.20). The distraction dimension includes responses to withdraw one’s attention from stressful events or negative moods to pleasant thoughts and activities, for example, “go to my favorite hangout to get my mind off my feelings”, and “I’ve got to get up and do something to make myself feel better” (p.22).

Response styles theory has been the most rigorously researched to account for individual differences in adjustment, particularly, negative emotionality. Research has found that individuals’ variation in emotionality, in terms of the likelihood of depression and duration and severity of depression, is associated with differential response styles that one applies to cope with the stressful events (Broderick & Korteland, 2002; Hankin & Abramson, 1999; Just & Alloy, 1997; Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 2000; Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema, Parker & Larson, 1994). Empirical studies have provided evidence that a ruminative style is related to depression: rumination is associated with increase in the likelihood, severity and duration of depressive episodes. However, the association between distraction and depression has not been well supported. Specially, some studies, for example, Morrow and Nolen-Hoeksema (1990), and Lyubomirsky and Nolen-Hoeksema (1993), showed that distractive response style was associated with shorter or lower level of depressed mood; while other studies, for example, Just and Alloy (1997), found that distraction was not statistically significantly associated with depression.

Response styles are also posited to relate to problem-solving, including social problem-solving (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1990, 1991). Specifically, rumination is posited to impede problem-solving by making negative cognitions more accessible,

and thus lead to deficient problem-solving performances; while distraction is posited to lead to enhanced problem-solving by engaging attention to generate possible solutions and attempting active problem-solving strategies. The link between response styles and social problem-solving has received some, but far from extensive and complete, empirical support. Empirical studies have provided support for the negative relationship between rumination and problem-solving. For example, studies find that ruminative response style with self-focused attention is negatively related to cognitive performance (Strack, Blaney, Ganellen, & Coyne, 1985), and effective and structured social problem-solving (Lam, Schuck, Smith, Farmer, & Checkly, 2003; Lyubomsky & Nolen-Hoeksema, 1993, 1995; Watkins & Barakacia, 2002). However, the evidence of the relationship between distraction and problem-solving is inconsistent. Some studies find that individuals with distractive response style performed significantly better in problem-solving task than individuals with rumination (Coyne, Metalsky, & Lavelle, 1980; Watkins & Barakacia, 2002); while other studies document no relationship between distraction and social problem-solving (Lam et al., 2003; Lyubomsky & Nolen-Hoeksema, 1995).

Sex Role Orientation

Sex-role orientation is one's cognitive-behavioral endorsement of the characteristics typical for femininity or masculinity (Bem, 1974a; 1975). The sex-role orientation literature advances femininity and masculinity as two independent dimensions, instead of two opposite ends of a single dimension (Bem, 1981; Spence, Helmreich & Stapp, 1975). Bem (1974b) initiated the concept of androgyny, as being "both masculine and feminine, both assertive and yielding, both instrumental and expressive, depending on the situational appropriateness of these various behaviors" (p.155). However, her original concept of sex-role orientation was unidimensional, proposing that a person could be characterized as masculine, feminine or

androgynous “as a function of the difference between his or her endorsement of masculine and feminine personality characteristics” (Bem, 1974b, p.156). Bem (1981) later adopts the bidimensional view posited by Spence et al. (1975), and suggested sex-role orientations as two independent continuums of masculinity and femininity.

Bem (1975) advances that sex-role orientation is associated with sex-role adaptability and situational effectiveness and appropriateness (also Bem & Lenney, 1976). Studies find that individuals with masculine orientation are more effective and flexible in coping ability than individuals with feminine orientation (Nezu, Nezu & Peterson, 1986; Spangenberg & Lategan, 1993). Particular studies have been conducted on the associations between sex-role orientations and social problem-solving, and the associations between sex-role orientations and response styles. Studies on the relationships between sex role orientations and problem-solving have found that only masculinity, but not femininity, is related to problem-solving. Specifically, the results show that higher masculine participants, relative to lower masculine participants, report that they engage in more problem-focused, and active and effective problem-solving (Brems & Johnson, 1989; Nezu & Nezu, 1987). Wang, Heppner and Berry (1997) summarize results from previous studies, and conclude that there is a relationship between masculinity, or instrumentality, and problem-solving.

Response style theory (Nolen-Hoeksema, 1987, 1991) proposes that sex-role orientations and identification with appropriate sex-typed behaviors may influence response styles. Nolen-Hoeksema (1987) notes that “being emotional and passive are part of the feminine stereotypes”, that “being active and ignoring one’s mood are part of the masculine stereotypes”, and that adhering to the sex-typed behaviors or sex stereotype is socially reinforced (p. 276). Based on this theoretical reasoning, studies have been conducted to consider the possibility that differences

in sex-role orientations might underlie the differential response styles. The positive association between femininity and rumination has received some support (Broderick & Korteland, 2002, 2004; Conway, Giannopoulos & Stiefenholer, 1990; Ingram, Cruet, Johnson & Wisnicki, 1988). However, the relationship between masculinity and distraction is less clear. Conway et al. (1990) found that masculinity, but not femininity, was related to distraction; and Broderick & Korteland (2004) found that both androgyny and masculinity were associated with distraction; while Broderick and Korteland (2002) reported no significant relationship between masculinity and distraction.

Research Hypotheses

The hypothesized model for the present study is presented in Figure 1. It contains two observed exogenous variables, two observed mediation variables, and one latent endogenous variable with four observed sub-scales.

Insert Figure 1 about here
---

1. The sex-role orientation literature advanced that sex-role orientations were associated with coping and problem-solving (Bem, 1975; Bem & Lenney, 1976). Specifically, studies on the relationships between sex-role orientations and problem-solving have indicated positive association between masculine orientation and effective problem-solving (e.g., Brems & Johnson, 1989; Nezu & Nezu, 1987; Wang et al., 1997), and negative association between feminine orientation and effective problem-solving (Spangenberg & Lategan, 1993). Hence, the first hypothesis predicted that sex-role orientations were associated with social problem-solving ability. To be specific, the study hypothesized a positive path from masculinity to social problem-solving ability, and a negative path from femininity to social problem-solving.

2. Nolen-Hoeksema (1987, 1991) proposed that sex-role orientations may influence response styles. There was some empirical evidence shwoing that femininity was positively associated rumination, and masculinity was positively associated with distraction (Brems & Johnson, 1989; Broderick & Korteland, 2002; Hankin & Abramson, 1999; Nezu & Nezu, 1987). Thus, the second hypothesis predicted that sex-role orientations directly related to response styles. To be specific, the study hypothesized a positive path from masculinity to distraction, and a positive path from femininity to rumination.

3. Response styles were also proposed to influence problem-solving, in that ruminative response style interfered with effective problem-solving by making negative cognitions more accessible; and distractive response style promoted effective problem-solving by engaging attention to generate possible solutions and attempting active problem-solving strategies (Nolen-Hoeksema, 1991). Empirical studies provided some support suggesting the negative relationship between rumination and problem-solving, and the positive relationship between distraction and problem-solving. Therefore, the third hypothesis predicted that sex-role orientations indirectly influenced social problem-solving, via response styles as mediators. To be specific, the study hypothesized negative path from rumination to social problem-solving, but a positive path from distraction to social problem-solving.

Method

Participants

One hundred and eighty-one college students were recruited, on a voluntary basis, from a large public university, located in the Northeast United States. Among the participants, one hundred and twenty-nine (71.3%) were female, while 52 (28.7%) were male. Participants ranged in age from 17 to 48 years (M = 21.4, SD = 3.87, median age = 21 years). The majority of the

participants (88.2%) were undergraduate students, with 110 (60.8%) identified as juniors and seniors. Of all participants, 71.8% (130 participants) majored in humanities, 13.3% (24 participants) in education, and 5.5% (10 participants) in sciences. In regard to ethnicity, 139 (76.8%) of the participants were Caucasian, 13 (7.2%) African American, 14 (7.7%) Hispanic, and 10 (5.5%) Asian American. Because of missing data, the actual sample size for statistical analyses was 177.

Measures

The Bem Sex Role Inventory. The observed exogenous variables of femininity and masculinity were measured by an adapted Bem Sex-Role Inventory (BSRI; Bem, 1981). The BSRI has been the most widely used measure of sex-role orientations. Furthermore, it has been used in a number of studies examining the relations between sex-role orientations and response styles, and the relations between sex-role orientations and social problem-solving (for example, Brems & Johnson, 1989; Broderick & Korteland, 2004; Conway et al., 1990; Ingram et al., 1988; Nezu et al., 1986; Nezu & Nezu, 1987). The masculinity items and femininity items of the short version of BSRI were used for the present study.

When taking the BSRI, participants are instructed to describe themselves with these characteristics on a 7-point scale, with 1 indicating “never or almost never true”, to 7 indicating “always or almost always true”. For the present study, the average scores of the masculinity scale and femininity scale were used to indicate sex-role orientation. Hence, each participant had two separate scores for sex-role orientation, one masculinity score and one femininity score. The BSRI has been reported to have adequate psychometric properties. The Cronbach’s alpha coefficients obtained from the current data set were .84 for the masculinity scale and .90 for the femininity scale.

The Response Styles Questionnaire. The observed mediating variables of ruminative response style and distractive response style were measured by a questionnaire adapted from the Response Style Questionnaire (RSQ; Nolen-Hoeksema, personal communication, 2005). This questionnaire has been used extensively in various correlational and experimental studies on response styles, including studies of the relationships between sex-role orientations and response styles, and the relationships between response styles and social problem-solving. The RSQ used for the present study included 10 ruminative items, and 10 distractive items.

The RSQ consists of the ruminative scale and the distractive scale. Examples of the ruminative items are “analyze recent events to try to understand why you are depressed”; and “think why I always react this way” (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). An example of the distractive item is “do something fun with a friend” (Butler & Nolen-Hoeksema, 1994).When taking the RSQ, participants are instructed to rate each item on a scale from 1 (almost never) to 4 (almost always), according to how frequently they engage in the behavior when they are confronted with external stress or negative emotionality. Each individual has a ruminative score and a distractive score. The Cronbach’s alpha coefficients obtained from the current data set were .82 for the distraction scale and .81 for the rumination scale, similar to what Butler and Nolen-Hoeksema (1994) and Treynor et al. (2003) reported.

The Rational Problem-Solving Scale of the Social Problem-Solving Inventory—Revised (SPSI-R). The endogenous latent variable of social problem-solving was measured by the scale of Rational Problem-Solving of the Social Problem-Solving Inventory—Revised (the SPSI-R, D’Zurilla, Nezu, & Maydeu-Olivares, 2002, 2004). The SPSI-R is a theoretically and empirically derived assessment, measuring five “different, albeit related”, dimensions of social problem-solving: positive problem orientation (PPO), negative problem orientation (NPO),

rational problem-solving (RPS), impulsivity/carelessness in problem-solving (ICS), and avoidance in problem-solving (AS) (D'Zurilla & Nezu, 2004, p.14). The first two dimensions of PPO and NPO are problem-orientation dimensions, and the remaining three dimensions of RPS, ICS and AS are problem-solving styles. Furthermore, the dimensions of PPO and RPS are constructive problem-solving dimensions, and the three dimensions of NPO, ICS and AS are dysfunctional dimensions. The rational problem-solving (RPS) scale measures one of these five dimensions of social problem-solving, namely, rational problem-solving, which is defined as the "rational, deliberate, and systematic application of effective problem-solving skills" (p.15).

The rational problem-solving dimension includes four sub-processes: Problem Definition and Formulation (PDF), Generation of Alternative Solutions (GAS), Decision Making (DM), and Solution Implementation and Verification (SIV) (Maydeu-Olivares & D'Zurilla, 1996).The RPS scale has 20 Likert-scale items, five items in each of the four processes of rational problem-solving. Participants are asked to report how they typically respond to problem-solving situations on a 5-point scale from 1 (not at all true of me) to 5 (extremely true of me) (D'Zurilla & Nezu, 1990; Maydeu-Olivares & D'Zurilla, 1996). For the sample of the present study, the RPS scale yielded an alpha coefficient of .92. The internal consistencies for the four subscales of rational problem-solving ranged from .73 to .80, slightly lower than those reported by Maydeu-Olivares and D'Zurilla (1996).

Procedures

Participants were tested on a single occasion in a group setting. Each participate received the same booklet containing the instructions, the instruments of the *Bem Sex Role Inventory*, the *Response Styles Questionnaire*, and *the Social Problem-Solving Inventory—Revised* as well as a demographic questionnaire. Demographic questions included information of gender, ethnicity,

age, major, and years of college schooling. Participants were instructed to complete the booklet at their own pace without time limits.

Results

Descriptive analyses. Means, standard deviations, and zero-order correlations of relevant measures are presented in Table 1. The means and standard deviations of the measured variables were comparable to those reported in manuals and previous studies (see Bem, 1981; Butler and Nolen- Hoeksema, 1994; D'Zurilla et al., 2002).

Insert Table 1 about here

Contrary to predications, the correlations between the sex-role orientations of femininity and masculinity and the response styles of rumination and distraction were low and insignificant. Only masculinity, but not femininity, was correlated with social problem-solving measured by the rational problem-solving scale. Both rumination and distraction were positively correlated with social problem-solving.

Measurement model analyses. Social problem-solving is measured by the scale of rational problem-solving, which includes the four dimensions of Problem Definition and Formulation (PDF), Generation of Alternative Solutions (GAS), Decision Making (DM), and Solution Implementation and Verification (SIV). Confirmatory factor analysis was conducted to test the measurement model of social problem-solving, with the four factors fitted to the current sample, using the sample covariance matrix as input and a maximum likelihood solution (see Figure 2).

For this measurement model, the RMSEA was .14, with 90% confidence interval of .06 to .24. The *p* value for the test of close fit was .04. The CFI was .99 and the traditional GFI was .97. The SRMR was .02. With the exception of RMSEA, all the indices pointed to good model

fit. Hu and Bentler (1998, 1999) recommended that for sample sizes smaller than 250, the criteria of CFI complemented by SRMR were more preferable. Both the CFI index and the SRMS index indicated good model fit. Inspection of the residuals revealed no theoretical meaningful and significant points of ill-fit in the model, nor were there any noteworthy modification indices.

Figure 2 presents the standardized parameter estimates for the measurement model of social problem-solving. Standardized coefficients appear on each path. As presented in Figure 2, the standardized path coefficients from social problem-solving to PDF, GAS, DM and SIV were .89, .81, .81 and .86. All of the factor loadings were statistically significant ($p < .01$). The residuals for PDF GAS, DM and SIV were, respectively, .21, .34, .34, and .26. The residuals were generally low, suggesting that the measures represented reasonable indicators of the constructs in question.

Insert Figure 2 about here

Structural model analyses. The fit of the social problem-solving model (see Figure 2) was evaluated with AMOS 5.0 using the sample covariance matrix as input and a maximum likelihood solution. The model was statistically over-identified. A variety of indices of model fit were evaluated. The RMSEA was .08, with 90% confidence intervals of .04 to .11. The *p* value for the test of close fit was .10. The CFI was .96 and the traditional GFI was .95. The SRMR was .04. The indices uniformly pointed towards good model fit. Inspection of the residuals revealed no theoretically meaningful and significant points of ill-fit in the model, nor were there any noteworthy modification indices.

Figure 2 also presents the parameter estimates for the structural coefficients. Standardized coefficients appear on each path, with unstandardized coefficients in parentheses. For purpose of presentation, the correlations between exogenous variables of femininity and masculinity were

omitted. The residuals indicate the proportion of unexplained variance in the endogenous variables (i.e., they are error variances in standardized form). The variables in the model were able to account for 23% of the variance in social problem-solving. The path coefficient from masculinity, but not femininity, to social problem-solving was statistically significant. The path coefficients from the two response styles of rumination and distraction to social problem-solving were statistically significant.

For the first hypothesis examining the path from sex-role orientations to social problem-solving, the direct path from masculinity to social problem-solving was found to be statistically significant; however the direct path from femininity to social problem-solving was not statistically significant. For the second hypothesis examining the paths from sex-role orientations to response styles, neither the path coefficients from femininity to rumination, nor the path coefficients from masculinity to distraction was statistically significant. The third hypothesis, concerning the mediation effects from sex-role orientations to social problem-solving through the paths to distraction and rumination, was not supported. The standardized indirect effects of femininity and masculinity on social problem-solving were .01 and .03, both of which were not statistically significant. However, both direct paths from rumination and distraction to social problem-solving were supported.

Discussion

The present study investigated the relationships between sex-role orientations, response styles and social problem-solving, using structural equation modeling. Specifically, this study attempted to develop an integrated model of the relationships between sex-role orientations and the two conceptually related coping behaviors of response style and social problem-solving, with femininity and masculinity as the exogenous variables, rumination and distraction as the

mediation variables, and social problem-solving as the endogenous variable. Social problem-solving is a latent variable derived from the four factors of PDF, GAS, DM and SIV. The results supported some of the hypotheses in the predicted directions, although some hypotheses were not supported due to low and statistically non-significant path coefficients.

Direct paths from sex-role orientations to social problem-solving. The first finding of the structural model indicated masculine orientation, but not feminine orientation, was statistically significantly associated with social problem-solving, as measured by the dimension of rational problem-solving. These findings added support to the existing empirical evidence (Brems & Johnson, 1989; Nezu & Nezu, 1987; Wang et al., 1997), and were consistent with the masculinity model (Whitley, 1983, 1984). The masculinity model proposed that masculinity had a "moderately strong relationship" to well-being and adjustment, such as self-esteem and general adjustment, and that femininity had small relationship to problem-solving and adjustment.

One possible explanation for the relationship between masculinity and problem-solving might lie in the association between masculinity and self-esteem (Whitley, 1983, 1984). Whitley (1983) proposed that masculinity and self-esteem were correlated, thus the relationships between sex-role orientations, particularly, masculinity, and other constructs might be confounded by the effects of self-esteem. Specifically, self-esteem could interact with masculinity to predict problem-solving, or mediate the masculinity-problem-solving relationship (Whitley & Gridley, 1993). Studies (for example, Cate & Sugawara, 1986; Lau, 1989; Whitley, 1983, Whitley & Gridley, 1993) documented the association between masculinity and self-esteem. Additional studies also found that self-esteem interacted with masculinity to relate to adjustment (for example, McCall & Struthers 1994), or mediated the association between masculinity and

adjustment (Payne & Futterman, 1983). Hence, the relationship between masculinity and problem-solving might be accounted for by the correlation between masculinity and self-esteem.

Another possible explanation for the association between masculinity and problem-solving is that masculine orientation might have an intrinsic association with social problem-solving measured by the rational problem-solving scale. Social problem-solving may result from an assertive and instrumental orientation that reflects one's self-efficacy about confronting and handling daily problems (Taylor & Hall, 1982; Whitley, 1984). An instrumental orientation and an agentic belief are identified with the masculine traits, and measured by the masculine scale. Bem (1974a) defined masculinity as associated with instrumentality, and femininity as associated with expressiveness; thus, masculine traits are more behaviorally referenced and problem-focused than feminine traits. This instrumental orientation of masculinity over the expressive orientation of femininity might explain, to some extent, why the relationship between masculinity and problem-solving was stronger, compared with that between femininity and problem-solving.

In summary, the first finding of the structural models was consistent with previous empirical evidence and the masculinity model, indicating that masculinity was related to social problem-solving. The association between femininity and social problem-solving was statistically non-significant. The findings could be explained by the correlation between masculinity and self-esteem, or by the intrinsic association of masculine traits with social problem-solving. However, it should be noted that the results were limited to only one of the five dimensions of social problem-solving, namely, rational problem-solving. The results regarding the relations with sex-role orientations could be different, for the global social problem-solving

ability (derived on all five problem-solving dimensions), or for any of the other four dimensions of social problem-solving.

Direct paths from sex-role orientations to response styles. The hypothesized model was constructed based on theoretical propositions and empirical findings. The response style theory advanced that sex-role orientations had an impact on response styles (Nolen-Hoeksema, 1987). Furthermore, past studies provided empirical evidence concerning the relationships between femininity and rumination (Broderick & Korteland, 2002, 2004; Conway, et al., 1990; Ingram, et al., 1988). There have been inconsistent findings in past research concerning the relationships between masculinity and distraction, for example, Conway, et al. (1990) found that masculinity was significantly associated with distraction, while Broderick and Korteland (2002) reported no association between distraction and masculinity. Contrary to the research hypotheses, the results did not show the paths between femininity and rumination and between masculinity and distraction to be statistically significant. The findings may add support to the claim of no robust relationship from masculinity to distractive response style.

It is worth noting that Broderick and Korteland (2002, 2004) conducted their study on early adolescence. This younger population had a higher chance of reporting stress and negative mood compared with a population from late-adolescence through late adulthood. This uniqueness of this younger population makes it an issue to generalize their findings to other age populations. The gender intensification theory (Hill and Lynch, 1983) proposed that puberty changes prompted early adolescents to attend more to gender characteristics, and led to stronger identification with gender traits compared with populations of late adolescence and young adulthood. The identification with gender attributes might influence their coping styles. Specifically, girls were more likely to display feminine traits of expressiveness, passivity, and

emotional orientation, which might result in a ruminative response style that focused attention internally on the emotional state and on oneself. In contrast, boys more tended to display masculine traits of assertiveness, instrumentality and activity-reference, which might make the externally- and behaviorally- focused response style of distraction a preferred coping style. Thus, the relationship between sex-role orientations and response styles might be aggrandized for the population of early adolescents.

Direct paths from response styles to social problem-solving. In the structural model of the current study, both rumination and distraction positively related to social problem-solving ability. The positive relationship of distraction to social problem-solving was in accordance with previous research (Lyubomsky & Nolen-Hoeksema, 1995; Watkins & Barakacia, 2002); whereas the positive relationship of rumination to social problem-solving was contrary to previous findings(Lam et al. 2003; Lyubomsky & Nolen-Hoeksema, 1993, 1995; Watkins & Barakacia, 2002).

The positive association between distraction and social problem-solving is consistent with the perspectives of the response style theory. Nolen-Hoeksema (1991) advanced that distractive response style could promote effective problem-solving. Distractive responses, such as socializing with friends or playing sports, can reduce the negative cognitions and emotions, and provide positive reinforcement that can enhance the self-concept and sense of self-control. As a consequence, individuals endorsing distractive style are effective in generating alternative solutions and attempting active problem-solving strategies. The positive association between distraction and social problem-solving could also be understood with social problem-solving conceptualizations. Social problem-solving “may be aimed at changing the problematic situation for the better, reducing the emotional stress that it produces, or both” (D’Zurilla et al., 2004).

Thus, individuals may adopt distractive styles, such as socializing with friends, or playing sports, to withdraw their attention from stressful events or negative moods to pleasant activities, and thus to reduce the emotional stress.

The present study also found that rumination had a positive relationship with social problem-solving, unlike what previous studies found (Lam et al. 2003; Lyubomsky & Nolen-Hoeksema, 1993, 1995; Watkins & Barakacia, 2002). One possible explanation to account for the different associations of rumination and problem-solving may be the use of different samples. Previous studies used dysphoric individuals to examine the effect of rumination on social problem-solving, while the current study used normal college students who could be regarded as non-depressive. It is probable that rumination might serve different functions to social problem-solving, depending on the psychological state of individuals, and thus, the results obtained from depressive individuals can not be generalized to non-depressive individuals. Specifically, rumination may lead depressive individuals to be preoccupied with their problems, and negative thoughts and emotions, which are task-irrelevant. This type of emotion-focused rumination exacerbates their negative emotionality, and leaves few mental resources to understand the problem and to brainstorm solutions. On the other hand, for non-depressive individuals, rumination may be problem-focused and task-relevant. It promotes them to ponder over and analyze their thoughts, emotions and behaviors. For these individuals, brooding on problems may help individuals to define and formulate the problem, which is important for the subsequent processes of problem-solving. Reflecting on possible causes and consequences may help generate alternative responses and improve decision-making: when thinking of possible causes and consequences, individuals can brainstorm different solutions and estimate their consequences to identify the optimal solution. In this sense, rumination is conducive to problem-

solving, in that it leads individuals to understand and solve their problems. Although certain levels of negative emotionality may be generated because of preoccupation with problems, these negative emotionality and cognitions are task-relevant, and thus, may stimulate individuals to approach and solve their problems, rather than inhibiting their problem-solving behaviors. The finding of the positive effect of rumination in this study but not some past studies suggests that rumination might arouse different reactions in different populations.

In summary, the findings indicated that distraction has a positive relationship with social problem-solving, consistent with theoretical propositions and previous empirical findings. Rumination also has a positive association with social problem-solving, because rumination promotes non-depressed individuals to focus on the problems to better understand and solve the problems. Again, it should be noted that the results were limited to only one of the five dimensions of social problem-solving ability, namely, rational problem-solving. The results regarding the relations with response styles, especially rumination, could be different, for the global social problem-solving ability, or for any of the other four dimensions of social problem-solving including the problem-orientation dimensions, and the two dysfunctional styles of negative impulsivity/careless style and avoidance style. Some previous studies found the positive association between rumination and maladaptive problem-solving, for example, the positive association of rumination with negative problem-orientation and avoidance style (Lam et al., 2003). In addition, previous studies, for example Nolen-Hoeksema and Morrow (1991) and Lyubomsky and Nolen-Hoeksema (1993), also found that individuals with ruminative responses style were less likely to engage in active, pleasant and structured problem-solving activities, suggesting the negative association between rumination and the global social problem-solving ability.

Implications

The primary purpose of the present study was to clarify the relationships between sex-role orientations, response styles and social problem-solving. The results provided support for, as well as yielded inconsistency with previous findings. These findings have implications for both theory and practice.

Implications for Theory. The lack of significant paths between sex-role orientations and response styles in the present study reveals the unstable nature of the relationships. The findings of the current study may add support to the previous findings showing no robust effect from masculinity to distraction. The lack of significant paths between sex-role orientations and response styles call for re-conceptualizing their relationships, as the response style theory advances that femininity was associated with emotional-focus and expressiveness, and masculinity was associated with problem-focus and instrumentality.

The positive effect of rumination on social problem-solving challenges the view that rumination is destructive. The response style theory proposes that rumination is a maladaptive coping style, in that it centers on negative emotionality and cognitions, and inhibits active problem-solving. The results of the study indicate that some negative thoughts and attributions do not exclude problem-solving behaviors. By contrast, brooding on problems may be constructive to problem definition and formation; and reflection upon causes and consequences may lead to generation and evaluation of alternative solutions. Some rumination items, such as “think why do I always react this way”, “write down what you are thinking and analyze it”, and “think why can’t I handle things better” are concerned with cogitating on and comprehending situations as well as responses, which can promote problem analysis and solution evaluation. The current finding of a

positive association of rumination to social problem-solving calls for future studies to reexamine whether rumination is innocuous, or even beneficial, to social problem-solving.

Implications for Practice. Results of the present study support previous findings that masculine and distractive styles have positive relationships with social problem-solving. The first practical implication is concerned with the positive path of masculinity. It is possible that the positive relationship of masculinity to social problem-solving is due to the correlation between masculinity and self-esteem, or the intrinsic association of masculinity with problem-solving. Parents, educators and practioners may acknowledge the fact, and moreover, encourage a full range of behaviors and traits in boys and especially, girls. It also suggests that practioners may consider an individual's sex-role orientations before developing interventions regarding problem-solving. Because masculinity was found to be positively associated with effective problem-solving, practioners may include in the interventions some activities to encourage clients of low masculinity to explore and attempt masculine traits and behaviors.

The second practical implication is concerned with the effect of distraction. It has been documented consistently that distraction is positive related to problem-solving processes. This finding is also consistent with theoretical perspectives of response style theory and social problem-solving theory. This finding can be applied in designing interventions for individuals with social problem-solving difficulties: interventions may be designed to promote distractive response style. For example, counselors may suggest their clients to temporarily withdraw themselves from the problems, and engage in pleasant and positive activities, such as socializing with friends, playing favorite sports, reading something for fun, listening to music or watching TV, when the clients experience social problems.

The present study also found the positive association between ruminative response style and social problem-solving. However, readers should be cautious in concluding the positive effect of the ruminative-coping based intervention, because the positive relationship of rumination with social problem-solving, found in the present study, was contrary to findings of the existing literature. Follow-up studies need to be conducted, to validate the speculation of different processes in depressed and normal populations, and to provide additional support to the positive effect of rumination on problem-social.

Limitations and Directions for Future Research

Several limitations of the study were noted. The first limitation was that the independent variables were not manipulated. The correlational nature of the design could not provide casual conclusions and interpretations. In addition, other variables, such as self-esteem, may correlate with sex-role orientation to predict problem-solving. Further studies would attempt to investigate the relations between sex-role orientations and the outcome constructs, after removing the variances due to self-esteem.

The second limitation concerned with the measures used to assess the constructs. The study mainly relied on self-report measures, which may or may not reflect the actual behaviors of participants. In addition, the results were limited to only one of the five dimensions of social problem-solving, namely, rational problem-solving. The results regarding the relations with sex-role orientations and response styles could be different, for the global social problem-solving ability, or for any of the other four dimensions of social problem-solving. Future studies could apply this model to other measures of social problem-solving, such as the performance measures of MEPS, or other dimensions of social problem-solving, to compare and contrast the results obtained from different measures and dimensions of social problem-solving.

The third limitation of the study was concerned with the sample. The sample was relatively homogeneous, and consisted of a large proportion of female participants. The lack of relationships between sex-role orientations and response styles, and the positive relationship between rumination and social problem-solving found in present study, are inconsistent with previous findings, which may be due to the different samples used. The participants in the present study were young adults whose self-concepts of masculine and feminine traits and responses to negative mood and social problems might be different compared with younger adolescents and older adults, therefore, their endorsement of sex-role orientations, coping styles and social problem-solving might not be representative of the responses and approaches demonstrated by other populations of different ages. Accordingly, the relationships found among these variables for this population might vary from those found from a different population. Furthermore, because the sample consisted of unequally group sizes of female and male participants, the larger size of the female subsample might exert more influence on the results than the smaller group. Future research with larger overall sample size and equal sample sizes across sex groups could try multiple group analysis, to test whether the identified model was consistent across sex.

References

Bem, S. L. (1974a). Gender schema theory: a cognitive account of sex typing. *Psychological Review, 88,* 354-364.

Bem, S. L. (1974b). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42,* 155-162.

Bem, S. L. (1975). Sex role adaptability: One consequence of psychological androgyny. *Journal of Personality and Social Psychology, 31,* 634-643.

Bem, S. L. (1981). *Bem Sex Role Inventory Manual.* Palo Alto: Mind Garden.

Bem, S. L., & Lenney, E. (1976). Sex typing and the avoidance and cross-sex behavior. *Journal of Personality and Social Psychology, 33,* 48-54.

Brems, C., & Johnson, M. E. (1989). Problem-solving appraisal and coping style: The influence of sex-role orientation and gender. *The Journal of Psychology, 123,* 187-194.

Broderick, P.A., & Korteland, C. (2002). Coping style and depression in early adolescence: Relationships to gender, gender role and implicit beliefs. *Sex Roles, 46,* 201-213.

Broderick, P.A., & Korteland, C. (2004). A prospective study of rumination and depression in early adolescence. *Journal of Clinical Psychology and Psychiatry, 9,* 383-394.

Butler, L. D., & Nolen-Hoeksema, S. (1994). Gender differences in response to depressed mood in a college sample. *Sex Roles, 30,* 331-347.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology, 56,* 267-283.

Cate, R., & Sugawara, A. I. (1986). Sex role orientation and dimensions of self-esteem among middle adolescents. *Sex Roles, 15,* 145-158.

Conway, M., Giannopoulos, C., & Stiefenholer, K. (1990). Response styles to sadness are related to sex and sex role orientation. *Sex Roles, 22,* 579-587.

Coyne, J. C., Metalsky, G. A., & Lavelle, T. L. (1980). Learned helplessness as experimenter-induced failure and its alleviation with attentional redeployment. *Journal of Abnormal Psychology, 89,* 350-357.

D'Zurilla, T. J., & Goldfried, M. R. (1971). Problem-solving and behavior modification. *Journal of Abnormal Psychology, 78,* 107-126.

D'Zurilla, T. J., & Nezu, A. M. (1982). Social problem solving in adults. In P.C. Kendall (Ed.), *Advances in Cognitive-Behavioral Research and Therapy*,(pp. 201-274). New York: Academic Press.

D'Zurilla, T. J., & Nezu, A. M. (1990). Development and preliminary evaluation of the Social Problem-Solving Inventory. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2,* 156-163.

D'Zurilla, T. J., & Nezu, A. M. (2007). *Problem-solving therapy: A positive approach to clinical intervention* (3rd ed.). New York: Springer.

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2002). *Social Problem-Solving Inventory-Revised : Technical manual.* NewYork: Multi-Health Systems Inc.

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2004). Social problem solving: Theory and assessment. In E. C. Chang, T .J. D'Zurilla, & L. J. Sanna (Eds.), *Social problem solving: Theory, research, and training (pp. 11-27).* Washington, D.C.: American Psychology Association.

Forkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21,* 219-239.

Gotlib, I. H., & Asarnow, R. F. (1979). Social and impersonal problem-solving skills in mildly and clinically depressed university students. *Journal of Consulting and Clinical Psychology, 47,* 86-95.

Hankin, B., & Abramson, L. Y. (1999). Development of gender differences in depression: Description and possible explanations. *Annuals of Medicine, 31,* 372-379.

Hartup, W. W. (1982). Peer relations. In C. B. Kopp & J. B. Krakow (Eds.), *The Child: Development in a social context* (pp. 514-575). Reading, MA: Addison-Wesley.

Hartup, W.W. (1983). Peer interaction and the behavioral development of the individual child. In W. Damon (Eds.), *Social and personality development: Essays on the growth of the child* (pp. 220-233). New York: Norton.

Hill, J. P., & Lynch, M. E. (1983). The intensification of gender-related role expectations during early adolescence. In J. Brooks-Gunn & A. C. Petersen (Eds.), *Girls at puberty: Biological and psychosocial perspectives* (pp.201-228). New York: Plenum.

Hu, L., & Bentler, P. M. (1998). Fit indexes in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3,* 425-453.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55.

Ingram, R.E., Cruet, D., Johnson, B. R., & Wisnicki, K. S. (1988). Self-focused attention, gender, gender role, and vulnerability to negative affect. *Journal of Personality and Social Psychology, 55,* 967-978.

Jahoda, M. (1953). The meaning of psychological health. *Social Casework, 34,* 349-354.

Just, N., & Alloy, L. B. (1997). The response styles theory of depression: Tests and extension of the theory. *Journal of Abnormal Psychology, 106,* 221-229.

Kelly, J. A. (1982). *Social skills training: A practical guide for interventions*. New York: Springer.

Lam, D, Schuck, N., Smith, N., Farmer, A., & Checkly, S. (2003). Response style, social difficulties, and social functioning in major depressive disorder. *Journal of Affective Disorders, 75*, 279-283.

Lau, S. (1989). Sex role orientation and domains of self-esteem. *Sex Roles, 21*, 415-422.

Lyubomirsky, S., & Nolen-Hoekseman, S. (1993). Self-perpetuating properties of dysphonic rumination. *Journal of Personality and Social Psychology, 65,* 339-349.

Lyubomirsky, S., & Nolen-Hoekseman, S. (1995). Effects of self-focused rumination on negative thinking and social problem solving. *Journal of Personality and Social* Psychology, 69, 415-427.

Marx, E. M., & Schultz, C. C. (1991). Social problem-solving in depressed students. *Journal of Clinical Psychology, 47*, 361-367.

Marx, E. M., Williams, J. M. G., & Claridge, G. C. (1992). Depression and social problem solving. *Journal of Abnormal Psychology, 101,* 78-86.

Maydeu-Olivares, A. & D'Zurilla, T. J. (1996). A factor-analytic study of the Social Problem-Solving Inventory: An integration of theory and data. *Cognitive Therapy and Research, 20*, 115-133.

McCall, M. E., & Struthers, N. J. (1994). Sex, sex-role orientation and self-esteem as predictors of coping style. *Journal of Social Behavior and Personality, 9,* 801-810.

Morrow, J. & Nolen-Hoeksema, S. (1990). Effects of responses to depression on the remediation of depressive affect. *Journal of Personality and Social Psychology, 58,* 519-527.

Nezu, A. M. (1985). Differences in psychological distress between effective and ineffective problem solvers. *Journal of Counseling Psychology, 32,* 135-138.

Nezu, A. M. (1986). Cognitive appraisal of problem-solving effectiveness: Relation to depression and depressive symptoms. *Journal of Clinical Psychology, 32,* 135-138.

Nezu, A. M. (1987). A problem-solving formulation of depression: A literature review and proposal of a pluralistic model. *Clinical Psychology Review, 7,* 121-144.

Nezu, A. M., & Nezu, C. M. (1987). Psychological distress, problem solving, and coping reactions: Sex role differences. *Sex Roles, 16,* 205-214.

Nezu, A. M., Nezu, C. M., & Perri, M. G. (1989). *Problem-solving therapy for depression: Therapy, research and clinical guidelines.* New York: John Wiley & Sons.

Nezu, A. M., Nezu, C. M., & Peterson, M. A. (1986). Negative life stress, social support, and depressive symptoms: Sex roles as a moderator variable. *Journal of Social Behavior and Personality, 1,* 599-609.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101,* 259-282.

Nolen-Hoeksema, S. (1990). *Sex differences in depression.* Stanford, California: Stanford University Press.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100,* 569-582.

Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109,* 504-511.

Nolen-Hoeksema, S. & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta Earthquake. *Journal of Personality and Social Psychology, 61,* 115-121.

Nolen-Hoeksema, S., Morrow, J., & Fredrickson, B. L. (1993). Response styles and duration of episodes of depressed mood. *Journal of Abnormal Psychology, 102,* 20-28.

Nolen-Hoeksema, S, Parker, L.E., & Larson, J. (1994). Ruminative coping with depressed mood following loss. *Journal of Personality and Social Psychology, 67,* 92-104.

Payne, F. D., & Futterman, J. R. (1983). "Masculinity," "femininity," and adjustment in college men. *Journal of Research in Personality, 17,* 110-124.

Platt, J. J., Scura, W. C., & Hannon, J. R. (1973). Problem-solving thinking of youthful incarcerated heroin addicts. *Journal of Community Psychology, 1,* 278-281.

Platt, J. J., & Spivack, G. (1975). *Manual for the Means-Ends Problem-Solving (MEPS): A measure of social cognitive problem-solving skills*. Philadelphia: Hahnemann Community Mental Health/ Mental Retardation Center.

Schneiders, A. A. (1960). *Personality development and adjustment in adolescence.* Milwaukee: The Bruce Publishing Company.

Spangenberg, J. J., & Lategan, T. P. (1993). Coping, androgyny, and attributional style. *South African Psychology, 23,* 195-203.

Spence, J. T., Helmreich, R. L., & Strapp, J. (1975). Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity. *Journal of Personality and Social Psychology, 32,* 29-39.

Spivack, G., Platt, J. J., & Shure, M. B. (1976). *The problem-solving approach to adjustment.* San Francisco: Jossey Bass.

Stark, L. J., Spirito, A., Williams, C. A., & Guevremont, D. (1989). Common problems and coping strategies I: Findings with normal adolescents. *Journal of Abnormal Child Psychology, 17*, 203-212.

Strack, S., Blaney, P. H., Ganellen, R. J., & Coyne, J. C. (1985). Pessimistic self-preoccupation, performance deficits and depression. *Journal of Personality and Social Psychology, 49,* 1076-1085.

Taylor, M. C., & Hall, J. A. (1982). Psychological androgyny: Theories, methods and conclusions. *Psychological Bulletin, 92,* 347-366.

Treynor, W., Gonzalez, R, & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*, 247-259.

Wang, L., Heppner, P.P., & Berry, R. B. (1997). Role of gender-related personality traits, problem-solving appraisal, and perceived social support in developing a mediational model of psychological adjustment. *Journal of Consulting Psychology, 44,* 245-255.

Watkins, E, & Baracaia, S. (2002). Rumination and social problem solving in depression. *Behavior Research and Therapy, 40,* 1179-1189.

Whitley, B. E. (1983). Sex role orientation and self-esteem: A critical meta-analytical review. *Journal of Personality and Social Psychology, 44,* 765-778.

Whitley, B. E. (1984). Sex-role orientation and psychological well-being: Two meta-analysis. *Sex Roles, 12*, 207-225.

Whitley, B. E., & Gridley, B. E. (1993). Sex role orientation, self-esteem, and depression: A latent variables analysis. *Personality and Social Psychology Bulletin, 19,* 363-369.

Table 1.

Means, Standard Deviations, and Zero-Order Correlations of Femininity, Masculinity, Ruminative Response Style, Distractive Response Style, and Social Problem-Solving (N=177).

	Femininity	Masculinity	Rumination	Distraction	Social Problem-Solving
Femininity	**0.90**				
Masculinity	0.05	**0.84**			
Rumination	0.03	-0.02	**0.81**		
Distraction	0.08	0.12	0.01	**0.82**	
Social Problem-Solving	0.13	0.17*	0.34**	0.25**	**0.92**
Mean	5.51	4.97	2.44	2.83	41.94
SD	0.87	0.82	0.61	0.52	12.81

Note: On the diagonal line are reliability coefficients. Femininity and masculinity items are on a 7-point Likert scale. Rumination and Distraction items are on a 4-point Likert scale. The scores of all the 20 items of the rational problem-solving scale (each item on a 5-point Likert-scale) were totaled to generate the score for social problem-solving.

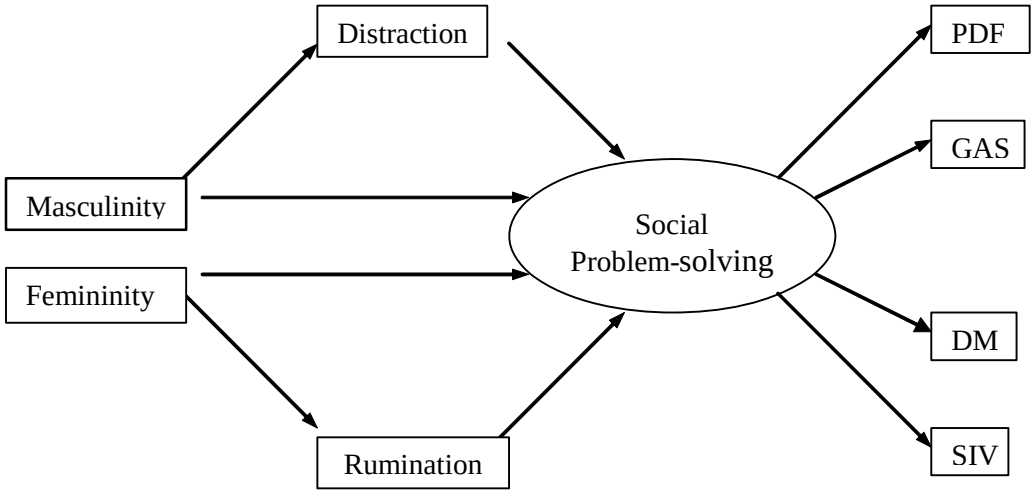

Figure 1. The hypothesized model of sex-role orientations to response styles and social problem-solving.

Note. Exogenous variables were assumed to be correlated. Latent constructs are shown as eclipses, and observed variables are shown as rectangles.

PDF = Problem Definition and Formulation; GAS = Generation of Alternative Solutions; DM = Decision Making; SIV = Solution Implementation and Verification.

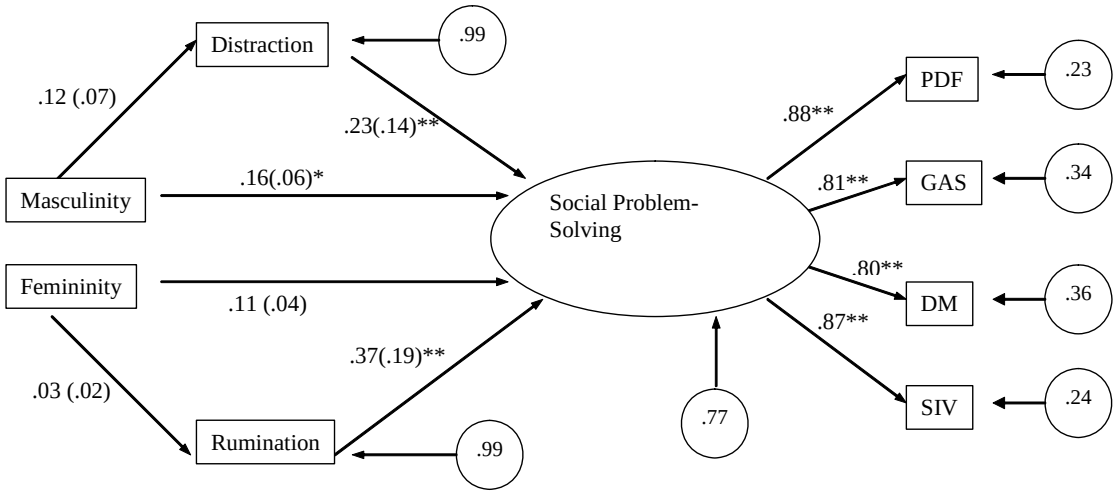

Figure 2. Structural model of sex-role orientations to response styles and social problem-solving (** p < .01, * p < .05).

Note. Exogenous variables were assumed to be correlated. Standardized coefficients appear on each path, with unstandardized coefficients in parentheses.

PDF = Problem Definition and Formulation; GAS = Generation of Alternative Solutions; DM = Decision Making; SIV = Solution Implementation and Verification.