

## Social Connectedness, Dysfunctional Interpersonal Behaviors, and Psychological Distress: Testing a Mediator Model

Richard M. Lee

University of Minnesota, Twin Cities Campus

Matthew Draper and Sujin Lee

University of Texas at Austin

The study examined the relationship among social connectedness, dysfunctional interpersonal behaviors, and psychological distress. The authors specifically hypothesized that the direct negative effect of social connectedness on psychological distress would be mediated by dysfunctional interpersonal behaviors. Prior to testing the hypothesis, the authors revised the original Social Connectedness Scale (SCS; R. M. Lee & S. B. Robbins, 1995). Studies 1 and 2 describe the revision and validation of the SCS on separate samples of college students. In Study 3, the authors surveyed 184 college students and found support for the mediation hypothesis on general psychological distress. The importance of assessing social connectedness and tailoring counseling interventions for people with low connectedness and dysfunctional interpersonal behaviors is addressed.

For most people, a lack of belongingness in life is a temporary, unpleasant experience that is overcome by reappraising relationships, mending friendships, seeking new social bonds, and participating in social activities. These people never feel fully disconnected from society as a whole and are able to make appropriate interpersonal changes in their lives to reestablish a sense of belonging. For a smaller segment of the population, a lack of belongingness is a persistent and pervasive experience that is psychologically distressing and potentially debilitating. These individuals have some friendships but nevertheless tend to feel like loners or outsiders. They have difficulty maintaining relationships, avoid social activities because of fear of rejection or exclusion, and tend to be interpersonally ill-equipped to overcome their circumstances (Rook, 1984).

Lee and Robbins (1995), drawing on psychoanalytic self-psychology theory (Kohut, 1984), have characterized this type of belongingness (or the lack thereof) as more precisely a sense of social connectedness. *Social connectedness* is considered an attribute of the self that reflects cognitions of enduring interpersonal closeness with the social world *in toto*. Lee and Robbins (1998) later characterized social connectedness as a type of relational schema or a “cognitive structure representing regularities in patterns of interpersonal relatedness” (Baldwin, 1992, p. 461). The emphasis on social connectedness is on the independent self in relation to others. Social connectedness, in this sense, is different than belongingness as defined by group membership or peer affiliation (Baumeister & Leary, 1995) and loneliness as defined by emotional feelings regarding the loss of specific relationships

(Marangoni & Ickes, 1989). The emphasis on the independent self also differs from that of other theorists (e.g., Chodorow, 1978) who define connectedness as an expression of the interdependent self in which the self and other are interconnected and mutually dependent on each other.

According to self-psychology theory (Baker & Baker, 1987; Detrick, 1985; Kohut, 1984; Lee & Robbins, 1995), a sense of social connectedness develops early in life and extends throughout the life span. In childhood, for example, parent–child attachments provide an initial sense of security and likeness with others. In adolescence, peer affiliations and group memberships allow individuals to identify with others who share similarities in appearance, interests, and talents. By adulthood, the aggregate of these past and present relationship experiences are gradually incorporated into one’s overall sense of self, providing a relatively stable psychological sense of connectedness that is not susceptible to vacillations in relationships, such as the loss of a friend or social exclusion from a group (Lee & Robbins, 1998). People with high connectedness tend to feel very close with other people, easily identify with others, perceive others as friendly and approachable, and participate in social groups and activities. As Baker and Baker (1987) noted, these adults have a greater tolerance and respect for interpersonal differences and temporary lapses in belonging because an underlying sense of connectedness girds people together.

People who experience acute or repeated interpersonal failures in life (e.g., abandonment, peer rejection, isolation, criticism) experience narcissistic wounds to the self and are more likely to manifest low connectedness in adulthood (Lee & Robbins, 1995). That is, they have incorporated more negative relationship experiences into their sense of self. People with low connectedness tend to feel interpersonally distant from other people and from the world at large. They often see themselves as outsiders, feel misunderstood by others, have difficulty relating with the social world, and are uncomfortable in social situations. They are able to develop some relationships with people and groups, but they nevertheless feel a lack of connectedness deep within themselves

---

Richard M. Lee, Department of Psychology, University of Minnesota, Twin Cities Campus; Matthew Draper and Sujin Lee, Department of Educational Psychology, University of Texas at Austin.

Correspondence concerning this article should be addressed to Richard M. Lee, Department of Psychology, Elliott Hall N218, 75 East River Road, University of Minnesota, Minneapolis, Minnesota 55455. Electronic mail may be sent to richlee@umn.edu.

that subsequently affects their ability to interact with the larger social world.

Kohut (1984) speculated that people with low connectedness fail to develop appropriate interpersonal behaviors necessary to maintain relationships later in life or conversely they develop dysfunctional interpersonal behaviors. For example, children often imitate the behavior of their parents and siblings to feel close to them. Adolescents and adults in the same way identify shared interests and talents (e.g., reading, sports) as well as develop appropriate interpersonal skills (e.g., sociability, intimacy, assertiveness) to attract and maintain relationships. These various interpersonal behaviors draw people closer together and subsequently validate a sense of connectedness. However, people with low connectedness do not possess or exhibit these appropriate interpersonal behaviors; they instead rely on more dysfunctional interpersonal behaviors characteristic of people with insecure attachment styles (e.g., avoidant and hard to be sociable, intimate, assertive; Hazen & Shaver, 1987; Rook, 1984). These dysfunctional interpersonal behaviors are adopted in an effort to avoid further criticism or rejection but ultimately lead to greater psychological distress (Lee & Robbins, 1995).

Empirical support for the relationship between social connectedness and psychological adjustment is relatively well-documented across subdisciplines of psychology (McWhirter, 1990; Rook, 1984). People with low connectedness often experience loneliness, anxiety, jealousy, anger, depression, low self-esteem, and a host of other negative emotions (Baumeister & Leary, 1995). It should be noted, however, that the majority of this research has been conducted on other psychological constructs, such as attachment styles, loneliness, perceived social support, and collective self-esteem, which only tap into aspects of connectedness (or the lack thereof) but not the full construct. To address this measurement gap in psychological research, Lee and Robbins (1995) developed the Social Connectedness Scale (SCS) to measure social connectedness as described by Kohut (1984). In a series of studies, they validated the SCS as relatively distinct from proxy measures of connectedness such as social reassurance, social identity, loneliness, social support size, group membership, and social provisions (Lee & Robbins, 1995, 1998, 2000). In addition, social connectedness was significantly related to anxiety and self-esteem—two broad measures of psychological adjustment (Lee & Robbins, 1998).

No empirical research to our knowledge, however, has examined the role of interpersonal behaviors in the relationship between social connectedness and psychological adjustment. Drawing on self-psychology theory, we suggest that the relationship between social connectedness and psychological adjustment is mediated by an individual's interpersonal behaviors. More specifically, individuals with high connectedness have more appropriate interpersonal behaviors and these appropriate behaviors in turn contribute to less psychological distress. Conversely, individuals with low connectedness have more dysfunctional interpersonal behaviors and these dysfunctional behaviors in turn contribute to more psychological distress.

The present study therefore sought to extend the literature on social connectedness by hypothesizing that the negative direct effect of social connectedness on psychological distress would be mediated by dysfunctional interpersonal behaviors. Prior to testing this hypothesis, however, it was necessary to examine the psycho-

metric limitations found in the current measure of social connectedness, the SCS. The SCS is the only self-report scale available that measures social connectedness as defined above. Despite its high internal item consistency and construct validity, the scale has psychometric limitations, including all negatively worded items and a negative skewness in the response distribution. Studies 1 and 2 describe the revision and validation of the scale. Once adequate construct validity was established, we proceeded to test the main hypothesis in Study 3.

### Study 1: Revising the SCS

The objective of this first study was to revise the original SCS, which has certain psychometric limitations. The original eight SCS items are written in a negative direction (e.g., "I feel disconnected from the world around me") that may elicit a response bias from respondents. The possibility of a response bias is evidenced by a consistent extreme negative skewness in the response distributions (mean item score of 4.86 with a range of 1 to 6 and mean item skewness of 1.01; Lee & Robbins, 1995). In addition, it can be argued that the scale fails to capture the full experience of connectedness because of the absence of positively worded items. To address these measurement concerns, we generated 10 positively worded items and 2 negatively worded items to complement the original 8 items. We also modified some of the original scale items to more accurately reflect mild deficiencies in the need for belonging. Once these items were reviewed and refined for grammar and ease of reading, we performed a maximum likelihood, exploratory factor analysis with unrotated factors to estimate factor loadings for the sample population.

### Method

#### Participants and Procedures

Two hundred eighteen undergraduate students (112 men, 105 women, and 1 unidentified) from a large, public, southwestern university participated in the study. They had a mean age of 19.55 years ( $SD = 3.32$ ) and ranged from 17 to 50 years old. The ethnic breakdown was as follows: 9 African Americans, 29 Asian Americans, 136 European Americans, 32 Hispanics, and 12 unidentified. There were 148 freshmen, 40 sophomores, 15 juniors, and 15 seniors. The majority of students (80%) lived away from their parents in campus dormitories or in nearby apartments. All participants were recruited from an introductory undergraduate course and were provided with course credit for completion of the questionnaire. The questionnaire packet contained demographic information (i.e., gender, age, ethnicity, class standing, and where they live) and the revised Social Connectedness Scale (SCS-R).

#### Item Development

Using the same operational definition for social connectedness previously established by Lee and Robbins (1995), we generated a total of 44 items that reflected the positive and negative aspects of connectedness. We reviewed these 44 items, along with the original 8 negatively worded items, and narrowed the list down to 10 positively worded and 10 negatively worded items. We elected to retain the original 8 negatively worded items and eliminated items that were redundant or did not directly relate to the operational definition of social connectedness.

The 10 new positively worded items capture experiencing a sense of closeness with others and maintaining and seeking connections. Sample items include "I am able to connect with other people," "I am able to relate

to my peers," "I see people as friendly and approachable," and "I feel comfortable in the presence of strangers." The two additional negatively worded items capture one's experience of distance and isolation from others, for example, "I see myself as a loner" and "I feel like an outsider." We also modified three of the original items that were written using absolute or extreme language. For example, the item "I don't feel related to anyone" was rewritten as "I don't feel related to most people." This decision to modify the original items was made as another means to decrease the negatively skewed response distribution.

We, along with an undergraduate research assistant unfamiliar with self-psychology theory and the original SCS, then evaluated the items for content validity. Each item was compared with the original operational definition for social connectedness. Minor revisions for clarity and grammar were made on the items until we reached consensus. The final list of 20 items was placed on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

### Results

A maximum likelihood, exploratory factor analysis with unrotated factors was performed to estimate factor loadings of the SCS items for the sample population (Tinsley & Tinsley, 1987). A three-factor solution was extracted and converged after six iterations,  $\chi^2(df = 133) = 243.05, p < .0001$  (see Table 1). The first factor accounted for the largest percentage of total variance (46%) with the second and third factors accounting for only 8% and 6%, respectively. A scree test confirmed the selection of only the first factor for scale development. Items from the first factor were retained if the factor loading was equal to or greater than  $|\cdot50|$  on the first factor, did not load equally on another factor, and was

conceptually consistent with the other items. Only one item ("I feel comfortable in the presence of strangers") did not load above  $\cdot50$  on the first factor, but its factor loading ( $r = -\cdot49$ ) was determined to be acceptable for inclusion in the final set of scale items.

On the basis of the factor analysis, the SCS-R consists of all 20 original items (10 positive and 10 negative). The negatively worded items are reverse scored and summed together with the positively worded items to create a scale score with a possible range from 20 to 120. An item mean score with a possible range from 1 to 6 can also be calculated by dividing the total scale score by 20 (or the number of scale items). Higher scores on the SCS-R reflect a stronger sense of social connectedness. For this sample, the mean scale score was 88.02 ( $SD = 16.82$ ) and the mean item score was 4.40 ( $SD = 0.84$ ) with an alpha coefficient of  $\cdot94$ . We examined the possibility of group differences on the SCS-R by gender and race but found no significant differences.

We compared the mean item score, skewness, and kurtosis of the SCS-R with that of the SCS to address the possibility of a response bias elicited by the use of only negatively worded items in the original SCS. The SCS-R mean item score (4.40), skewness ( $-0.50$ ), and kurtosis ( $-.39$ ) were lower than the original SCS mean item score (4.86), skewness ( $-1.01$ ), and kurtosis ( $\cdot52$ ), suggesting that the modification of negatively worded items and the inclusion of positively worded items adequately address the measurement concerns. We also visually examined the mean item distribution of the SCS-R (see Figure 1). No participants rated all 20 items as either 1 (*strongly disagree*) or 6 (*strongly agree*). In addition, 85% of the sample reported a greater tendency to feel

Table 1

Study 1: Factor Loadings, Item Means, and Standard Deviations for Three-Factor Solution for the Social Connectedness Scale—Revised

Item	Factor			M	SD
	1	2	3		
1. I feel distant from people.	.83	.32	-.01	2.68	1.35
2. I don't feel related to most people.	.79	.20	-.07	2.61	1.29
3. I feel like an outsider.	.78	.23	-.01	2.58	1.32
4. I see myself as a loner.	.75	.22	.05	2.66	1.52
5. I feel disconnected from the world around me.	.73	.14	-.19	2.45	1.29
6. I don't feel I participate with anyone or any group.	.71	.11	.07	2.28	1.34
7. I feel close to people.	-.69	.22	-.14	4.41	1.25
8. Even around people I know, I don't feel that I really belong.	.67	.12	.18	2.41	1.35
9. I am able to relate to my peers.	-.67	.16	.06	4.59	1.01
10. I catch myself losing a sense of connectedness with society.	.67	.21	-.15	2.72	1.31
11. I am able to connect with other people.	-.65	.37	.08	4.60	1.08
12. I feel understood by the people I know.	-.61	.24	-.11	4.23	1.22
13. I see people as friendly and approachable.	-.61	.31	.21	4.15	1.09
14. I fit in well in new situations.	-.60	.39	.37	4.06	1.78
15. I have little sense of togetherness with my peers.	.59	-.10	.16	2.64	1.33
16. My friends feel like family.	-.59	.35	-.45	4.43	1.30
17. I find myself actively involved in people's lives.	-.57	.23	-.07	4.15	1.23
18. Even among my friends, there is no sense of brother/sisterhood.	.55	-.03	.40	1.99	1.21
19. I am in tune with the world.	-.51	.09	.15	4.41	0.97
20. I feel comfortable in the presence of strangers.	-.49	.25	.32	4.01	1.21

Note. Permission to use the Social Connectedness Scale—Revised must be obtained from Richard M. Lee. Scale items are copyrighted (2000) by Richard M. Lee.

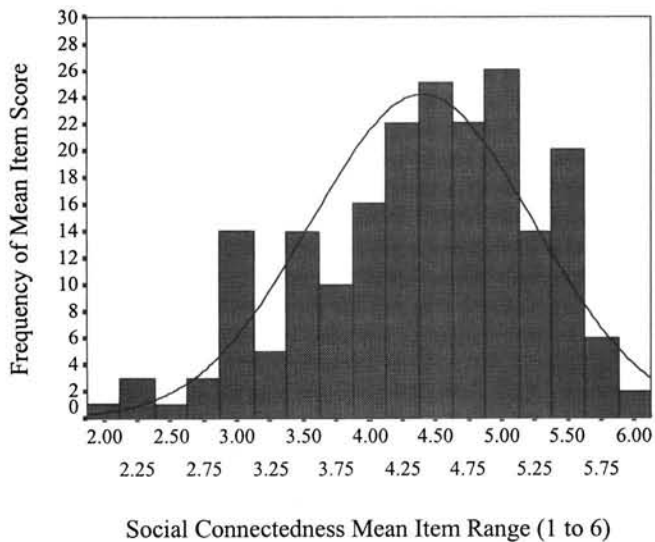


Figure 1. Study 1: Social Connectedness Scale—Revised item distribution.

socially connected, as evidenced by a mean item score equal to or greater than 3.5 (or *slightly agree to strongly agree*). The remaining 15% of the sample reported a greater tendency to feel socially disconnected, as evidenced by a mean item score below 3.5 (or *slightly disagree to strongly disagree*).

### Study 2: Validating the SCS-R

We revisited the theoretical framework of social connectedness to identify related constructs necessary to demonstrate the concurrent validity of the SCS-R. Social connectedness, as defined by self-psychology theory (Kohut, 1984), reflects an independent sense of self. That is, one's subjective awareness of others and the degree of interpersonal closeness that is experienced is more salient to the self than the actual presence of other people. This view of social connectedness is distinct from other definitions of social connectedness that reflect a more interdependent or collectivistic sense of self (Chodorow, 1978). Social connectedness is also believed to develop from past and present social experiences and contributes to overall self-esteem, particularly relationship-based self-esteem (or collective self-esteem). A lack of social connectedness, on the other hand, contributes to feelings of loneliness and social distress. On the basis of these self-psychology postulates, we hypothesized that the SCS-R would be significantly correlated with measures of independent self-construal, collective self-esteem, loneliness, and social avoidance and distress. We also hypothesized that the SCS-R would not be significantly correlated with measures of interdependent self-construal and collective identity.

### Method

#### Participants and Procedures

The sample consisted of 100 college students (49 men, 48 women, and 3 unidentified) from a large, public, southwestern university. They had a mean age of 18.89 years ( $SD = 1.15$ ) and ranged from 18 to 24 years old. The ethnic breakdown was as follows: 2 African Americans, 22 Asian

Americans, 61 European Americans, 10 Hispanics, and 5 unidentified. There were 58 freshmen, 24 sophomores, 13 juniors, and 5 seniors. The majority of students (76%) lived away from their parents in campus dormitories or in nearby apartments.

Participants were recruited from an introductory undergraduate course and were provided with course credit for completion of the questionnaire. The questionnaire packet contained demographic information, the SCS-R, the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), the Self-Concept Scale (Singelis, 1994), the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), and the Social Avoidance and Distress Scale (SADS; Watson & Friend, 1969).

#### Instruments

**Collective Self-Esteem Scale.** The Collective Self-Esteem Scale was developed to measure the self-esteem that arises from knowledge of membership in one's social groups combined with the emotional importance one attaches to being a member of that group (Luhtanen & Crocker, 1992). The scale consists of 16 items evenly divided into four subscales. Those subscales are Membership, Private, Public, and Identity. The Membership subscale measures the most individualistic of the four types of collective self-esteem, that is, how worthy one feels to belong to social groups. The Private subscale measures one's personal judgments about how good social groups are. The Public subscale measures one's judgments about how others evaluate the groups to which he or she belongs. The Identity subscale measures the most collectivistic of the four types of self-esteem, that is, one's determination of how membership in various groups contributes to identity. This Identity subscale was not expected to correlate with SCS-R. Respondents rate items using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The higher scores on a given subscale indicate a greater level of self-esteem in each area. The internal reliabilities have been found to be good ( $\alpha = .76-.86$  for the subscales,  $\alpha = .86-.89$  for the total scale; Luhtanen & Crocker, 1992).

**Self-Concept Scale.** This scale was developed to measure the strength of an individual's independent and interdependent self-construals (Singelis, 1994). The 24-item scale consists of two subscales that distinguish between the individualistic self more common in Western cultures and the more collectivistic self more common in non-Western cultures. Even though studies on this scale indicate that each dimension of the scale is distinct, researchers have also demonstrated that the two types of self-construal can exist simultaneously. The scale also demonstrates satisfactory reliability and validity (Singelis, 1994). Each subscale consists of 12 items, each scored along a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). On each subscale, a higher score represents a higher degree of either independent or interdependent self-construal.

**SADS.** The SADS, developed by Watson and Friend (1969), is a 28-item measure of anxiety in social situations. Items reflect one of two aspects of anxiety, one's experience of distress (e.g., discomfort and fear) and the deliberate avoidance of social situations. Each item is answered either "true" or "false." Total scale scores range from 0 to 28 with higher scores indicating more anxiety; subscale scores range from 0 to 14. Watson and Friend reported the internal consistency based on item-to-total score correlation as .77. Reliability was also determined using Kuder-Richardson Formula 20 (i.e.,  $r = .94$ ). Test-retest reliability for a 1-month period was .68 with college students. Watson and Friend established the validity of SADS by testing to see if participants with high scores demonstrated more discomfort in a social situation than did participants with lower scores. Also, they made comparisons to determine if participants with high scores demonstrated a greater preference for being alone than did participants with lower scores.

**UCLA Loneliness Scale.** The UCLA Loneliness Scale, developed by Russell et al. (1980), consists of 20 items, half reflecting emotional satisfaction with social relationships and half reflecting emotional dissatisfaction. Each item is anchored from 1 (*never*) to 4 (*often*), and the total

scores range from 20 to 80. The high scores imply more felt loneliness. The internal consistency by coefficient alpha is reported as .96 (Russell et al., 1980). The test-retest reliability over a 2-month period was approximately .75. The validity of the UCLA has been established in a variety of ways. First, UCLA scale scores have been found to predict self-selection into a loneliness clinic, number of close friends, social support, and amount and frequency of social contact. Second, UCLA scale scores are positively correlated with a variety of moods and personality variables (e.g., shyness, depression, anxiety, risk taking). Third, UCLA scale scores are more strongly related to a self-labeling measure of loneliness than to measures of related constructs such as extroversion, social risk taking, and affective tendency.

### Results

The SCS-R mean score, skewness, internal reliability, and possible gender and race differences were calculated and compared with Study 1 results. The SCS-R mean scale score of 89.84 ( $SD = 15.44$ ) and mean item score of 4.49 ( $SD = 0.77$ ) are comparable with the results from Study 1. The mean item skewness of  $-.34$  and kurtosis of  $-.17$  were lower than mean item skewness and kurtosis from Study 1. Slightly more students (91%) were classified as having a greater tendency to feel socially connected (SCS-R mean item  $\geq 3.5$ ) than disconnected (9%) in this sample compared with Study 1. The internal item reliability with an alpha coefficient of .92 also is comparable across studies. No significant differences on the SCS-R by gender and race were found.

We examined the correlations between the SCS-R and measures of loneliness, collective self-esteem, independent and interdependent self-construal, and social avoidance and distress to provide concurrent validity for the SCS-R. For these correlations, we used a .006 alpha level to adjust for Type I error ( $.05 \div 8$  correlations; see Table 2). As hypothesized, social connectedness was significantly correlated with loneliness ( $r = -.80$ ), three of the four types of collective self-esteem (membership  $r = .49$ , private  $r = .42$ , public  $r = .39$ ), independent self-construal ( $r = .37$ ), and social avoidance ( $r = -.57$ ) and distress ( $r = -.55$ ). Social connectedness also was not significantly correlated with interdependent self-construal ( $r = .15$ ) and the identity-based collective self-esteem ( $r = .07$ ).

The high correlation between social connectedness and loneliness was not surprising because loneliness is considered a strong

affective consequence of a lack of connectedness (Lee & Robbins, 2000; Marangoni & Ickes, 1989). To see if social connectedness, as measured, is a unique psychological phenomenon, distinct from loneliness, we performed a partial correlation analysis controlling for loneliness (see Table 2). After removing shared variance with loneliness, social connectedness was still significantly correlated with public-based collective self-esteem ( $r = .32$ ) and social avoidance ( $r = -.32$ ). These findings provide preliminary evidence that social connectedness is relatively distinct from loneliness in certain psychological functions. In particular, social connectedness remains significantly related to the ways in which we appraise the value of our social groups and behave in social situations.

Contrary to hypothesis, the correlation between social connectedness and interdependent self-construal, after controlling for loneliness, was near statistical significance with a modest effect size of .27. This unexpected finding suggests that loneliness operates as a suppressor variable (Cohen & Cohen, 1983). That is, the inclusion of loneliness in the partial correlation enhances the relationship between social connectedness and interdependent self-construal by removing shared variance between loneliness and social connectedness. The removal of loneliness from the shared variance unexpectedly results in the SCS-R also relating to the interdependent self.

### Study 3: Testing a Mediator Model

Having revised and validated the SCS, we proceeded to examine the relationship between social connectedness, dysfunctional interpersonal behaviors, and psychological distress. We specifically hypothesized that the negative direct effect of social connectedness on psychological distress would be mediated by dysfunctional interpersonal behaviors, as measured by the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Urefio, & Villaseñor, 1988). We used Baron and Kenny's (1986) multiple regression approach to test for mediation effects for this study with social connectedness as the predictor or independent variable, dysfunctional interpersonal behaviors as the mediator, and psychological distress as the criterion or dependent variable. If social connectedness has no effect on psychological distress when interpersonal behaviors is controlled, then the mediation model is supported by the present data.

Table 2  
Study 2: Means, Standard Deviations, Alpha Coefficients, Correlations with the Social Connectedness Scale—Revised, and Partial Correlations

Variable	<i>M</i>	<i>SD</i>	$\alpha$	Pearson <i>r</i>	Part <i>r</i>
Social connectedness	89.84	15.44	.92		
Loneliness	37.53	11.09	.93	-.80**	
Membership self-esteem	21.39	4.73	.85	.49**	.15
Private self-esteem	22.84	4.26	.83	.42**	.21
Public self-esteem	21.21	4.53	.86	.39**	.32**
Identity self-esteem	16.99	4.76	.68	.07	.14
Interdependent self	55.61	8.24	.70	.15	.27
Independent self	58.68	9.20	.68	.37**	.09
Social avoidance	17.87	2.96	.84	-.57**	-.32**
Social distress	18.84	2.86	.75	-.55**	-.22

\*\*  $p < .006$ .

## Method

### Participants and Procedures

The sample consisted of 184 college students (95 men, 89 women) from a large, public, southwestern university. The mean age of participants was 18.98 years ( $SD = 1.20$ ) and ranged from 17 to 23 years old. The ethnic breakdown was as follows: 17 African Americans, 18 Asian Americans, 127 European Americans, 21 Hispanics, and 1 unidentified. There were 105 freshmen, 44 sophomores, 18 juniors, 11 seniors, and 6 other.

The participants were recruited from an introductory undergraduate course and were provided with course credit for completion of the questionnaire. The questionnaire packet contained demographic information, the SCS-R, the Brief Symptom Inventory (BSI; Derogatis, 1993; Derogatis & Spencer, 1982), and the IIP.

### Instruments

**BSI.** The BSI was developed by Derogatis (1993) and colleagues (Derogatis & Spencer, 1982) and consists of 53 items reflecting distress during the previous week. Each item is rated on 5-point scales ranging from 0 (*not at all*) to 4 (*extremely*). Forty-nine of the items with adult norm groups measure nine specific types of problems: somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The remaining four items contribute to a global index of distress. Hayes (1997) identified a six-factor model of the BSI for college students. These factors include depression, somatization, hostility, social discomfort, obsessive-compulsiveness, and phobic anxiety. The internal consistency of the six-factor BSI ranged from .64 to .87. Convergent validity of the six-factor BSI with a problem checklist ranged between .40 and .69. For this study, we used Hayes's six-factor version of the BSI along with the total scale score as a measure of general or overall psychological distress.

**IIP.** The IIP was developed by Horowitz et al. (1988) to identify dysfunctional interpersonal behaviors. This inventory consists of 127 items rated on a 4-point scale ranging from 0 (*not at all*) to 4 (*extremely*). The total items are divided into six subscales. Items from four of the subscales begin with the heading "It is hard for me to be \_\_\_\_." Items from the other two subscales begin with the heading "I am too \_\_\_\_." The first four subscales are labeled "It is hard for me to be . . . Assertive, Social, Intimate, and Submissive." The two final subscales are both labeled "I am too . . . Responsible and Controlling." Horowitz et al. reported internal consistencies ranging from .82 to .94, and the test-retest reliability across a 10-week period ranged from .80 to .90. Concurrent validity with the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, Rickels, & Rock, 1976) was  $r = .64$  at Time 1 and  $r = .57$  at Time 2. The correlations between the subscales and other inventories also demonstrated appropriate convergent and discriminant validity. Convergent and discriminant validity also was demonstrated with measures of loneliness, assertiveness, and interpersonal dependency.

## Results

### Preliminary Analyses

The means, standard deviations, and intercorrelations for the SCS-R, the IIP, and the BSI are presented in Table 3. The mean item skewness and kurtosis for the SCS-R in this sample were  $-.31$  and  $-.44$ . Compared with the previous two studies, slightly more students (94%) were classified as having a greater tendency to feel socially connected (SCS-R mean item  $\geq 3.5$ ) rather than disconnected (6%). Women ( $M = 95.63$ ,  $SD = 15.33$ ) also reported slightly higher levels of social connectedness than did men,  $M = 89.99$ ,  $SD = 13.65$ ,  $F(1, 177) = 6.77$ ,  $p < .01$ . There were

Table 3  
Study 3: Means, Standard Deviations, Alpha Coefficients, and Correlations with the Social Connectedness Scale—Revised

Variable	<i>M</i>	<i>SD</i>	$\alpha$	Pearson <i>r</i>
Social connectedness	91.90	14.83	.92	
BSI-total scale	92.47	26.34	.92	-.32*
BSI-depression	14.35	5.14	.84	-.45*
BSI-somatization	10.56	3.96	.77	-.09
BSI-hostility	8.87	3.29	.74	-.24*
BSI-social discomfort	15.39	6.06	.85	-.28*
BSI-obsessive-compulsiveness	13.26	4.38	.78	-.19
BSI-phobic anxiety	6.31	2.10	.63	-.13
IIP-total scale	374.63	58.95	.88	-.47*
IIP-Assertive	64.62	14.37	.94	-.34*
IIP-Social	54.76	11.47	.91	-.64*
IIP-Submissive	29.19	5.63	.80	-.40*
IIP-Intimate	32.47	5.79	.79	-.46*
IIP-Responsible	38.09	7.60	.85	-.17
IIP-Controlling	28.35	5.32	.77	-.19

Note. BSI = Brief Symptom Inventory; IIP = Inventory of Interpersonal Problems.

\*  $p < .004$ .

no differences on the SCS-R by race. In addition, students reported experiencing psychological distress between *not at all* and *a little bit* and difficulties with interpersonal behaviors between *a little bit* and *sometimes*.

We performed a confirmatory factor analysis using maximum likelihood on a covariance matrix to cross-validate the factor structure of the SCS-R. A summary of the results suggests a moderate fit between the measurement model and the data. The  $\chi^2(df = 170) = 438.43$ ,  $p < .0001$  was relatively high although the  $\chi^2/df$  estimate was below 3.0 (Fassinger, 1987). The root-mean-square error of approximation (RMSEA) score of .09 also suggests a mediocre fit (Browne & Cudeck, 1993, as cited in Quintana & Maxwell, 1999). Additional descriptive fit indices, such as the comparative fit index (CFI) and the root-mean-square residual (RMSR), were .82 and .09, respectively. To increase the overall fit, we correlated 10 error terms with a modification index of greater than 10 and performed a second confirmatory factor analysis. The goodness-of-fit indices for this modified measurement model show an improved overall fit,  $\chi^2(df = 160) = 299.54$ ,  $p < .0001$ ; RMSEA = .07; CFI = .91; RMSR = .08.

We also examined the correlations between the SCS-R, the IIP subscales, and the BSI subscales to provide additional concurrent validity for the SCS-R. For these correlations, we used a .004 alpha level to adjust for Type I error ( $.05 \div 12$  correlations). Social connectedness was significantly correlated with hard to be sociable ( $r = -.64$ ), intimate ( $r = -.46$ ), submissive ( $r = -.40$ ), and assertive ( $r = -.34$ ) as well as with depression ( $r = -.45$ ), social discomfort ( $r = -.28$ ), and hostility ( $r = -.24$ ). Social connectedness was not significantly correlated with too much interpersonal responsibility, too controlling, somatization, obsessive-compulsiveness, and phobic anxiety.

### Testing the Mediator Model

We examined the correlation between the SCS-R and IIP total scale to confirm that the independent variable was related to the

mediator variable and we examined the correlation between the SCS-R and the BSI total scale to confirm that the independent variable was related to the dependent variables. Social connectedness was significantly correlated with dysfunctional interpersonal behaviors (IIP total scale,  $r = -.47$ ) and general psychological distress (BSI total scale,  $r = -.32$ ). We next performed a simultaneous multiple regression analysis on the BSI total scale with the SCS-R and the IIP total scale as the independent and mediator variables, respectively;  $F(2, 139) = 57.72, p < .0001; R^2 = .45$ . The results were that the direct effect of social connectedness on general psychological distress was no longer statistically significant when dysfunctional interpersonal behaviors was entered into the regression equation ( $F = 0.50, ns, \beta = -.05$ ). Dysfunctional interpersonal behavior, however, was statistically significant ( $F = 82.76, p < .001, \beta = .65$ ), uniquely accounting for 32% ( $sr^2$ ) of the total variance in general psychological distress. This finding supports the hypothesis that dysfunctional interpersonal behaviors serve as a mediator between social connectedness and psychological distress (Baron & Kenny, 1986).

## General Discussion

### Revision of the SCS

The SCS-R, like its predecessor, measures social connectedness as a psychological sense of belonging or, more specifically, as a cognition of enduring interpersonal closeness with the social world *in toto*. The scale consists of 20 items (10 positive and 10 negative) rated on a 6-point Likert scale and demonstrates good internal reliability. Test-retest reliability was not examined in these studies. Most important, the SCS-R is more normally distributed compared with the original scale, as evidenced by a lower mean item score, skewness, and kurtosis. On the basis of these distributions, most college students also can be classified as socially connected but 6–15% of the students can be classified as more socially disconnected. These percentages are comparable with those estimates reported by Rook (1984) in her review of the loneliness literature. However, we do not recommend the use of raw percentage scores of the SCS-R for assessment purposes. More normative data on the SCS-R are necessary to develop standardized scores useful for counseling and assessment.

Results from Studies 2 and 3 provide initial evidence of convergent and discriminant validity for the SCS-R. For convergent validity, the SCS-R was positively correlated with measures of independent self-construal and collective self-esteem. The SCS-R also was negatively correlated with measures of loneliness, social distress and avoidance, depression, hostility, and social discomfort, and dysfunctional interpersonal behaviors such as hard to be sociable, intimate, assertive, and submissive. For discriminant validity, SCS-R was not significantly correlated with measures of interdependent self-construal, collective identity, somatization, obsessive-compulsiveness, phobic anxiety, and too much interpersonal responsibility and controlling behaviors.

Additional discriminant validity was demonstrated by a partial correlation analysis that controlled for loneliness. The SCS-R remained significantly correlated with measures of public-based collective self-esteem and social avoidance. These significant correlations to a certain extent distinguish social connectedness from loneliness. One unique feature of social connectedness appears to

be its effect on the ways in which we appraise the value of our social groups and behave in social situations, above and beyond loneliness or our emotional feelings regarding the loss of specific relationships. This finding is consistent with previous research by Lee and Robbins (1998, 2000) on the original SCS that found social connectedness to be related to trait anxiety and perceptions of relationships above and beyond the effects of loneliness and perceived social support.

Although we attempted to demonstrate the difference between social connectedness and loneliness, the high correlation between the SCS-R and the UCLA Loneliness Scale—Revised presents some conceptual and psychometric concerns that need to be addressed in future research. Theoretically, social connectedness represents cognitions of interpersonal closeness with the social world *in toto* (Lee & Robbins, 1995), whereas loneliness represents emotional feelings regarding the loss of specific relationships (Marangoni & Ickes, 1989). This theoretical distinction, however, may be obfuscated in the measurement of the two constructs. Scalise, Ginter, and Gerstein (1984), for example, have criticized the UCLA Loneliness Scale as an omnibus measure of social relationships that fails to address the actual structure and experience of loneliness *per se*. It is recommended that additional validation research be conducted using a more multidimensional loneliness measure such as the Loneliness Rating Scale developed by Scalise et al.

### Support for the Mediation Model

Having demonstrated initial reliability and validity for the SCS-R, we proceeded to test and find general support for the main hypothesis that the negative direct effect of social connectedness on psychological distress would be mediated by dysfunctional interpersonal behaviors. More specifically, a low sense of connectedness in itself is not psychologically distressing. It is the dysfunctional interpersonal behaviors associated with a low sense of connectedness that are related to general psychological distress.

This finding of dysfunctional interpersonal behaviors as a mediator of psychological distress is consistent with self-psychology theory (Kohut, 1984). Kohut theorized that psychologically healthy people are able to validate a sense of social connectedness and enhance self-esteem through relationships with other people. This ability to develop and maintain relationships, however, is dependent on accurate appraisal of relationships and appropriate interpersonal behaviors. As seen in Studies 2 and 3, people with low connectedness are unfortunately more likely to negatively appraise the status and value of their relationships, exhibit dysfunctional interpersonal behaviors, such as difficulty with sociability, intimacy, submissiveness, and assertiveness, and avoid social situations rather than engage in appropriate interpersonal behaviors. These individuals are therefore interpersonally ill-equipped to validate their sense of connectedness and subsequently experience greater general psychological distress.

It is likely that people with low connectedness develop dysfunctional interpersonal behaviors not to pursue a sense of connectedness or to enhance self-esteem but rather to protect them from further rejection (Lee & Robbins, 1995). Patton and Robbins (1982), in their articulation of self-psychology theory for college-aged students, described these behaviors as defensive maneuvers typical of narcissistically vulnerable people that inevitably con-

tribute to greater feelings of psychological distress. Raskin, Novacek, and Hogan (1991) similarly described these types of interpersonal behaviors as a generalized narcissistic personality style aimed at regulating self-esteem. They found such behaviors to actually be related to higher self-esteem, but they noted that narcissistic individuals also live life full of hostility, anger, and rage. People with low connectedness therefore seem to distance themselves from others to protect their fragile sense of self but at the expense of their psychological well-being.

### *Counseling Implications*

Predictably, people with low connectedness have difficulty with being appropriately assertive and sociable, but perhaps more revealing is their difficulty being intimate and submissive. This tendency to remain guarded and hesitant in allowing other people to draw near them can pose a problem for therapists working with clients. Therapists need to consider the salience of connectedness in their clients' lives and may find it difficult to establish a working relationship with such clients. They need to recognize that despite yearnings for closeness with others, these clients may be unready and ill-equipped to actually trust therapists.

In these cases, self-psychologists stress the importance of empathy, addressing the emotional and social needs of the client and not necessarily the presenting symptoms. Empathy moves beyond the client's defensive behaviors and validates his or her core sense of self, thereby providing a corrective emotional experience that differs from what is typically experienced (Baker & Baker, 1987; Miller, 1992; Wolf, 1988). Interpersonal-oriented therapists similarly emphasize the importance of complementarity in therapy, particularly during the initial stage of therapy (Tracey, 1993). People seek to self-validate their views of themselves and therefore act in ways that elicit responses from others that will validate their sense of self, even if the self-views are negative. Interpersonal therapists may need to provide both complementary and complementary behaviors to help clients develop healthier self-views and more appropriate interpersonal behaviors. It also may be useful for therapists to address directly dysfunctional interpersonal behaviors that can mediate the relationship between feeling disconnected and psychological distress. Clients may be able to learn to moderate their own feelings of disconnectedness by developing more appropriate interpersonal behaviors. Concurrently, therapists may want to use cognitive-behavioral techniques that focus on modifying dysfunctional beliefs (Beck, 1976; Rook, 1984). People with low social connectedness may operate according to pessimistic "if . . . then" interpersonal scripts (e.g., "If I introduce myself to this person, then I will be rejected"; Baldwin, 1992). These scripts can be examined and challenged in a supportive manner.

Given the interpersonal style of people with low connectedness, it seems paradoxical that many interventions and treatment programs for these people are offered in a group format (Yalom, 1995). For example, it is typical for therapists at intake to refer clients with low connectedness to group counseling, presuming that people who lack friends and report loneliness would immediately benefit from social interactions. However, as Rook (1984) noted in her research on lonely and socially isolated people, it is usually the least lonely and isolated that benefit from group programs designed for the most lonely and isolated. Clients with low connectedness may not be ideal candidates as referrals for group

counseling without adequate preparation. In Study 2, for example, social connectedness was inversely related to social avoidance and public-based collective self-esteem. These individuals are quite hesitant to enter into social situations and are concerned with how other people view them and their group memberships. Lee and Robbins (1998) in their study of women with low connectedness also found such individuals are less willing to identify with other group members even when the group condition is highly cohesive and supportive. Kivlighan and Angelone (1992) similarly found that group-therapy members who perceived themselves as too dominant or too cold (i.e., exhibiting dysfunctional interpersonal behaviors) experienced the group climate more negatively. It may be that clients with low connectedness, because of their own negative self-views, are more resistant to group cohesion—a necessary ingredient to successful group therapy (Yalom, 1995).

### *Limitations and Future Research*

The findings from this study are promising and have relevant implications for counseling and development. At the same time, a number of limitations beyond the ones already addressed need to be dealt with in future studies. The SCS-R presents improved psychometric properties, but additional construct validity is necessary given the moderate fit between the measurement model and data and the high correlation with one measure of loneliness. We also caution against any causal inferences from the mediation model tested in Study 3, as the study design was correlational and cross-sectional. Future research may want to examine competing mediation models and use structural equation modeling to examine underlying constructs (Quintana & Maxwell, 1999). We also recognize that our sample population consisted primarily of freshmen or first-year college students, which is not fully representative of the college or general adult population. We do want to point out, however, that people at this age are at a critical developmental period in which social connectedness plays an important part in this life transition away from the family and home (Kohut, 1984; Lee & Robbins, 1995). As such, the findings are relevant and provide us with a glimpse of the developmental issues that face late adolescents and young adults.

We would like to see future research on social connectedness' relationship with interpersonal behaviors, psychological well-being, and social adjustment. It would be interesting, for example, to know which types of behaviors are used in given situations by people who are seeking to validate their sense of connectedness. It may be that individuals are less assertive or intimate in certain contexts (e.g., large social situations) but not in others (e.g., intimate, one-on-one relationships). Another line of research might examine how social connectedness develops over time. For example, it is not known to what extent new social experiences are gradually incorporated into one's sense of connectedness. In terms of counseling and psychotherapy, attribute by treatment intervention research would allow us to examine the role of social connectedness in the counseling process. For example, future research might examine how social connectedness affects the interpersonal stages of therapy, including the initial, middle-conflict, and end-termination stages (Tracey, 1993). A related study might examine how well socially disconnected clients respond to group psychotherapy, in terms of participation level, group identification, and therapeutic effectiveness. Finally, future research might examine



how social connectedness may moderate one's susceptibility to feelings of depression and other risk or violent behaviors (e.g., suicide, alcohol abuse; Verlinden, Hersen, & Thomas, 2000).

### References

- Baker, H. S., & Baker, M. N. (1987). Heinz Kohut's self-psychology: An overview. *The American Journal of Psychiatry*, *144*, 1-8.
- Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*, 461-484.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human emotion. *Psychological Bulletin*, *112*, 461-484.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.
- Chodorow, N. (1978). *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Derogatis, L. R. (1993). *Brief Symptom Inventory: Administration, scoring, and procedures manual—II*. Minneapolis, MN: National Computer Systems.
- Derogatis, L. R., Rickels, K., & Rock, A. F. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *British Journal of Psychiatry*, *128*, 280-289.
- Derogatis, L. R., & Spencer, P. M. (1982). *Brief Symptom Inventory: Administration, scoring, and procedures manual—I*. Baltimore: Clinical Psychometric Research.
- Detrick, D. W. (1985). Alterego phenomena and alterego transferences. In A. Goldberg (Ed.), *Progress in self psychology* (pp. 240-256). New York: Guilford Press.
- Fassinger, R. E. (1987). Use of structural equation modeling in counseling psychology research. *Journal of Counseling Psychology*, *34*, 425-426.
- Hayes, J. A. (1997). What does the Brief Symptom Inventory measure in college and university counseling center clients? *Journal of Counseling Psychology*, *44*, 360-367.
- Hazen, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511-524.
- Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureño, G., & Villaseñor, V. S. (1988). Inventory of Interpersonal Problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology*, *56*, 885-892.
- Kivlighan, D. M., & Angelone, E. O. (1992). Interpersonal problems: Variables influencing participants' perception of group climate. *Journal of Counseling Psychology*, *39*, 468-472.
- Kohut, H. (1984). *How does analysis cure?* New York: International Universities Press.
- Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The Social Connectedness and the Social Assurance Scales. *Journal of Counseling Psychology*, *42*, 232-241.
- Lee, R. M., & Robbins, S. B. (1998). The relationship between social connectedness and anxiety, self-esteem, and social identity. *Journal of Counseling Psychology*, *45*, 338-345.
- Lee, R. M., & Robbins, S. B. (2000). Understanding social connectedness in college women and men. *Journal of Counseling and Development*, *78*, 484-491.
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, *18*, 302-318.
- Marangoni, C., & Ickes, W. (1989). Loneliness: A theoretical review with implications for measurement. *Journal of Social and Personal Relationships*, *6*, 93-128.
- McWhirter, B. T. (1990). Loneliness: A review of current literature, with implications for counseling and research. *Journal of Counseling and Development*, *68*, 417-422.
- Miller, I. J. (1992). Interpersonal vulnerability and narcissism: A conceptual continuum for understanding and treating narcissistic psychopathology. *Psychotherapy*, *29*, 216-224.
- Patton, M. J., & Robbins, S. B. (1982). Kohut's self-psychology as a model for college student counseling. *Professional Psychology*, *13*, 876-888.
- Quintana, S. M., & Maxwell, S. E. (1999). Implications of recent developments in structural equation modeling for counseling psychology. *The Counseling Psychologist*, *27*, 485-527.
- Raskin, R., Novacek, J., & Hogan, R. (1991). Narcissistic self-esteem management. *Journal of Personality and Social Psychology*, *60*, 911-918.
- Rook, K. S. (1984). Promoting social bonding: Strategies for helping the lonely and socially isolated. *American Psychologist*, *39*, 1389-1407.
- Russell, D., Peplau, L., & Cutrona, C. E. (1980). The Revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personal and Social Psychology*, *39*, 472-480.
- Scalise, J. J., Ginter, E. J., & Gerstein, L. H. (1984). A multidimensional loneliness measure: The Loneliness Rating Scale (LRS). *Journal of Personality Assessment*, *48*, 525-530.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*, 580-591.
- Tinsley, H. E., & Tinsley, D. J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology*, *34*, 414-424.
- Tracey, T. J. (1993). An interpersonal stage model of the therapeutic process. *Journal of Counseling Psychology*, *40*, 396-409.
- Verlinden, S., Hersen, M., & Thomas, J. (2000). Risk factors in school shootings. *Clinical Psychology Review*, *20*, 3-56.
- Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology*, *33*, 448-457.
- Wolf, E. (1988). *Treating the self: Elements of clinical self psychology*. New York: Guilford Press.
- Yalom, I. D. (1995). *The theory and practice of group psychotherapy* (4th ed.). New York: Basic Books.

Received April 17, 2000

Revision received December 8, 2000

Accepted December 11, 2000 ■