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P. Scott Richards

*Brigham Young University, scott\_richards@byu.edu*

Timothy B. Smith

*Brigham Young University, tbs@byu.edu*

Marion Schowalter

*University of Wurzburg, Germany*

Michael E. Berrett

Randy K. Hardman

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Development and Validation of the Spiritual Outcome Scale (SOS)

P. Scott Richards and Timothy B. Smith

Brigham Young University

Provo, Utah

Marion Schowalter and Matthias Richard

University of Wurzburg

Wurzburg, Germany

Michael E. Berrett and Randy K. Hardman

Center for Change

Orem, Utah

### Abstract

We developed the Spiritual Outcome Scale (SOS) to measure the spiritual outcomes of psychotherapy from a theistic spiritual perspective. A 17-item version of the SOS was found to have adequate reliability and validity in a sample of college students. Three factors emerged from the analyses that corresponded to subscales labeled Love of God, Love of Others, and Love of Self. Correlations with measures of psychological outcomes were statistically significant. In subsequent analyses, the SOS was administered over an 8-week period to a sample of inpatient women with eating disorders and to two samples from inpatient psychological clinics in Germany. The analyses resulting from these studies were also supportive of the reliability, validity and clinical usefulness of the scale. Overall, the findings support the use of the SOS as a spiritual outcome scale in psychotherapy research.

### Development and Validation of the Spiritual Outcome Scale (SOS)

There is growing professional recognition of the influences of religious faith and spirituality upon human health and healing (Benson, 1996; Koenig, McCullough, & Larson, 2001; Plante & Sherman, 2001). In parallel with the increased research publications on this topic, numerous spiritually-oriented psychotherapy approaches have been developed in recent years (Miller, 1999; Richards & Bergin, 1997, 2000, 2003; Shafranske, 1996; Sperry & Shafranke, in press). As part of this line of inquiry, researchers have called for specific attention to the assessment of the religious and spiritual outcomes of mental health treatment (Richards & Bergin, 1997).

There are several important reasons why researchers should assess how therapy affects clients' religiousness and spirituality. Do secular psychotherapies undermine and weaken clients' spiritual beliefs and faith as some religious people have claimed? Do spiritually-oriented psychotherapies strengthen clients' faith and spirituality as some have suggested? In light of the hesitancy of many religiously committed people to seek psychotherapy from secular therapists out of fear that it will undermine their religious faith and values (Bergin, 1991; Richards & Bergin, 2000; Worthington, 1986), it would seem important for psychotherapy researchers to address these questions. Documenting that psychotherapy does not necessarily undermine clients' faith and spirituality could increase the trust leaders and members of traditional religious communities have for mental health professionals. It could also lead to greater numbers of referrals from religious leaders and increased mental health service utilization rates from members of their congregations.

Furthermore, from an empirical perspective assessing client spiritual outcomes is in line with suggestions from leading psychotherapy researchers who have advocated a multifaceted

approach to outcome assessment (e.g., Kazdin, 1994; Lambert & Hill, 1994). With several extant multidimensional models of mental health giving notable attention to spirituality (e.g., Jung, 1933; Maslow, 1964; May, 1982; Myers, J. E., Sweeney, & Witmer, 2000; Myers, L. J., 1988), the need to assess spiritual outcomes seems clear. Nevertheless, despite the widespread use of multidimensional assessments of clients' psychological, social, and physical functioning, the religious and spiritual outcomes of psychotherapy have to date been virtually ignored (Richards & Bergin, 1997).

A related reason why it is important to assess the spiritual outcomes of mental health treatment is to determine whether improvements in spiritual well-being are associated with better treatment outcomes in other domains of clients' functioning. Some health professionals have suggested that improvements in faith and spirituality during treatment may be associated with better and more enduring emotional, social, familial, and work outcomes (Benson, 1996; Bergin, 1991; Richards & Bergin, 1997). The possibility that spiritual growth may act as a catalyst to help promote and maintain other positive changes in clients' lives is intriguing. Spiritual outcome measures are needed to investigate this possibility.

#### *The Need for Clinically Valid Spiritual Outcome Measures*

Perhaps the neglect of the spiritual dimension in psychotherapy outcome research is not surprising given the historical exclusion of religion and spirituality in the professions of psychology and psychotherapy (Bergin, 1980; Richards & Bergin, 1997). Another reason for this neglect is undoubtedly that there are few empirically proven and clinically useful religious and spiritual outcome assessment measures (Richards & Bergin, 1997). Although researchers with interests in the psychology of religion have developed numerous measures of religiousness and spirituality during the past few decades (Gorsuch, 1990; Hill & Hood, 1999), few of these have

been validated for use in clinical settings and those that have been evaluated in clinical settings have limitations.

For example, the most widely used measure of spirituality in recent years, the *Spiritual Well-Being Scale* (SWBS; Ellison, 1983; Ellison & Smith, 1991; Paloutzian & Ellison, 1979), has a problem with ceiling effects (Hall & Tinsdale, 1999), which seriously limits its usefulness in clinical settings. Religiously devout clients often score so high on the SWBS at the beginning of treatment that it is not sensitive to improvements in spiritual well-being during treatment (Richards, Hardman, & Berrett, 2003). Virtually all other existing measures of spirituality were not specifically designed as psychotherapy outcome measures (Hill & Hood, 2000), and thus appear to lack the sensitivity to change required of such measures (Lambert & Hill, 1994). Undoubtedly this will not be the case for all existing measures, but until research is done in clinical settings with them this will remain unclear. Thus, there remains a great need for the development of reliable, valid, and clinically useful spiritual outcome measures (Richards & Bergin, 1997).

#### *Development of the Spiritual Outcome Scale*

In the remainder of this article, we describe the development and validation of the English and German versions of the *Spiritual Outcome Scale* (SOS), a brief spiritual outcome questionnaire that can be administered weekly in therapy to assess clients' perceptions of their spirituality. The SOS is theoretically grounded in a theistic view of spirituality (Richards & Bergin, 1997), and is thus in general harmony with the beliefs of many devout Christians, Jews, and Muslims. Richards & Bergin (1997) defined spirituality as "attunement with God, the Spirit of Truth, of the Divine Intelligence that governs the universe" (p. 77). This theistic perspective of spirituality includes several dimensions or components: (1) faith in God's existence and loving

influence, (2) awareness of one's spiritual identity and purpose as a creation of God, (3) love for other people, including a desire to promote their welfare, and (4) feelings of moral congruence, worthiness and self-acceptance (Richards & Bergin, 1997).

The hypothesis that these dimensions represent important aspects of genuine theistic spirituality has a strong grounding in the theological and scriptural writings of the major theistic world religions (Palmer, Keller, Choi, & Toronto, 1997; Richards & Bergin, 1997, 2000; Smart, 1994). These dimensions can also be found in the writings of numerous social scientists who have written about the nature of spirituality and spiritual well-being from a theistic perspective (e.g., Burke & Miranti, 1996; Cook & Kelly, 1998; Ellison, 1983; Malony, 1985; Moberg, 1979; Paloutzian, & Ellison, 1979; Richards & Bergin, 1997; Whitmer & Sweeney, 1995).

Using this conception of spirituality as a theoretical foundation, the first author wrote approximately 50 items that reflected various indicators of theistic spirituality, including items that reflected faith, love, and reverence toward God; life purpose and meaning; love for other people; desires to serve, help and forgive others; and moral congruence, worthiness and self-acceptance. A relatively large number of items were written with the intent that several items would be dropped due to psychometric considerations, lack of clarity, or lack of ecumenical suitability. The structure and nature of the items were designed to adhere to the recognized standards of clarity and parsimony (Crocker & Algina, 1986). After writing the item pool, the first author then gave the items to an internationally renowned researcher in the area of psychotherapy outcomes and the psychology of religion, who reviewed the items and made suggestions for item pool refinement. A 34-item version was then administered to research participants. At the top of the SOS, the following instructions to respondents were provided: "Please help us understand how you have been feeling spiritually this past week, including today.

Carefully read each item below and fill in or mark the circle that best describes how you felt.”

The items were based on a five-point Likert scale, the potential responses being “almost always,” “frequently,” “sometimes,” “rarely,” and “never.”

### Study 1: Initial Scale Development

#### *Methods*

*Sample.* A total of 344 research participants were recruited from multiple classes at a mid-sized university in the north central region of the United States ( $n = 159$ ) and at a large university in the western region ( $n = 186$ ). Participants were offered either complimentary movie passes or extra credit toward their class grade as an incentive for their participation. Two hundred twenty-two of the participants were female (65%), and 120 were male (35%), with two participants not responding to this item. The mean age of the participants was 22.6 years of age, with a range from 17 to 61 years of age. Ninety-one of the participants were freshman (27%), 60 were sophomores (18%), 70 were juniors (21%), 88 were seniors (26%), and 21 were graduate students (6%), with 8 participants claiming “other” class standings (2.4%). Two hundred sixty-seven of the participants were single (79%), 49 were married (14%), one was separated and 18 were divorced (6%), with two participants claiming “other” marital status and seven participants not responding. The vast majority of participants were White ( $n = 292$ , 87%), seven were African American (2%), four were Latin American (1%), nine were Asian American (3%), 11 were Native American (2%), with 13 reporting “other” ethnicities (4%) and eight participants not responding.

Concerning religious affiliation in the overall sample, 41 of the participants were Roman Catholic (14%), 15 were Methodist (4%), 33 were Lutheran (10%), 187 were Latter-Day Saints (55%), 42 reported affiliation with other Christian denominations (14%), and 21 reported non-



Christian affiliations or no religious affiliation. Regarding perceptions of God, 304 of the participants indicated they believed in a personal God (90%), 15 stated they believed in an impersonal God (4%), 16 indicated they were agnostic (5%) and nine participants did not respond to this item.

*Measures.* In addition to the 34-item SOS, the participants completed the Outcome Questionnaire-45 (OQ-45) (Lambert et al., 1996). The instrument has 45 symptom-based items (e.g., "I feel hopeless about the future") that are rated on a five-point Likert scale (0=never, 4=almost always). Responses to these items yield a possible range of scores from 0 to 180. The OQ-45 provides a total score and three subscale scores, and it has been shown to be a reliable and valid instrument (Lambert et al. 1996). The reliability estimates for the OQ-45 total scores are .84 for a three-week test-retest and .93 for internal consistency. Concurrent validity estimates based on correlations with the SCL-90, BDI, Zung Depression Scale, Taylor Manifest Anxiety Scale, STAI, Inventory of Interpersonal Problems, and the Social Adjustment Scale were all significant at the .01 level, with correlation coefficients ranging from .50 to .85.

### *Results*

*Preliminary Analyses and Item Reduction.* To refine the item composition of the SOS, the 34 items were subjected to exploratory factor analysis. Based on recommendations provided by Gorsuch (1997), principle axis factoring was used, followed by promax rotation. Six factors had eigen values greater than one, but analysis of the scree plot suggested that a four-factor solution was optimal. Subsequently, four factors were extracted and item communalities and factor loadings were analyzed. Items that did not have factor loadings above .40 on any of the four factors were removed.

Conceptual analysis of item content was also used to reduce the number of items. For example, all negatively items were removed. Where two items shared similar content, the item that was more clearly worded was retained. In all, these conceptual and statistical analyses reduced the item pool by one-half, resulting in a 17-item version of the SOS.

*Factor Analyses.* Data from the resulting 17-item version were again subjected to factor analysis. Three factors with eigen values greater than 1.0 were extracted that accounted for 61% of the variance in the items. The first factor had an eigen value of 7.55 (accounting for 44% of the variance), the second factor had an eigen value of 1.60 (accounting for 9.4% of the variance), and the third factor had an eigen value of 1.26 (accounting for 7.4% of the variance). Item communalities, factor loadings, and rotated factor loadings are presented in Table 1. All items loaded significantly on one of the three rotated factors, with six items loading on the first factor, six items loading on the second factor, and five items loading on the third factor.

Examination of item content was then performed to identify the common meaning in the factors extracted. Items that assessed participants concerning their feelings of love and connectedness with God characterized the first factor. The only items that contained the words "God" and "spiritual" loaded onto this factor, and the highest factor loading was for item 14, "I felt God's love." The one item about prayer (communicating with God) also loaded onto this factor, as did items about having faith in and praising God. Thus, this first factor was labeled "Love of God." Reliability analyses indicated that this scale had an internal consistency (Cronbach's alpha) of .93, indicating high reliability.

Items loading on the second factor shared content pertinent to ideal humanitarianism. Every item referred to either feelings or actions toward others. The item with the highest loading (number 11) reads: "I wanted to make the world a better place," and the remaining items

emphasize issues of forgiveness, appreciation, and love toward others. Thus, this factor was labeled, "Love of Others." Reliability analyses indicated that this scale had an internal consistency (Cronbach's alpha) of .80, indicating acceptable reliability for this six-item subscale.

Items denoting self-acceptance and feelings of moral worthiness characterized the third factor. An item reflective of harmony between actions and values also loaded on this scale, and the highest loading was for item 9, "I felt worthy." The other items denoted love for self. Thus, this factor was labeled "Love of Self," with the assumption that a personal sense of worth and worthiness was also captured by this title. Reliability analyses indicated that this scale had an internal consistency (Cronbach's alpha) of .80, indicating acceptable reliability for this five-item subscale.

Because men and women have been found to differ in their spirituality orientations (Levins, Taylor, & Chatters, 1994), subsequent analyses were conducted to verify that the obtained factor structure would be replicated when data from the two genders were examined separately. The results were very consistent with the initial solution. For men, the original factor structure was replicated exactly, and all 17 items loaded significantly on the same factors they had previously. For women, the analysis yielded a fourth factor with an eigen value of exactly 1.0. Examination of the pattern matrix revealed that this fourth factor was accounted for by a single item, number 10, "My behavior was congruent with my values." Furthermore, it was noted that item 1 ("I had feelings of love toward others") did not load significantly on any of the four factors. All remaining items loaded significantly on the same factors identified in the initial analysis with the total sample. When a three factor solution was run with the data from the female subjects, item 10 loaded significantly on factor 3, as it had in the solution generated from the data from the total sample.

Because over half of the participants in this study were members of the Church of Jesus Christ of Latter-day Saints (LDS) and because past research has indicated some differences in the spiritual orientations of people affiliated with the LDS church compared to other Christian denominations (Jensen, Jensen, & Wiederhold, 1993), it was important to verify that the factor structure of the SOS did not differ between LDS and non-LDS participants. Results of an analysis conducted with data from LDS subjects were very similar to those conducted with the total sample, except that items 1 and 17 loaded on the factor labeled Love of God (the factor loadings were .37 & .35, respectively) *in addition* to loading significantly on the factors where they had loaded with the total sample (Love of Others and Love of Self, respectively). For non-LDS participants, the results also closely matched the original analysis, except that item 1 also loaded on the factor labeled Love of Self (loading = .38) in addition to loading significantly on Love of Others, as intended. Given the small magnitude of the discrepant multiple loadings and problems inherent with reducing the sample size, these results served to confirm that the overall factor structure reported previously was robust across subgroups.

*Correlational Analyses.* To assess the relationship between the three subscales identified in the analyses above, inter-scale correlations were computed. As may be seen in Table 2, the subscales consistently correlated with one another at about .59. The fact that the subscales correlated only moderately highly with one another indicates that although they clearly assess a similar core construct (spirituality), they apparently assess somewhat different aspects of that construct.

To assess the relationship between spiritual outcome and psychiatric symptoms, the SOS subscales were correlated with the total score and subscales of the OQ-45. As may be seen in Table 2, the SOS subscales were all significantly negatively correlated with the OQ-45. The

Love of Self subscale consistently correlated higher than the other two SOS subscales, reflecting a particular overlap between Love of Self and mental health, as might be expected. To assess if the items assessing feelings of moral self-acceptance and feelings of inner peace were accounting for the high relationship between the Love of Self subscale and the OQ-45, individual items from that subscale were correlated with the OQ-45. Results indicated that the magnitude of the correlation with the OQ-45 was very similar for *all* items (range = -.34 to -.40). No single item or set of items was identified as being primarily responsible for the high degree of overlap between the subscale and scores on the OQ-45. Thus, the correlational analyses were supportive of the construct validity of the SOS.

### *Discussion*

The results of the analyses in Study 1 largely supported the construct validity of the SOS as a measure of spirituality from a theistic perspective. That a single factor, Love of God, explained over 44% of the variance in the measure's items is consistent with Richards' and Bergin's (1997) view that a person's faith in and connection with God is an important dimension of genuine theistic spirituality. That a second factor emerged, Love of Others (or Love of Humanity), is consistent with Richards' and Bergin's (1997) view that a person's feelings of love for other people, and desires to serve and promote their welfare, is another important dimension of genuine spirituality. That a third factor emerged, Love of Self (or Moral Self-Acceptance), is consistent with Richards' and Bergin's view that a person's feelings of self-acceptance and moral worthiness is also an important dimension of spirituality.

The relationship between the SOS and the OQ-45 was as expected. Symptoms of mental illness were significantly inversely related to spirituality in this sample. Spiritual devotion to God and humanitarian devotion to others are associated with mental health. The fact that the

Love of Self subscale correlated with the OQ-45 much higher than the other two SOS subscales is to be expected, given that several of the items in this subscale assess feelings of self-acceptance and inner peace. Nevertheless, item level correlations with the OQ-45 revealed that SOS items whose content reflected perceptions of moral behavior were also strongly correlated with the OQ-45. Thus, a conceptual contribution of the SOS is that perceptions of moral behavior are potentially just as relevant to mental health as are feelings of self-worth and inner peace.

## Study 2

Although Study 1 served to validate the SOS in a non-clinical sample, the SOS is intended for use as a clinical outcome instrument. Therefore, additional work was needed to test its reliability and validity with a clinical sample. To address this, the 17-item SOS was used as a weekly outcome measure in a study of women who were receiving inpatient treatment for eating disorders. The complete findings of this study have been reported in more detail elsewhere (Richards, Hardman, & Berrett, 2003). Here we report only those findings that are relevant to the development of the SOS.

### *Method*

*Treatment Facility and Program.* The eating disorder treatment program is located in the western United States, and is a private facility that provides both inpatient and outpatient treatment for women with eating disorders. The multidisciplinary inpatient treatment staff includes 2 medical doctors, 2 psychiatrists, 5 Ph.D. psychologists, 1 Ph.D. marriage and family therapist, 2 clinical social workers, 2 Ph.D. psychology residents, 3 Ph.D. psychology interns, 1 director of nursing and health services, 9 registered nurses, 3 registered dietitians, 1 dietary technician, 1 Ph.D. instructional psychologist/education director, 5 experiential therapists, 18

care technicians, and 2 chefs. Approximately 50% of the staff are members of The Church of Jesus Christ of Latter-day Saints (LDS) and the remaining adhere to a variety of spiritual traditions, including Protestant Christian, Jewish, and Muslim perspectives.

The inpatient treatment program is grounded in current research findings and accepted clinical guidelines for treating eating disorders (APA, 2000; Striegel-Moore, 2001). A medical assessment of each client is completed upon admission. The evaluation includes a complete medical history, physical assessment, necessary medical procedures and medications. Throughout the treatment program, the physician oversees the physical aspects of recovery including the medical progress of each client, her diet and weight gain. In addition, at the time of admission, a psychiatrist, psychologist, or social worker gathers an eating disorder history and assesses the patient's emotional condition.

Patients participate in a variety of needed therapies to assure comprehensive treatment and progress toward recovery. These include: (1) individual psychotherapy sessions, (2) group psychotherapy and body image group, (3) experiential and expressive activities, including music, dance, movement and recreation therapies, (4) family counseling, (5) nutrition monitoring and counseling, (6) medical evaluations and treatment, (7) eating disorders education classes on a variety of topics, including diet and nutrition, self-esteem, healthy exercise, assertiveness, communication skills, and (8) individualized academic management and tutoring. All patients also participate in a bi-weekly 12-step group, patterned after the 12-step groups of Alcoholics Anonymous, but adapted for women with eating disorders.

### *Participants*

Participants for this study were 122 women suffering from anorexia nervosa, bulimia nervosa, or eating disorder (NOS). Forty-two (34.4%) patients were diagnosed with anorexia

nervosa, 47 (38.5%) with bulimia nervosa, and 33 (27.0%) with eating disorder (NOS). The average length of stay in the inpatient treatment program for patients was 68 days.

The ages of the participants ranged from 13 to 52 years ( $M = 21.2$ ;  $SD = 6.6$ ). Eighty percent of participants were in the 16 to 26 age range. Most of the participants were Caucasian ( $N = 119$ ; 97.5%). The majority of participants were LDS ( $N = 84$ ; 68.9%), 6.5% were Protestant ( $N = 8$ ), 5.7% were Catholic ( $N = 7$ ), 1.6% were Jewish ( $N = 2$ ), 7.4% said they were affiliated with some other religious denomination but did not specify which one ( $N = 9$ ), and 7.4% of the participants were not affiliated with a religious affiliation, but viewed themselves as having their own spiritual beliefs ( $N = 9$ ).

Participants came from 19 different states. The largest number of participants was from Utah ( $N = 62$ ; 50.8%). A smaller number of participants were from California ( $N = 14$ ; 11.5%), Idaho ( $N = 7$ ; 5.7%), and Colorado ( $N = 6$ ; 4.9%). The majority of participants were single ( $N = 105$ ; 86.1%), while a smaller number were married ( $N = 14$ ; 11.5%), and few were divorced or separated ( $N = 2$ ; 1.6%). A high percentage of participants (77%,  $N = 94$ ) suffered from a psychiatric comorbid diagnosis.

### *Study Procedures*

Treatment and data collection for the study began on October 1, 1999 and ended on January 31, 2001. When participants were admitted to the inpatient program, they were informed about the purpose and possible benefits and risks of the study. In accordance with ethical guidelines of the American Psychological Association, they were also informed that they had the right to not participate in the study or to withdraw at any time.



### *Outcome Measures*

Several outcome measures were administered at admission and discharge (post-treatment), including the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979), Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987), Outcome Questionnaire (OQ-45.2; Lambert & Burlingame, 1996), Multidimensional Self-Esteem Inventory (O'Brien & Epstein, 1988), and Spiritual Well-Being Scale (SWBS; Ellison, 1983). The SOS was administered weekly during the first 8 weeks of treatment, along with two other weekly outcome measures not reported here. Below are brief descriptions of the EAT, BSQ, MSEI, and SWBS. We refer readers to Study 1 for descriptions of the OQ-45.2 and SOS.

The EAT is a 40-item self-report measure that assesses symptoms associated with anorexia nervosa and bulimia nervosa (e.g., restricting, bingeing, purging). Internal consistency reliabilities reported for the EAT have ranged from .79 to .94 (Garner & Garfinkel, 1979; Raciti & Norcross, 1987). Evidence supporting the validity of the EAT has also been reported (e.g., Garner & Garfinkel, 1979; Garner, Olmstead, Bohr, & Garfinkel, 1982; Raciti & Norcross, 1987).

The BSQ is a 34-item measure that assesses concerns about body shape and feelings of self-consciousness and shame about one's body. Item total correlations of .60 or above have been reported for the BSQ items (Cooper, Taylor, Cooper, & Fairburn, 1987). Evidence supporting the validity of the BSQ has also been reported (Cooper & Fairburn, 1993; Cooper et al., 1987; Hadigan & Walsh, 1991).

The Multidimensional Self-Esteem Inventory (MSEI) is a 116-item measure that assesses patients' global self-esteem, eight sub-components of self-esteem (i.e., competence, likability, self-control, personal power, body functioning, body appearance, moral self-approval, lovability),

as well as identity integration and defensive self-enhancement (Epstein & O'Brien, 1983). Internal consistency reliabilities reported for the MSEI have ranged from .78 to .90 and test-retest reliabilities from .78 to .89 (O'Brien, 1980). Evidence supporting the validity of the MSEI has also been reported (Epstein & O'Brien, 1983). In this study, to avoid undue inflation of the Type I error rate, we reported the correlations of the SOS with only 3 MSEI scales, including global self-esteem, moral self-approval, and lovability. These scales were most theoretically relevant to the validation of the SOS.

The Spiritual Well-Being Scale (SWBS) is a 20-item measure that assesses patients' feelings of spiritual well-being on two subscales: religious well-being (i.e., whether patients' feel that God cares about them and helps them with their problems) and existential well-being (i.e., whether patients' feel a sense of life purpose, satisfaction and direction). Internal consistency reliabilities of .87 and .75 for the RWB and EWB subscales, respectively have been reported, as have test-retest reliabilities of .96 and .86, respectively (Paloutzian & Ellison, 1979). Evidence supporting the validity of the SWBS has also been reported (e.g., Ellison, 1983; Ellison & Smith, 1991).

### *Results*

*Internal Consistency Reliabilities.* The Cronbach Alpha reliability estimates for the total SOS was .90. The internal consistency reliability estimates for the SOS subscales were as follows: .93 for the Love of God (closeness to God) subscale, .71 for the Love of Others (love of humanity) subscale, and .77 for the Love of Self (moral self-acceptance) subscale.

*Correlations with Measures of Religiousness and Spiritual Well-Being.* The Pearson correlations of the SOS with the Religious Orientation Scale (ROS) and Spiritual Well-being Scale (SWBS) subscales may be seen in Table 3. The total SOS and SOS Love of God subscale

were significantly and positively correlated (.37 and .53 respectively) with the intrinsic subscale of the ROS. This indicates that those who are intrinsically (devoutly) committed to their religious beliefs tend to feel more love and closeness to God. The total SOS and SOS subscales were not significantly correlated with the extrinsic subscale of the ROS, which was in accord with theoretical expectations.

The total SOS and SOS subscales were significantly and positively correlated with the religious well-being subscale (RWB) of the SWBS. The total SOS and SOS subscales were most strongly associated with the RWB subscale, which assesses whether people feel that God loves and supports them. The total SOS and SOS subscales were also all significantly and positively correlated with the EWB subscale of the SWBS, which assesses whether people feel a sense of life purpose, direction, and satisfaction.

Considerable evidence exists which supports construct validity of the SWBS as a measure of spiritual well-being (e.g., Ellison, 1983); thus, the relatively high correlations of the total SOS with the SWBS subscales provides convergent validity evidence for the SOS. The high correlation of the SOS Love of God subscale with the RWB subscale is particularly noteworthy in light of the fact that the RWB subscale also purports to measure people's feelings of connection with God. The .71 correlation between the SOS Love of God subscale and RWB subscale, therefore, provides convergent validity evidence for the SOS Love of God subscale. Interestingly, the Love of Self (moral self-acceptance) subscale of the SOS correlated more highly with the existential well-being subscale of the SWBS than it did with the RWB subscale or with the intrinsic subscale of the ROS.

*Correlations with Psychological Functioning.* The Pearson correlations of the SOS with various measures of psychological functioning may also be seen in Table 3. The SOS and the

SOS subscales were negatively associated with the OQ-45 and its subscales, ranging from -.15 to -.44. Interestingly, the Love of Self (moral self-acceptance) subscale of the SOS correlated somewhat more highly with the OQ-45 subscales than did the other SOS subscales. The Love of Self subscale also tended to correlate more highly than did the other SOS subscales with the Body Shape Questionnaire and Multidimensional Self-Esteem Inventory (global self-esteem and moral self-approval, in particular). Generally, the SOS manifested low, but often significant correlations with the measures of psychological functioning administered to this clinical sample. Those who scored higher on the SOS tended to be less psychologically disturbed.

#### *Relative Rates of Improvement on the Spiritual Outcome Scale*

A hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) analysis for all 8 weeks of SOS data revealed that the main effect for week was statistically significant,  $F(1, 88) = 45.4, p < .0001$ , which indicates that collectively the patients' spirituality improved at a significant rate during the first 8 weeks of treatment.

#### *Discussion*

Study 2 provided some evidence for the use of the Spiritual Outcome Scale (SOS) in clinical settings. The internal consistency reliability in Study 2 for the total SOS was high, and although the reliabilities for the Love of Others and Love of Self subscales were somewhat lower, they are acceptable for research purposes.

The moderately high correlations between the intrinsic subscale of the ROS, the religious well-being subscale of the SWBS, and the SOS provided evidence that the SOS is measuring a similar, but not identical construct to these two widely used standardized religious measures. The ROS and SWBS are measures of a mature, committed religious and spiritual orientation (Donahue, 1985; Ellison, 1983; Richards & Bergin, 1997), and so it would appear as intended

that the SOS is assessing similar aspects of spirituality. The finding that the SOS was not significantly associated with the extrinsic subscale of the ROS provides some evidence concerning the divergent validity of the SOS given that extrinsic religiousness is viewed as an instrumental, less devout form of religious involvement (Donahue, 1985).

The significant but relatively small correlations of the SOS with measures of psychological functioning also provide evidence that the the SOS is assessing constructs associated with health and well-being. The finding that the SOS Love of Self subscale correlated quite highly with the MSEI Moral Self-Approval scale provides some evidence that the Love of Self subscale measures in part, at least, people's feelings of moral worthiness or congruence.

The fact that the SOS correlates considerably higher with the ROS and SWBS than with the various measures of psychological functioning provides some evidence that the SOS is a measure of spirituality and not simply another measure of psychological functioning. The weekly outcome HLM results provided initial evidence that the SOS is sensitive to changes in spirituality in a clinical setting.

### Study 3

To further validate the SOS for its intended use as a clinical outcome instrument, a third study in Germany was conducted. This study was conducted in two inpatient treatment centers and provided the opportunity to validate a German language version of the SOS, as well as to cross-validate some of the psychometric properties of the English SOS. The complete findings of this study have been reported elsewhere (Schowalter, Richard, Senst, & Murken, 2000; Schowalter, Richard, Senst & Murken, in press). Here we summarize only those findings that are most relevant to the validation of the SOS.

### *Method*

*SOS Translation.* A native German Ph.D. level psychologist translated the 17-item English version of the SOS into German. A native English speaker then verified the accuracy of the translation by retranslating the German version of the SOS back into English. Once the accuracy of the German translation of the SOS was verified, the Spiritual Outcome Scale-German Translation (SOS-GT) was then used in a comparative inpatient treatment outcome study.

*Treatment Clinics and Participants.* Two inpatient psychiatric clinics in Germany participated in the treatment outcome study. Psychotherapists in both clinics had been trained in either psychodynamic or behavioral therapy and used these approaches in their treatment programs.

Two hundred and eighty patients in Clinic 1 participated in the study. Clinic 1 was a spiritually-oriented treatment center. All of the therapists were Christians and spiritual interventions were integrated into the treatment program (e.g., daily worship sessions, prayer, scriptural discussions, teaching about religious concepts), along with psychodynamic and behavioral interventions. In regards to religious affiliation, 12.1% of patients in Clinic 1 were Protestant, 30.4% were Roman Catholic, 41.3% were Evangelical Christians, and 0.4% were of some other non-specified tradition. Over 84% of the patients in Clinic 1 indicated on a rating scale that their personal religious beliefs were “very important” or “extremely important” to them, whereas only 2.9% of them said their beliefs were “less important” or “not important.”

The average age of Clinic 1 patients was 39 years ( $SD = 10.9$ ). Two hundred and eight (74.3%) of Clinic 1 patients were female; 72 (25.7%) were male. One hundred and thirty-five (48.2%) of Clinic 1 patients were married, 115 were single, 23 (8.3%) were divorced or

separated, and 7 (2.5%) were widowed. In regards to psychiatric diagnosis, 10.4% of the patients in Clinic 1 had schizophrenia (non-acute), 44.3% had depression, 29.3% had a neurotic disorder (anxiety disorder, obsessive compulsive disorder, somatoform disorder), 6.8% had an eating disorder, and 8.6% had a personality disorder. The average length of treatment for patients in Clinic 1 was 52.2 days (SD = 17.1).

One hundred and eighty-five patients in Clinic 2 also participated in the study. Clinic 2 was a secular treatment program. The therapists were diverse in terms of their religious affiliation and orientation and spiritual interventions were not used in the treatment program. In regards to religious affiliation, 45.4% of patients in Clinic 2 were Protestant, 35.1% were Roman Catholic, 1.6% were Evangelical Christians, 3.8% were non-specified Christian, 1.6% were non-Christian, and 15.4% said they belonged to no religious denomination. Only 21.1% of the patients in Clinic 2 indicated that their personal religious beliefs were “very important” or “extremely important” to them, whereas 50.8% of them said their religious beliefs were “less important” or “not important.”

The average age of Clinic 2 patients was 43.0 years (SD = 10.4). 71.4% of Clinic 2 patients were female; 28.6% were male. 60.3% of Clinic 2 patients were married, 20.1% were single, 15.2% were divorced or separated, and 4.4% were widowed. In regards to psychiatric diagnosis, 0.5% of the patients in Clinic 2 had schizophrenia (non-acute), 40.0% had depression, 40.5% had a neurotic disorder (anxiety disorder, obsessive compulsive disorder, somatoform disorder), 11.9% had an eating disorder, and 2.7% had a personality disorder (the diagnosis for 4.4% of patients in Clinic 2 was not available). The average length of treatment for patients in Clinic 2 was 44.9 days (SD = 13.3).

### *Outcome Measures*

Several outcome measures were administered at admission and discharge (post-treatment), including the Symptom Checklist (SCL-90-R; Derogatis, 1983), Freiburg Personality Inventory (FPI), and SOS-GT. The SCL-90-R is a widely used 90-item self-report symptom inventory. It has nine primary symptom dimensions (e.g., somatization, depression, anxiety, hostility, etc) and three global indices of distress of which the most important is the Global Severity Index (GSI). The German translation of SCL-90-R has adequate reliability and evidence supporting its validity has been reported (Franke 1995). The FPI is a German personality questionnaire that assesses general well-being and satisfaction with life. The FPI has adequate reliability and evidence supporting its validity (Schowalter et al., 2000, in press). Two items written by the researchers that inquired about the importance of the patients' personal religious beliefs were also administered at admission and discharge. Item 1 asked patients to rate on a 6-point scale "How important are your personal religious beliefs?" Item 2 asked the patients to rate on a 6-point scale "Do your personal religious beliefs serve as a source of consolation and strength?"

### *Results*

*Factor Analyses.* Because of linguistic and cultural differences between Germany and the United States, it was important to factor analyze the German translation of the SOS to see how consistent its factor structure is with the English SOS. Three factors with eigen values greater than 1.0 were extracted that accounted for 61.7% of the variance in the items. The first factor accounted for 40.0% of the variance, the second factor for 13.5% of the variance, and the third factor for 8.2% of the variance. The SOS-GT items that loaded on each factor exactly corresponded with the items that loaded on each factor for the English version of the SOS. The



correlations between the SOS subscales were comparable to those reported in Study 1 for the English version of the SOS. The correlation between the Love of God and Love of Others subscales was .45 ( $p < .01$ ), between the Love of God and Love of Self subscales was .48 ( $p < .01$ ), and between the Love of Others and Love of Self subscales was .55 ( $p < .01$ ).

*Internal Consistency Reliabilities.* The Cronbach Alpha reliability estimates for the total SOS-GT was .90. The internal consistency reliability estimates for the SOS-GT subscales were as follows: .91 for the Love of God (closeness to God) subscale, .76 for the Love of Others (love of humanity) subscale, and .86 for the Love of Self (moral self-acceptance) subscale. These reliabilities are comparable to those obtained for the English version of the SOS.

*Correlations with Importance of Personal Religious Belief.* The Pearson correlations of the SOS with the patients' ratings of the importance of their personal religious beliefs may be seen in Table 4. The SOS Love of God subscale was significantly and positively correlated (.64) with the participants "importance of personal religious beliefs" rating. This indicates that those who view their religious beliefs as highly important tend to feel more love and closeness to God.

The SOS subscales were also significantly and positively correlated with participants' ratings of the degree to which their personal religious beliefs are "a source of consolation and strength." The SOS Love of God subscale was most strongly correlated with this item. The positive correlations between the SOS subscales and this item provides some evidence that the type of theistic spirituality assessed by the SOS is a positive resource in peoples' lives.

*Correlations with Psychological Functioning.* The Pearson correlations of the SOS with the SCL-90R and FPI may be seen in Table 5. The SOS and the SOS subscales are negatively associated with the SCL-90R's GSI index, ranging from -.08 to -.49. Interestingly, the Love of Self (moral self-acceptance) subscale of the SOS correlated more highly with the SCL-90R's GSI

index than did the other SOS subscales. The SOS and the SOS subscales were positively associated with the FPI's "Satisfaction with Life" subscale. Again, the Love of Self subscale of the SOS correlated most highly with this measure. Consistent with the findings of Study 2, the SOS and SOS subscales manifested low, but statistically significant positive associations with the measures of psychological functioning. We interpreted this correlation pattern as evidence that the SOS is assessing a meaningful construct in its own right. It captures aspects of general religiosity and psychosocial functioning as the moderate correlations with the various subscales show, but is not identical with these constructs.

*Treatment Outcome Results.* Table 6 presents the pre- and post-treatment mean SOS-GT scores for Clinic 1 and Clinic 2. Here it can be seen that patients in the spiritually-oriented treatment center (Clinic 1) had larger gain scores on the SOS-GT subscales than did patients in the secular treatment center (Clinic 2), particularly on the Love of God subscale. The finding that the improvements measured by the SOS-GT were largest in the spiritually-oriented treatment center provides some evidence that the SOS-GT is a sensitive measure of spiritual outcomes.

### *Discussion*

The finding that factor structure and internal consistency reliabilities for the German translation of the SOS were very similar to those observed for the English SOS provides some strong cross-validation support for the SOS. The correlations between the SOS-GT and the various religious and psychological measures used in this study provide further evidence concerning its convergent and divergent validity. The finding that the SOS-GT was sensitive to differences in spiritual outcome between the spiritually-oriented and secular treatment clinics provided some additional evidence supporting the use of the SOS in psychotherapy research.

### General Discussion

The three studies reported in this article provide initial evidence that the Spiritual Outcome Scale (SOS) is a potentially useful outcome measure for psychotherapy research. Study 1 provided evidence concerning the factor structure, reliability and validity of the SOS with a normal young adult sample. Study 2 provided similar evidence with a sample of clinical inpatients. Furthermore, Study 2 provided some evidence that the SOS is a sensitive measure of the spiritual outcomes of clinical treatment. Study 3 provided initial information about the psychometric properties of a German language version of the SOS, and in so doing also provided some cross-validation evidence concerning the psychometric properties and clinical usefulness of the SOS. Study 3 also provided further evidence that the SOS is a sensitive measure of the spiritual outcomes of clinical treatment.

In addition to the evidence pertaining to the psychometric properties of the SOS, the findings of the 3 studies reported here also have some implications for theory and practice. First and foremost, the fact that a measure of spirituality correlated significantly with several validated measures of psychological functioning is worthy of note. The magnitude of correlations observed here are similar to that of other widely investigated correlates of mental health, such as genetic predisposition (Kendler, Gardner, & Prescott, 1999) and cognitive irrational beliefs (McDermut, Haaga, & Bilek, 1997). Our findings, therefore, add additional evidence to the growing body of research that has shown there are often positive associations between spirituality and various indicators of mental health (Koenig, McCullough, & Larson, 2001).

Second, the finding that the items comprising the Love of Self subscale, which essentially assessed moral self-acceptance, correlated significantly with all measures of psychological outcome is particularly noteworthy. As stated earlier, the data showed that moral self-acceptance is apparently a key correlate of mental health. Although this conceptualization clearly fits within

a theistic model of mental health (Richards & Bergin, 1997), secular theories of personality and psychopathology have little to say about the role of moral behavior. Congruence of behavior with personal moral values is a topic warranting additional work.

Finally, the findings of Studies 2 and 3 support the notion that clinical treatment, especially spiritually-oriented treatment, can improve patients' spiritual outcomes. This possibility potentially expands the conceptualization of the role of psychotherapists. In cases where clients desire improved spiritual outcomes, such work can apparently be undertaken with success (McCullough, 1999). It is also noteworthy in light of fears expressed by some religious people that psychotherapy may undermine faith and spirituality (Richards & Bergin, 1997; Worthington, 1986) that patients' scores in Studies 2 and 3 did not significantly decline during treatment. This was true even of patients who received solely secular forms of psychological treatment. Findings such as these will hopefully help allay fears about psychological treatment in religious communities and may help leaders and members in religious communities be more inclined to utilize psychological services when there is a need (Richards & Bergin, 2000).

#### *Limitations and Need for Additional Studies*

Several limitations of the current studies need to be acknowledged. First, there was an overrepresentation of one religious group (LDS) in the first two studies. Second, the racial and ethnic diversity of the samples in all three studies was lacking. Third, the sample size in the second study was not large enough to conduct a factor analysis of the SOS with that particular clinical sample. Further studies about the SOS are needed to help address these shortcomings. The reliability, validity and usefulness of the SOS needs to be assessed with additional clinical populations, religious denominations, age-groups, and racial-ethnic groups. In addition, although the factor analyses reported in this study were supportive of the construct validity of the SOS, a

confirmatory factor analysis would be useful to further assess the degree to which the factor structure and item loadings of the SOS conform to theoretical expectations. Finally, additional normative data for the SOS and SOS-GT is needed so that researchers and clinicians can more confidently interpret SOS scores for individuals and groups. Such data would also make it more feasible to calculate clinical cutoff scores to assist in such interpretations.

### *Conclusion*

Although further empirical work is needed in the validation of the SOS, the studies here tentatively support its use as a clinical outcome scale and research instrument. The neglect of the religious and spiritual outcomes of treatment is currently a glaring deficiency in the psychotherapy outcome field (Richards & Bergin, 1997). We hope that this instrument will make it more feasible for psychotherapy outcome researchers to investigate the spiritual outcomes of psychotherapy. Such research will be valuable for mental health professionals because it will provide an empirical basis from which to respond to questions and concerns from clients and the public about the religious and spiritual effects of psychotherapy.

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Table 1.

Item commonalities, initial factor loadings, and rotated pattern matrix for SOS items.

Item	Communality	Initial Factor Loadings			Rotated Pattern Matrix		
		1	2	3	1	2	3
1. I had feelings of love toward others.	.33	.54				.42	
2. I felt there is a spiritual purpose for my life.	.64	.76			.73		
3. I felt good about my moral behavior.	.55	.64					.71
4. I wanted to make the world a better place.	.45	.53		.34		.75	
5. I felt peaceful.	.47	.62					.53
6. I felt appreciation for the beauty of nature.	.38	.49	.31			.62	
7. I felt like praying.	.68	.74	-.37		.87		
8. I felt spiritually alive.	.68	.81			.62		
9. I felt worthy.	.55	.59		-.40			.82
10. My behavior was congruent with my values.	.41	.59					.51
11. I felt love for all of humanity.	.50	.62				.66	
12. I had faith in God's will.	.67	.74	-.35		.84		
13. I felt like helping others.	.51	.60				.71	
14. I felt God's love.	.78	.79	-.40		.93		
15. I praised and worshipped God.	.73	.78	-.33		.85		
16. I felt forgiveness toward others.	.35	.55				.46	
17. I loved myself.	.37	.48					.65

Table 2

Study 1: Intercorrelations of SOS total score and subscales and correlations with OQ-45.2.

Scale	SOS Total	Love of God	Love of Others	Love of Self
<b>Spiritual Outcome Scale</b>				
Love of God	.91			
Love of Others	.81	.58		
Love of Self	.81	.58	.59	----
<b>Outcome Questionnaire</b>				
OQ-45 Total	-.33	-.25	-.20	-.48
Symptom Distress	-.38	-.28	-.23	-.54
Relationship Conflict	-.55	-.45	-.39	-.61
Social Role Conflict	-.38	-.31	-.26	-.45

Note: All correlations are significant at the  $p < .0001$  level.

Table 3

Study 2: Correlations of Spiritual Outcome Scale (SOS) total score and subscales with Religious and Psychological Measures.

Scale	SOS Total	Love of God	Love of Others	Love of Self
Religious Orientation Scale (ROS)				
Intrinsic	.37***	.53***	.05	.17
Extrinsic	.15	.18	-.04	.13
Spiritual Well-Being Scale (SWBS)				
Religious Well-Being	.57***	.71***	.19*	.29**
Existential Well-Being	.49***	.43***	.33***	.45***
Outcome Questionnaire				
OQ-45 Total	-.35***	-.18	-.31***	-.44***
Symptom Distress	-.31***	-.15	-.28**	-.43***
Relationship Conflict	-.37***	-.27**	-.31***	-.35***
Social Role Conflict	-.23*	-.10	-.23*	-.29**
Eating Attitudes Test (EAT)	-.01	.04	.08	-.18
Body Shape Questionnaire (BSQ)	-.27**	-.21*	-.07	-.38***
Global Self-Esteem (MSEI)	.33***	.26**	.23*	.37***

\* < .05; \*\* < .01; \*\*\* < .001.

Table 4

Study 3: Correlations of Spiritual Outcome Scale (SOS) total score and subscales with Religious and Psychological Measures.

Scale	SOS Total	Love of God	Love of Others	Love of Self
Important of Personal Belief	NA	.64***	.10*	-.01
Beliefs a Source of Consolation	NA	.73***	.27**	.25**
Symptom Checklist (SCL-90-R)				
Global Severity Index	-.24**	-.08	-.14**	-.49***
Freiburg Personality Inventory (FPI)				
Satisfaction with Life	.32**	.16**	.35**	.47**

\* < .05; \*\* < .01.

Table 5

Study 3: Spiritual Outcome Scale (SOS) Pre- and Post-Treatment Means in German Treatment Clinics.

Scale	Spiritually-Oriented Clinic		Secular Clinic	
	Pre	Post	Pre	Post
Spiritual Outcome Scale (SOS)				
Total SOS Score	37.4	44.9**	39.8	40.3
Love of God	14.5	17.3**	12.7	12.1
Love of Others	13.1	14.8**	15.7	15.3
Love of Self	9.8	12.8**	11.1	12.7**

\* < .05; \*\* < .01.