

The Spiritual Assessment Inventory: A Theistic Model and Measure for Assessing Spiritual Development

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The Spiritual Assessment Inventory (SAI) is a relationally-based measure designed to assess two dimensions of spiritual development: Awareness of God and Quality of Relationship with God. The present article reports the results of two studies: exploratory and confirmatory factor analyses of a revised SAI, which replicated five factors, and a factor analysis of a revised SAI with a new Impression Management (IM) subscale. Results supported the factor structure of the SAI and the homogeneity of the IM scale. Correlations of the SAI subscales with the Spiritual Well-Being Scale, the Intrinsic/Extrinsic-Revised, the Bell Object Relations Inventory, the Defense Styles Questionnaire, and the Narcissistic Personality Inventory also supported the construct validity of the SAI. Two-step multiple regressions supported the incremental validity of the SAI. Suggestions for future research and implications for clinical use of the instrument are discussed.

Assessment of spirituality and religiousness has been an important topic for psychologists interested in religious issues. This is reflected by the number of different measures developed to assess spirituality and related constructs. Hill and Hood (1999) recently published a compendium reviewing 125 measures of religiosity and spirituality. The fact that there are a number of existing measures raises the question of whether there is a need for a new measure of the religion/spirituality domain. Gorsuch (1984) has argued that new measures of religiosity should demonstrate incremental validity and that researchers should establish a definite need before creating a new instrument (Gorsuch 1990). This has been echoed more recently by others with respect to religion (Gorsuch and Miller 1999) and spirituality (Pargament 1999). Our rationale for developing the Spiritual Assessment Inventory is based on several factors.

First, the theoretical construct of spiritual development as defined by the SAI is distinct from the dominant framework in the psychology of religion: intrinsic and extrinsic (I/E) religious orientation. In fact, the I/E construct has been under increasing criticism recently (Kirkpatrick and Hood 1990; Pargament 1992), and researchers have been encouraged to consider alternative frameworks for studying religious motivation, belief, and behavior, such as attachment theory (Kirkpatrick and Hood 1990). The SAI draws on the theoretical insights of object relations theory, which is very congruent with attachment theory and consistent with a sizable literature on God image/representation, indicating that one's relational/emotional development is mirrored in one's relationship with the Divine, however that is perceived by the individual (Brokaw and Edwards 1994). Second, in reviewing other related instruments, there appear to be few measures of spiritual development that integrate a sound psychometric foundation, a clinically-relevant theoretical framework, and a design for clinical application (Hall and Edwards 1996). Hall, Tisdale, and Brokaw, and Edwards (1994) and Slater, Hall, and Edwards (2001) provide detailed reviews of numerous measures of religious/spiritual variables, including a critique of their psychometric properties. Finally, to date there does not appear to be an objective, multidimensional measure of spiritual development that has proven to be clinically useful for psychotherapists, pastoral

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counselors, chaplains, and clergy who work with religiously-committed clients (see Hill 2000). It appears that there is potential in clinical and counseling settings for the use of a relationally-based, psychometrically-sound measure of spiritual development from a broadly theistic perspective. In response to these needs, we developed the Spiritual Assessment Inventory (SAI).

INITIAL DEVELOPMENT OF THE SAI

In a previous article, we articulated the theoretical framework of the SAI (Hall and Edwards 1996). Briefly, the SAI consists of two primary dimensions (Quality of Relationship with God, and Awareness of God), and five subscales (Awareness, Realistic Acceptance, Disappointment, Grandiosity, and Instability). The quality dimension of the SAI was designed to assess different developmental levels of relationship with God from an object relations perspective. The SAI model attempts to broaden the conceptualization of what is traditionally considered to be “spiritual development” and could aptly be called a model of “psychospiritual development.” For a more detailed discussion of the theoretical foundations of the SAI, see Hall and Edwards (1996).

Hall and Edwards (1996) described the initial development and testing of the SAI in two factor-analytic studies. Interfactor correlations and correlations with the Bell Object Relations Inventory (BORI; Bell et al. 1986) generally supported the construct validity of the SAI. However, the results of the second study suggested additional areas for potential improvement of the instrument. First, the Grandiosity scale did not correlate significantly with any of the BORI scales and its coefficient alpha was low (0.52). Second, feedback from respondents indicated that some of the qualifying adjectives in the original items caused confusion. This confusion may have contributed to less than desirable levels of internal consistency for the Grandiosity and Realistic Acceptance subscales.

PURPOSE OF CURRENT STUDIES

The results obtained to date, while promising, suggested the need for further work. In this article we report the results of two additional studies of the SAI. The purpose of the first study was to examine the psychometric properties of a revised SAI item pool. Items for the Grandiosity subscale were added to broaden the content and improve the scales’ internal consistency. In addition, the qualifiers on most of the items were dropped to improve linguistic style and semantic clarity. Several negatively worded Awareness items were added in an attempt to counterbalance this scale. We also investigated the relationship of the SAI subscales with several other conceptually-related scales in order to further investigate the SAI’s validity. The Bell Object Relations Inventory (Bell et al. 1986) was again used because of its conceptual relationship to the SAI, particularly the quality subscales. The Spiritual Well-Being Scale (Ellison 1983), and the Intrinsic/Extrinsic-Revised (Gorsuch and McPherson 1989) were included to examine convergent and incremental validity of the SAI relative to these existing spirituality/religiosity measures. The Defense Styles Questionnaire (Andrews et al. 1993) was used to evaluate the construct validity of a Defensiveness subscale. The Narcissistic Personality Inventory (Raskin and Terry 1988) was included to further evaluate the validity of the Grandiosity scale.

As discussed above, the SAI is designed for clinical as well as research use. For the SAI to be maximally useful in clinical settings, an Impression Management scale would be helpful as an indication of a subject’s test-taking approach, and to identify illusory spiritual health (Slater et al. 2000; Shedler et al. 1993). The original Defensiveness subscale was designed as a validity scale. However, our empirical analysis to date suggests that this scale is a content scale assessing disappointment with God, which can readily be conceptualized as a component of the borderline personality organization. This conceptualization is supported by its correlation with the Instability subscale. Consequently, we designed a new Impression Management scale.

The purpose of Study 2 was to investigate the psychometric properties of the new Impression Management scale, and its relationship to the other scales of the revised SAI.

STUDY 1

Method

Participants and Procedures

Seventy-nine items, based on the items from the second factor analysis and additional items written for this study, were administered to a sample of 438 subjects from a local private Protestant university. The sample consisted of predominantly single, Caucasian male and female undergraduates between the ages of 18 and 22 who volunteered for this study for extra credit in a general education course.

The original 79 items were intercorrelated and subjected to an exploratory factor analysis. The number of factors (five) and the factor identity of the items were specified a priori. The factors were hypothesized to be moderately correlated but no a priori constraints on the degree of correlation was specified. Since a number of items were added to the instrument and the primary purpose of the analysis was instrument development, this procedure allowed for some exploration of the new and revised items within an a priori model. The appropriateness of the five-factor solution for this new pool of items was evaluated using Kaiser's criterion and the Scree Test applied to a plot of the eigenvalues (Cattell 1966). The oblique rotation using a direct oblimin method was chosen, given the expectation of moderate correlations between the factors (Nunnally and Bernstein 1994). Item loadings of 0.40 or above on the a priori factor were interpreted as confirmation of item factor identity. As a final test of the overall model, a confirmatory factor analysis (CFA) was performed using Amos to test the fit of the data to the five-factor model.

Subscale scores for the factors were derived by taking the average of the raw score ratings on all items loading above 0.40 on that factor. The SAI subscales were correlated with the four subscales of the Bell Object Relations Inventory (BORI; Bell et al. 1986), the two subscales of the Spiritual Well-Being Scale (SWBS; Ellison 1983), the three subscales of the Intrinsic/Extrinsic-Revised Scale (Gorsuch and McPherson 1989), the three subscales and two empirically derived factors of the Defense Style Questionnaire (Andrews et al. 1993), and three subscales from the Narcissistic Personality Inventory (Raskin and Terry 1988) using Pearson Product Moment correlations.

Incremental validity of the SAI was examined by using the Alienation subscale of the BORI as the criterion for overall psychological adjustment. This subscale was chosen because it is the first factor and accounts for the majority of the variance on the BORI. Two- and three-step hierarchical regressions were performed to investigate the incremental validity of the SAI relative to the SWBS and the I/E-R scales in predicting BORI Alienation.

Instruments

Spiritual Assessment Inventory. The Quality of Relationship construct of the SAI consists of three facets measured by four scales. The Awareness construct is measured by one subscale. In Study 1, the original SAI item pool was expanded to include 57 one-part items, 8 two-part items (16), and 2 experimental three-part items (6) for a total of 79 items. The original item set consisted of 26 Awareness items, 19 Instability items, 14 Grandiosity items, 9 Realistic Acceptance items, 11 Defensiveness items. The part (a) of each of the two-part and three-part items was a Defensiveness item. On the two-part items, part (b) was a Realistic Acceptance item. On the three-part items, parts (b) and (c) were both Instability items. There was also 1 one-part Defensiveness item, and 1 one-part Realistic Acceptance item. All the items are rated on a five-point scale anchored on each end by the phrases "Not true at all" and "Very true." A high score on each scale represents the presence of the trait named.

The Defensiveness scale was created in the first revision of the SAI (Hall and Edwards 1996) when the Realistic Acceptance items were rewritten into two parts to reduce semantic

ambiguity. An original item stated, "When I feel disappointed with God, I still desire to put effort into our relationship." We separated this item into two items that were presented in pairs. It was hypothesized that the statements regarding negative experiences with God might be useful as a validity scale. Our hypothesis was that individuals who gave a numerical rating of 1 on all or almost all (8 or more out of 10 items) of these items were demonstrating a pattern of defensive denial. The validity of this hypothesis was examined in the present study.

Bell Object Relations Inventory. The BORI is a 45-item true/false self-report scale. It contains four object relations subscales: Alienation (ALN), Insecure Attachment (IA), Egocentricity (EGC), and Social Incompetence (SI). Bell et al. (1986) conducted and replicated a factor analysis that corroborated the multidimensional nature of the underlying empirical structure of the subscales. The coefficient alphas for the four subscales were 0.90 (ALN), 0.82 (IA), 0.78 (EGC), and 0.79 (SI), which demonstrate good internal consistency (Bell et al. 1986). Several studies have demonstrated the BORI's discriminant, concurrent, and predictive validity using various psychiatric and nonpsychiatric samples (Bell 1991; Bell et al. 1986).

Spiritual Well-Being Scale. The Spiritual Well-Being Scale (SWBS) was developed by Ellison (1983) to measure religious and existential well-being. The scale is conceptualized as having two dimensions, vertical and horizontal. The vertical dimension, Religious Well-Being (RWB), measures satisfaction and meaning in one's relationship with God. The horizontal dimension, Existential Well-Being (EWB), reflects a sense of life purpose and life satisfaction. Although the two-factor solution of the SWBS has been questioned by Scott, Agresti, and Fitchett (1999) using exploratory analysis, and by Ledbetter, Smith, Fischer, Vosler-Hunter, and Chew (1991), and Slater (1999) using confirmatory analysis, numerous studies have been conducted using the two subscales originally reported by Ellison (see Ellison and Smith 1991 for a review). Good internal consistency was demonstrated by coefficient alphas of 0.89 (SWB), 0.87 (RWB), and 0.78 (EWB) (Ellison, 1983). A sample of 100 students yielded test-retest coefficients of 0.93 (SWB), 0.96 (RWB), and 0.86 (EWB).

Intrinsic/Extrinsic-Revised. Gorsuch and McPherson (1989) created a revised version of the "age universal" I/E scale, which Gorsuch and Venable (1983) developed, as a revision of the Religious Orientation scale. Based on Kirkpatrick's results indicating that extrinsicness can be divided into two distinct categories ("Es" for socially oriented extrinsic items and "Ep" for extrinsic items related to personal benefit), Gorsuch and McPherson conducted a factor analysis and found three factors corresponding to I, Es, and Ep. Coefficient alphas demonstrated good internal consistency for Intrinsic (0.83), but only moderate internal consistency for Es and Ep (0.58 and 0.57, respectively). Extensive research has been conducted on the I/E constructs (see Hall et al. 1994).

Narcissistic Personality Inventory. The Narcissistic Personality Inventory (NPI) consists of seven subscales including Authority, Self-Sufficiency, Superiority, Exhibitionism, Exploitativeness, Vanity, and Entitlement. Guttman lambda three (alpha) estimates of internal consistency for the seven scales were as follows: 0.73, 0.63, 0.54, 0.50, 0.52, 0.50, and 0.64, respectively. The construct validity of the NPI was supported by numerous correlations with various trait rankings, the California Q-Sort, the Adjective Check List, and the California Psychological Inventory. The current study used the Authority, Exhibitionism, and Exploitativeness scales of the Emmons (1984, 1987) Narcissistic Personality Inventory modified by Raskin and Terry (1988).

Defense Style Questionnaire. The Defense Style Questionnaire-40 (DSQ 40; Andrews et al. 1993) corresponds to the DSM-III-R draft glossary of defense mechanisms. Forty self-report items represent 20 defense mechanisms, each of which are assessed by two items. The 20 defenses are grouped into three main factors: mature, neurotic, and immature. The mature defenses factor is comprised of sublimation, humor, anticipation, and suppression. Undoing, pseudo-altruism, idealization, and reaction formation correspond to the neurotic factor. The immature factor contains the defenses of projection, passive aggression, acting out, isolation, devaluation, autistic fantasy,

denial, displacement, dissociation, splitting, rationalization, and somatization. Scores for the three higher-order factors were used in the present study.

Adequate temporal stability of the instrument has been demonstrated by four-week test-retest correlations ranging from 0.38 to 0.80 (Andrews et al. 1993). Test-retest correlations over an 18-month period were reported to be 0.71 for the mature factor and 0.60 for the immature factor. The internal consistency was measured by coefficient alphas, which ranged from 0.58 to 0.80 for the factor scores. High correlations (0.90s) between the DSQ-40 and the original 82-item DSQ support its construct validity. The construct validity of the DSQ-40 is further supported by its ability to significantly discriminate a normal control group from both anxiety patients and child-abusing parents, and child-abusing parents from anxiety patients.

Results and Discussion

Exploratory factor analyses were conducted on the new enlarged item pool. The Scree Test (Cattell 1966) applied to the eigenvalues supported the hypothesis that the best solution was five factors. The five factors were extracted using the principle axis method and were subjected to an oblique rotation. There were 31 items in this initial solution with loadings below 0.40 on all the factors. These items were omitted and the remaining 48 items were reanalyzed. Five factors were again extracted and rotated obliquely.

The Scree Test again confirmed a clear break between the fifth and sixth factors. The eigenvalues for the first five factors were 12.96, 6.00, 3.28, 2.23, and 1.81, respectively. The five factors accounted for 52.6 percent of the total variance. All 48 items had loadings only on the hypothesized factors of greater than 0.40. The item loadings for 46 of the 48 final items loaded 0.50 or better on their respective factors. The SAI items and their factor loadings are reported in Table 1.

The final 48 items were subjected to a confirmatory factor analysis (CFA) using Amos to assess the adequacy of the five-factor model in accounting for the interitem correlations. All the measures of fit produced by the CFA suggested that the five-factor model is a very good approximation of the data. The $\chi^2(1065) = 1100.04$ was not significant ($p < 0.22$), suggesting a good fit. The Comparative Fit Index was 0.99. Bentler and Bonett (1980) recommended 0.90 as a cutoff for the minimum acceptable level for a fit index. All of these indices confirm that the model fits the data well and accounts for the majority of the variance. The average absolute standardized residual, a measure of the difference between the observed covariances and the covariances predicted by the model, was 0.027 and 100 percent of the residuals were between -0.10 and $+0.10$. All of the standardized parameter estimates were significant (see Figure 1).

Factor 1 is the Awareness factor, which contains 19 items; item-loadings range from 0.82 to 0.55. Factor 2 is the Defensiveness factor, consisting of seven items with loadings ranging from 0.88 to 0.62. We judged the homogeneous content of this scale to be "disappointment with God" and it was renamed the Disappointment subscale. The results and rationale for this are discussed below. The third factor is the Grandiosity factor, which consists of seven items with loadings from 0.73 to 0.53. The fourth factor, Realistic Acceptance, has seven items that load from 0.81 to 0.53. Loadings for the eight items of the fifth factor, Instability, range from 0.78 to 0.46. Thus, results from the factor analysis of the final 48 items replicated the five theoretical factors found in the previous factor analysis, indicating good construct validity for this pool of revised SAI items.

The subscale scores for the five SAI factors were calculated by computing the mean of the raw scores of the items. The correlations among the five subscales confirmed theoretical expectations of a moderate relationship between the awareness and quality components. The Awareness subscale correlated 0.44 ($p < 0.01$) with Realistic Acceptance and -0.35 ($p < 0.01$) with Instability. These moderate correlations are similar to those of the previous factor-analytic study (0.33 and -0.33 , respectively) and support the hypothesized relationship between the two components. These correlations are consistent with the present theory that instability in relationship with God would be moderately related to less awareness of God and that realistic

TABLE 1
THE SPIRITUAL ASSESSMENT INVENTORY FACTOR PATTERN
COEFFICIENTS GREATER THAN 0.40

ITEM	FACTOR	ITEM	FACTOR	ITEM	FACTOR
AWARENESS		DISAPPOINT		REAL ACCEPT	
A57	0.82	D8A	0.88	RA13B	0.81
A44	0.77	D24A	0.84	RA35B	0.77
A39	0.77	D13A	0.81	RA5B	0.71
A56	0.75	D5A	0.80	RA24B	0.70
A19	0.75	D63A	0.69	RA8B	0.62
A34	0.74	D35A	0.67	RA63B	0.54
A52	0.73	D54A	0.62	RA54B	0.53
A62	0.72				
A51	0.72	GRANDIOS		INSTABILITY	
A20	0.71	G49	-0.73	I60	0.78
A31	0.70	G67	-0.67	I59	0.70
A11	0.69	G17	-0.66	I12	0.69
A45	0.68	G42	-0.62	I21	0.64
A1	0.68	G23	-0.58	I50	0.62
A10	0.62	G29	-0.56	I22	0.53
A7	0.61	G32	-0.53	I43	0.49
A27	0.60			I55	0.46
A16	0.60				
A15	0.55				
A45	0.68				
A1	0.68				
A10	0.62				
A7	0.61				
A27	0.60				
A16	0.60				
A15	0.55				

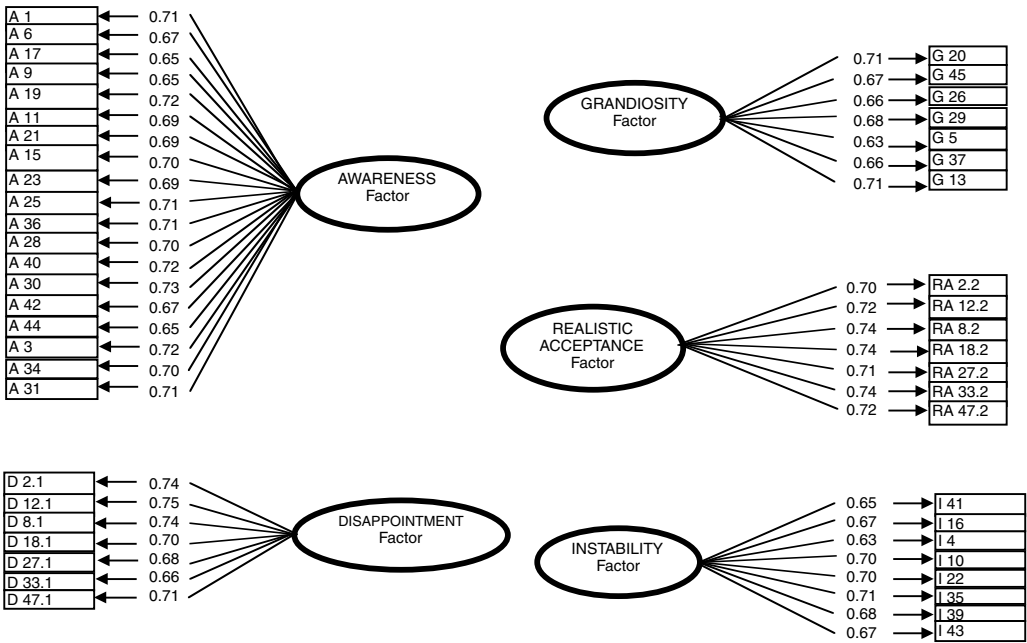
Note: The item letters refer to the scales on which the item is scored. The item numbers refer to the actual item numbers on the original 79-item questionnaire. Scale abbreviations: Disappoint = Disappointment; Real Accept = Realistic Acceptance; Grandios = Grandiosity.

acceptance would be moderately associated with more awareness of God. The Grandiosity factor correlated 0.12 with Awareness, which, although significant at the 0.05 level, was lower than expected. Instability had a moderate positive association with Grandiosity ($r = 0.22$; $p < 0.01$), and a negative correlation with Realistic Acceptance ($r = -0.27$; $p < 0.01$) as expected.

The reliability of each subscale was estimated using Cronbach's coefficient alpha measure of internal consistency. The values for the scales were: Awareness, 0.95; Disappointment, 0.90; Realistic Acceptance, 0.83; Grandiosity, 0.73, and Instability, 0.84. All values indicate good lower-bound estimates of scale reliability.

The SAI scales were correlated with several other measures to evaluate construct and convergent validity. As with the previous two studies, correlations were computed with the BORI because of its conceptual convergence with the SAI, particularly the quality subscales. Correlations with the BORI are reported in Table 2. The BORI subscales were expected to correlate slightly higher with the quality factors than with the Awareness factor. Since a high score on the BORI

FIGURE 1
PARAMETER ESTIMATES FOR THE CONFIRMATORY FACTOR MODEL
OF THE SAI



indicates pathology, negative correlations were predicted with Awareness and Realistic Acceptance, and positive correlations with Instability, Grandiosity, and Disappointment. In addition, the Egocentricity subscale was expected to correlate higher with the Grandiosity subscale than with the other SAI subscales.

Consistent with our expectations, the Instability subscale had a stronger relationship overall with the BORI scales than did the Awareness subscale. However, the Grandiosity and Realistic Acceptance subscales had about the same magnitude of correlation with the BORI subscales as did Awareness. The Grandiosity subscale correlated higher with the Egocentricity subscale ($r = 0.47$; $p < 0.01$) than with any other BORI subscale, and Egocentricity had lower correlations with the other SAI subscales. This pattern of correlation provides evidence for the convergent and discriminant validity of the Grandiosity subscale.

TABLE 2
CORRELATION OF SAI SUBSCALES WITH BELL OBJECT RELATIONS
INVENTORY (BORI) SUBSCALES

BORI Subscales	SAI Subscales				
	Awareness	Instability	Grandiosity	Realistic Acceptance	Disappointment
Alienation	-0.40**	0.49**	0.21**	-0.28**	0.35**
Insecure attachment	-0.12*	0.35**	0.03	0.01	0.21**
Social incompetence	0.19**	-0.17**	-0.12*	0.10	-0.08
Egocentricity	-0.23**	0.26**	0.47**	-0.24**	0.18**

Note: * $p < 0.05$; ** $p < 0.01$ (one-tailed tests).

TABLE 3
CORRELATION OF SAI SUBSCALES WITH SPIRITUAL WELL-BEING
SUBSCALES (SWBS)

SWBS Subscales	SAI Subscales				
	Awareness	Instability	Grandiosity	Realistic Acceptance	Disappointment
Religious well-being	0.68**	-0.43**	-0.11*	0.38**	-0.34**
Existential well-being	0.56**	-0.41**	0.11*	0.24**	-0.27**

Note: * $p < 0.05$; ** $p < 0.01$ (one-tailed tests).

Correlations between the SAI and the SWBS (Ellison 1983) (reported in Table 3) generally confirmed theoretical expectations. High positive correlations were found between the SAI Awareness subscale and both the Religious and Existential Well-Being subscales (RWB and EWB, respectively). Moderate negative correlations were found between the SAI Instability and Disappointment subscale and RWB and EWB. SAI Grandiosity had the weakest relationship with RWB (negative correlation) and EWB (positive relationship). The quality scales of the SAI appear to measure aspects of religious/spiritual experience that the SWBS does not.

The correlations between the SAI and the I/E-R (Gorsuch and McPherson 1989), reported in Table 4, corroborated theoretical expectations. The Intrinsic scale correlated higher with Awareness than with the quality subscales. The Extrinsic social (Es) scale had correlations below 0.20 with all five SAI subscales. The Extrinsic personal (Ep) scale also had three of the correlations with the SAI below 0.20. The correlation of Ep with the Instability and Grandiosity subscales were $r = 0.26$ and 0.32 , respectively. It is interesting to note that Extrinsic personal (Ep) correlated highest with the SAI Grandiosity subscale. In general, these results support our contention that the quality of one's relationship with God has minimal relationship with religious motivation as measured by I/E-R.

The SAI subscales were correlated with three NPI subscales, primarily to test the discriminant validity of the Grandiosity subscale. These results, shown in Table 5, are consistent with the Grandiosity construct. Grandiosity is the only SAI subscale that correlated significantly with all three NPI subscales. The correlations of the NPI Exhibitionism and Exploitativeness scales with Grandiosity (0.22, and 0.27, respectively; $p < 0.01$ level) were higher than with the other SAI subscales. The correlation between NPI Authority and SAI Awareness (0.22) was the only correlation of the 15 correlations in the table that was inconsistent with the convergent-discriminant validity support for the Grandiosity subscale.

The validity of the Defensiveness scale was tested in two ways. First, an index of defensiveness was created, based on the number of "1" (not at all) responses. Subjects with 7 or 8 on this index were compared to those with 6 or less using a one-way ANOVA on the DSQ-40 subscales. There were no significant differences on any of the DSQ-40 scales. Second, a Defensiveness scale

TABLE 4
CORRELATION OF SAI SUBSCALES WITH INTRINSIC/EXTRINSIC-REVISED
SUBSCALES (I/E-R)

I/E-R Subscales	SAI Subscales				
	Awareness	Instability	Grandiosity	Realistic Acceptance	Disappointment
Intrinsic	0.57**	-0.33**	-0.06	0.41**	-0.18**
Extrinsic social	-0.16**	0.08	0.12*	-0.15**	0.15**
Extrinsic personal	-0.10*	0.26**	0.32**	-0.08	0.18**

Note: * $p < 0.05$; ** $p < 0.01$ (one-tailed tests).

TABLE 5
CORRELATION OF SAI SUBSCALES WITH THE NARCISSISTIC PERSONALITY INVENTORY SUBSCALES (NPI)

NPI Subscales	SAI Subscales				
	Awareness	Instability	Grandiosity	Realistic Acceptance	Disappointment
Authority	0.22**	-0.10*	0.18**	0.03	0.03
Exhibitionism	0.03	0.07	0.22**	-0.05	0.09
Exploitativeness	-0.02	0.09	0.27**	-0.15**	0.13**

Note: * $p < 0.05$; ** $p < 0.01$ (one-tailed tests).

score using the average of the D item responses was correlated with the DSQ-40 factors (mature, neurotic, and immature defenses). None of the correlations were significant. The correlations of the Defensiveness scale with the other variables suggest that the Defensiveness scale is a valid measure of an individual’s disappointment with God, which can be conceptualized as consistent with the borderline personality organization.

The Alienation subscale of the BORI was used as the dependent variable in examining incremental validity of the three measures of spirituality/religiosity. The results are summarized in Table 6. First, alienation was regressed on each set of subscales for each measure. The SAI (32.7 percent) predicted more variance than the SWBS (28.9 percent) or the I/E-R (11.3 percent). Next, a series of hierarchical regressions were conducted to test the incremental validity of each measure, controlling for one of and then both of the other measures. The SAI had the highest incremental validity relative to each of the other two measures. The SAI accounted for 12.8 percent of Alienation controlling for the SWBS and 18.7 percent controlling for I/E-R. The SWBS accounted for 6.9 percent of Alienation controlling for the SAI; the I/E-R accounted for 1.9 percent of Alienation controlling for the SAI. When both the other measures were controlled, the SAI still explained 10.1 percent of the variance of Alienation. The corresponding values for the SWBS and the I/E-R were 7.1 percent and 3.5 percent, respectively. (The second-order multiple partials for these latter two were slightly higher than their first-order partial coefficients due to mild suppressor effects among the subscales.)

STUDY 2

The purpose of Study 2 was to test the psychometric properties of a new set of items written explicitly as an Impression Management validity scale and to replicate the factor analysis of the SAI with the new IM items.

TABLE 6
INCREMENTAL VALIDITY OF THE SAI, SWBS, AND I/E-R IN PREDICTING PSYCHOLOGICAL ADJUSTMENT (BORI ALIENATION SUBSCALE)

SAI Models	ΔR^2	SWBS Models	ΔR^2	I/E-R Models	ΔR^2
$R^2_{Y.SAI}$	0.327	$R^2_{Y.SWBS}$	0.289	$R^2_{Y.I/E-R}$	0.113
$R^2_{Y.SAI(I/E-R)}$	0.187	$R^2_{Y.SWBS(I/E-R)}$	0.187	$R^2_{Y.I/E-R(SWBS)}$	0.090
$R^2_{Y.SAI(SWBS)}$	0.128	$R^2_{Y.SWBS(SAI)}$	0.069	$R^2_{Y.I/E-R(SAI)}$	0.019 ns
$R^2_{Y.SAI(I/E-R;SWBS)}$	0.101	$R^2_{Y.SWBS(I/E-R;SAI)}$	0.071	$R^2_{Y.I/E-R(SWBS;SAI)}$	0.035 ns

Note: Y = BORI Alienation. The control variables are shown in parentheses. The R^2 s in rows 2 and 3 are first-order squared multiple partial correlations; the R^2 s in row 4 are second-order squared multiple partial correlations. ns = not significant. All other values are significant at $p = 0.01$ or less.

Method

Participants and Procedures

A total of 260 participants were recruited from three different sources. The first group consisted of 38 male and 81 female students from an introductory psychology class at a local private university. The second group consisted of 26 male and 28 female students in a counseling master's degree program at a Christian college in the midwest. The third group consisted of 33 male and 54 female members of various Sunday school classes at an evangelical midwestern church. The participants ranged in age from 19 to 75 years.

Instruments

Spiritual Assessment Inventory. A new set of Impression Management (IM) items were developed. Each of the items on the IM scale states some virtuous and common spiritual behavior or attitude in an exaggerated form. The scale was designated as an Impression Management scale on the assumption that most religious persons would not experience the stated frequency or intensity and thus not endorse these statements as characteristic of them. Strong endorsements of these types of items are hypothesized to represent an Impression Management test-taking approach that needs to be taken into account in interpreting a scale profile. It was predicted that the Impression Management items would load on a separate factor.

Data Analysis

The SAI items were intercorrelated and subjected to a principle axis factor analysis to determine whether the Impression Management subscale items comprise a separate homogeneous subscale. Six factors were extracted and subjected to direct oblimin oblique rotation. Scale scores for all of the instruments were computed by taking the average of respondents' ratings to all the items on the scale. If the respondent failed to complete half the items on a scale, the scale was not scored for that person. Both zero-order correlations and partial correlations controlling for Impression Management were calculated for the SAI scale intercorrelations.

Results and Discussion

We conducted another factor analysis of the SAI items to determine the degree of factorial stability of the items and to see if the new set of Impression Management items formed a separate factor. Only the loadings of items above 0.40 are shown. With only a few minor exceptions, the SAI items loaded on their theoretically specified factors and the new IM items formed a separate factor. The coefficient alpha estimate of reliability for the Impression Management scale was 0.77.

We next examined the intercorrelation of the SAI scales using both zero-order correlations among the original five scales and the new IM scale and partial correlations among the original five scales controlling for IM. The results of these analyses are shown in Table 7.

The new IM scale correlated significantly with each of the original five scales. The highest correlations were with Awareness and Realistic Acceptance and the lowest were with Disappointment and Instability.

The theoretical model for the SAI specifies that the awareness and quality dimensions are moderately independent of each other. The zero-order correlations of Awareness with the various quality scales in Table 7 are all significant but in the low to moderate range. The fact that the SAI scales correlated with Impression Management suggests that the scale intercorrelations are inflated

TABLE 7
CORRELATIONS AND PARTIAL CORRELATIONS CONTROLLING FOR
IMPRESSION MANAGEMENT AMONG THE SPIRITUAL
ASSESSMENT INVENTORY SCALES

	SAI SCALES				
	AWARE	REALACC	DISAPPNT	INSTABIL	GRANDIOS
AWARE	—	0.59**	-0.08	-0.13*	0.19**
REALACC	0.68**	—	-0.19**	-0.26**	-0.09
DISAPPNT	-0.16**	-0.25**	—	0.51**	0.16**
INSTABIL	-0.22**	-0.32**	0.53**	—	0.26**
GRANDIOS	0.32**	0.06	0.09	0.17**	—
IM	0.53**	0.42**	-0.18**	-0.21**	0.32**

Note: The zero-order correlations are below the diagonal and the partial correlations controlling for IM are above the diagonal. The scales are: AWARE = Awareness; REALACC = Realistic Acceptance; DISAPPNT = Disappointment; INSTABIL = Instability; GRANDIOS = Grandiosity; IM = Impression Management. * $p < 0.05$; ** $p < 0.01$.

because of this common factor. The partial correlations in Table 7 show the scale intercorrelations with IM removed.

The effect of controlling for IM on the intercorrelation of the SAI subscales is to lower most of the coefficients. The awareness and quality dimensions are thus more empirically independent when controlling for Impression Management. Scales D and I, the two SAI quality scales that are theoretically linked to more severe forms of psychological maladjustment, have low correlations with Awareness. The RA scale, which is the quality dimension theoretically linked to psychological adjustment, has a moderate positive correlation with Awareness.

The correlations between Grandiosity and the other SAI scales before and after controlling for IM present an interesting pattern. Considering the zero-order correlations first, Grandiosity is the only scale that correlates in a significant positive direction with both the Awareness scale and the negative quality scale, Instability. The zero-order correlation of G with A (0.32) is larger than G with I (0.17). However, when controlling for IM, the partial correlation of G with A (0.19) becomes smaller than that of G with I (0.26). Removing IM has the effect of reducing Grandiosity's correlation with a positive subscale (A), and increasing it with a negative subscale (I). Thus, it appears that controlling for IM presents a more theoretically valid picture of the relationship between Grandiosity and other variables. In general, controlling for IM results in a set of scale intercorrelations that are more consistent with the SAI theoretical model and that more clearly identify the maladjustment component of G.

GENERAL DISCUSSION

It appears that our revisions of the SAI based on the third and fourth factor analyses have resulted in a stable factor structure that corroborates our theoretical model of two overall facets of spiritual maturity represented by the five empirical factors and the Impression Management factor. The results from the factor analyses in Studies 1 and 2 replicated the five-factor solution of the second factor analysis reported in our first article (Hall and Edwards 1996). The six factors (Awareness, Instability, Grandiosity, Realistic Acceptance, Disappointment, and Impression Management) appear to be quite robust as all 48 items loaded 0.40 or better on only the hypothesized factor, and 46 of the 48 items loaded 0.50 or better on their respective factors. In addition, all the measures of fit produced by the CFA indicated that the five-factor model was a very good

approximation of the data. Thus, after four factor analyses and revisions, we believe this version of the SAI represents the best one to date.

In addition to the factor structure, several other aspects of the SAI were improved in the present studies. The internal consistency (alpha) coefficients for three of the five subscales were improved. This was particularly important for Realistic Acceptance, which improved from the 0.70s to the 0.80s, and for Grandiosity, which improved from the 0.50s to the 0.70s. Most of the qualifying adjectives were dropped to improve linguistic style and reduce respondent confusion in interpreting items in the context of a Likert response format.

Additional items were written for the Grandiosity factor to broaden item content, lengthen the scale, and improve its internal consistency. This resulted in a seven-item Grandiosity factor with a more acceptable coefficient alpha of 0.73. In another study, Horton (1998) found the coefficient alpha for the Grandiosity to be in the low 0.80s. In addition, we set out to test the construct validity of the Grandiosity subscale more directly since it did not correlate significantly with the BORI in our previous study. The new Grandiosity subscale was correlated with three subscales of the NPI. Among the SAI subscales, Grandiosity clearly showed the strongest relationship with the NPI in demonstrating significant, positive correlations with all three NPI subscales (Authority, Exhibitionism, and Exploitativeness). Furthermore, the new Grandiosity subscale showed significant positive correlations with two of the BORI subscales, and it correlated higher with the Egocentricity subscale than did the remaining SAI subscales. Thus, we believe the Grandiosity subscale has been improved from the previous version, with these results providing substantial support for its construct validity.

We included the SWBS and the I/E-R in Study 1 to test the SAI against established measures of spirituality and religious orientation, respectively. We set out to demonstrate that the SAI is related in certain ways to other measures of spirituality/religiosity (SWBS and I/E-R), but is not merely a global measure of spirituality or religiosity that simply replicates these existing measures. The correlations with these measures support this contention and the convergent and discriminant validity of the SAI. The results indicate that there is a substantial relationship between awareness of God and spiritual well-being, particularly satisfaction and meaning in relationship with God, which makes theoretical sense. In addition, the present results indicate that the quality of one's relationship with God is relatively independent of spiritual well-being or satisfaction with one's relationship with God and with life. Thus, the quality of relationship facet of the SAI is particularly distinct from spiritual well-being as measured by the Spiritual Well-Being scale. We would argue also that the Awareness subscale, while clearly related to the Spiritual Well-Being scale, is conceptually distinct based on its item content. Correlations with the I/E-R subscales also supported our hypotheses that, while the SAI Awareness subscale is particularly related to an intrinsic religious orientation, the quality subscales are more independent. Furthermore, all the SAI subscales are relatively independent of both Extrinsic subscales (Es and Ep).

As Gorsuch (1984, 1990) and others have argued, incremental validity is important to justify the existence of a new measure. The results of hierarchical regressions provide further evidence of the incremental validity of the SAI. Thus, our conclusion, based on the pattern of observed correlations and regressions, is that the SAI is not merely another measure of religious orientation or motivation that replicates the I/E-R scale or the SWBS.

We also wanted to design a subscale that would measure test-taking approach. Our initial attempt to do this produced a subscale that is more adequately conceptualized as disappointment with God. The results have caused us to move away from interpreting the Defensiveness scale as an indicator of defensiveness and have suggested an alternate approach to this scale as a quality of relationship with God scale. Although this scale was not theoretically developed as a quality scale, the results clearly indicate that it measures disappointment in relationship with God, which is related to the Instability subscale ($r = 0.57$; $p < 0.01$). Based on our results, we decided to retain this scale, now labeled Disappointment, as an indicator of quality of relationship with God.

Specifically, we view high scores as reflecting excessive and unrealistic demands on God, which lead to a great deal of disappointment and frustration with God. The correlation with Instability indicates that high scores on Disappointment are associated with an unstable relationship with God and fear of rejection.

The Impression Management subscale, designed and tested in Study 2, appears to be a better measure of test-taking attitude. It correlates highest with the SAI subscale that has the strongest pull for socially desirable responses, namely Awareness of God. Additional results reported in another paper (Edwards et al. 1998) show the IM subscale does not correlate with other measures of psychological adjustment. In addition, partial correlations between the SAI subscales with IM removed resulted in a set of scale intercorrelations that is more consistent with the SAI model, and that identifies the pathological component of G more clearly. Further research is needed to establish the IM subscale as a useful measure of test-taking attitude that would need to be taken into account when interpreting individual profiles in a clinical setting.

The results of the current study have strengthened and broadened the SAI. The replication of the factor structure and correlations with several other instruments support the construct validity of the SAI subscales. With this psychometric and theoretical foundation, we believe the SAI has much potential for research and clinical use. The model of spiritual development is unique in emphasizing what would traditionally be viewed as a more “spiritual” dimension (awareness), as well as a more traditional “psychological” dimension (relational maturity) that we believe is a fundamental component of spiritual development. As such, the model avoids both spiritual reductionism and psychological reductionism by emphasizing a holistic view that may be termed psychospiritual development or maturity.

The SAI provides a research tool for investigating growth experiences focusing on one or both of the two facets. It has already been used in examining the impact of spiritual direction (Hall et al. 1996). It could also be used to investigate the impact of discipleship, support groups, pastoral counseling, and numerous other growth experiences. To our knowledge, the SAI has been or is currently being used in nearly 30 empirical studies and we have reports on several studies (e.g., Chan and Edwards 1997; Horton 1998; Tisdale 1997; Seatter, 2001; Warren 1998). We are currently investigating the SAI’s relation to objective and projective personality variables. We have also created a shortened 12-item version (two items on each of the six subscales) for research use. The multidimensionality of the SAI makes it particularly suitable for research in more general areas in the psychology of religion and spirituality, as well as ministry effectiveness and selection.

One of the primary goals in developing the SAI was to make it clinically useful as well as useful in research. Further research is needed to establish criterion validity and develop norms for different populations to allow for interpretation of individual profiles. Several such studies are currently underway. As research on the SAI continues, it may begin to be used by pastors, pastoral counselors, chaplains, and psychotherapists to assess individuals’ spiritual development. This is an area that is currently neglected in clinical assessment with religiously-committed clients and parishioners. Psychological assessment is conducted with religiously-committed clients and pastors/pastoral counselors often use such instruments as the Myers-Briggs to assess personality types. However, psychotherapists and pastors/pastoral counselors rarely formally assess their clients’ spiritual development even though it is important and often the focus of pastors’ work.

We hope that the SAI will provide a clinical tool for pastors, pastoral counselors, chaplains, and psychotherapists to formally assess parishioners’ and clients’ spiritual development. Our vision is for the SAI to be a tool that would assist in identifying individuals’ strengths and weaknesses, thus providing direction for pastoral counseling or psychotherapy. In addition, our experience suggests that individuals find it helpful to reflect on the items. Thus, individual items, in addition to subscale scores, may have heuristic value for clients in the counseling context.

APPENDIX A—THE SPIRITUAL ASSESSMENT INVENTORY

SPIRITUAL ASSESSMENT INVENTORY

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Instructions

1. Please respond to each statement below by writing the number that best represents your experience in the box to the right of the statement.
2. It is best to answer according to what *really reflects* your experience rather than what you think your experience should be.
3. Give the answer that comes to mind first. Don't spend too much time thinking about an item.
4. Give the best possible response to each statement even if it does not provide all the information you would like.
5. Try your best to respond to all statements. Your answers will be completely confidential.
6. Some of the statements consist of two parts as shown here:

[2.1] There are times when I feel disappointed with God.

[2.2] When this happens, I still want our relationship to continue.

Your response to 2.2 tells how true statement 2.2 is for you when you have the experience of feeling disappointed with God described in statement 2.1.

	1	2	3	4	5
	Not At All True	Slightly True	Moderately True	Substantially True	Very True
1	I have a sense of how God is working in my life				A
2.1	There are times when I feel disappointed with God				D
2.2	When this happens, I still want our relationship to continue				RA
3	God's presence feels very real to me				A
4	I am afraid that God will give up on me				I
5	I seem to have a unique ability to influence God through my prayers				G
6	Listening to God is an essential part of my life				A
7	I am always in a worshipful mood when I go to church.				IM
8.1	There are times when I feel frustrated with God				D
8.2	When I feel this way, I still desire to put effort into our relationship				RA
9	I am aware of God prompting me to do things				A
10	My emotional connection with God is unstable				I
11	My experiences of God's responses to me impact me greatly				A
12.1	There are times when I feel irritated at God				D
12.2	When I feel this way, I am able to come to some sense of resolution in our relationship				RA
13	God recognizes that I am more spiritual than most people				G
14	I always seek God's guidance for every decision I make				IM
15	I am aware of God's presence in my interactions with other people				A
16	There are times when I feel that God is punishing me				I
17	I am aware of God responding to me in a variety of ways				A
18.1	There are times when I feel angry at God				D
18.2	When this happens, I still have the sense that God will always be with me				RA
19	I am aware of God attending to me in times of need				A
20	God understands that my needs are more important than most people's				G
21	I am aware of God telling me to do something				A

22	I worry that I will be left out of God's plans	I
23	My experiences of God's presence impacts me greatly	A
24	I am always as kind at home as I am at church.	IM
25	I have a sense of the direction in which God is guiding me	A
26	My relationship with God is an extraordinary one that most people would not understand	G
27.1	There are times when I feel betrayed by God	D
27.2	When I feel this way, I put effort into restoring our relationship	RA
28	I am aware of God communicating to me in a variety of ways	A
29	Manipulating God seems to be the best way to get what I want	G
30	I am aware of God's presence in times of need	A
31	From day to day, I sense God being with me	A
32	I pray for all my friends and relatives every day	IM
33.1	There are times when I feel frustrated by God for not responding to my prayers	D
33.2	When I feel this way, I am able to talk it through with God	RA
34	I have a sense of God communicating guidance to me	A
35	When I sin, I tend to withdraw from God	I
36	I experience an awareness of God speaking to me personally	A
37	I find my prayers to God are more effective than other people's	G
38	I am always in the mood to pray.	IM
39	I feel I have to please God or he might reject me	I
40	I have a strong impression of God's presence	A
41	There are times when I feel that God is angry at me	I
42	I am aware of God being very near to me	A
43	When I sin, I am afraid of what God will do to me	I
44	When I consult God about decisions in my life, I am aware to my prayers of his direction and help	A
45	I seem to be more gifted than most people in discerning God's will	G
46	When I feel God is not protecting me, I tend to feel worthless	I
47.1	There are times when I feel like God has let me down	D
47.2	When this happens, my trust in God is not completely broken	RA

Scales:

- A = Awareness
 RA = Realistic Acceptance (formerly = Healthy Ambivalence)
 D = Disappointment (formerly = Defensiveness)
 G = Grandiosity (formerly = Narcissism)
 I = Instability (formerly = Splitting)
 IM = Impression Management (new scale, experimental)

Scoring Instructions: The score for each scale is the average of answered items. If the respondent omits more than half the items for a given scale, the scale cannot be scored.

Scoring of the RA scale items (designated by xx.2 item numbers) depends on the respondent's answer to the corresponding disappointment item (designated by xx.1 item numbers). If the respondent answers "not at all true" (1) on the xx.1 item, then the corresponding xx.2 item is NOT included in the RA scale average score. For example, if he/she rates item 2.1 as a "1", then item 2.2 is not included in calculating the RA scale score average.

REFERENCES

- Andrews, G., M. Singh, and M. Bond. 1993. The Defense Style Questionnaire. *Journal of Nervous and Mental Disease* 181(4):246–56.
- Bell, M. 1991. *An introduction to the Bell Object Relations and Reality Testing Inventory*. Los Angeles, CA: Western Psychological Services.
- Bell, M., R. Billington, and B. Becker. 1986. A scale for the assessment of object relations: Reliability, validity, and factorial invariance. *Journal of Clinical Psychology* 42(5):733–41.
- Bentler, P. M. and D. G. Bonett. 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin* 88:588–606.
- Brokaw, B. F. and K. J. Edwards. 1994. The relationship of God image to level of object relations development. *Journal of Psychology and Theology* 22(4):352–71.
- Cattell, R. 1966. The meaning and strategic use of factor analysis. In *Handbook of multivariate experimental psychology*, edited by R. B. Cattell, pp. 174–243. Chicago, IL: Rand McNally.
- Chan, J. and K. J. Edwards. 1997. Acculturation, marital adjustment, and spiritual functioning for Chinese couples. Paper presented at the annual convention of the Christian Association for Psychological Studies, Seattle, WA.
- Edwards, K. J., T. W. Hall, and S. E. Thelander. 1998. The Spiritual Assessment Inventory: Relational maturity and impression management correlates. Paper presented at the 106th Annual Convention of the American Psychological Association, San Francisco, CA.
- Ellison, C. W. 1983. Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology* 11(4):330–40.
- Ellison, C. W. and J. Smith. 1991. Toward an integrative measure of health and well-being. *Journal of Psychology and Theology* 19(1):35–48.
- Emmons, R. A. 1984. Factor analysis and construct validity of the Narcissistic Personality Inventory. *Journal of Personality Assessment* 48:291–300.
- . 1987. Narcissism: Theory and measurement. *Journal of Personality and Social Psychology* 52:11–17.
- Gorsuch, R. L. 1984. The boon and bane of investigating religion. *American Psychologist* 39:228–36.
- . 1990. Measurement in psychology of religion revisited. *Journal of Psychology and Christianity* 9:82–92.
- Gorsuch, R. L. and S. E. McPherson. 1989. Intrinsic/extrinsic measurement: I/E-revised and single-item scales. *Journal for the Scientific Study of Religion* 28(3):348–54.
- Gorsuch, R. L. and Miller, W. R. 1999. Assessing Spirituality. In *Integrating spirituality into treatment: Resources for practitioners*, edited by W. R. Miller, pp. 47–64. Washington, D.C.: American Psychological Association.
- Gorsuch, R. L. and Venable, G. D. 1983. Development of an “age universal” I-E scale. *Journal for the Scientific Study of Religion* 22(2):181–87.
- Hall, T. W., B. F. Brokaw, K. J. Edwards, and P. L. Pike. 1996. The relationship of spiritual maturity to level of object relations development and God image and the impact of spiritual direction and psychotherapy on these variables. Unpublished doctoral dissertation. La Mirada, CA: Rosemead School of Psychology, Biola University.
- Hall, T. W. and K. J. Edwards. 1996. The initial development and factor analysis of the Spiritual Assessment Inventory. *Journal of Psychology and Theology* 24(3):233–46.
- Hall, T. W., T. C. Tisdale, and B. F. Brokaw. 1994. Assessment of religious dimensions in Christian clients: A review of selected instruments for research and clinical use. *Journal of Psychology and Theology* 22(4):395–422.
- Hill, P. C. 2000. Measurement issues and scales in the scientific study of religion and spirituality: A levels of evidence approach. Unpublished manuscript. Grove City, PA: Grove City College.
- Hill, P. C. and R. W. Hood (eds.). 1999. *Measures of religiosity*. Birmingham, AL: Religious Education Press.
- Horton, T. G. 1998. The relationship between extrinsic religiosity, intrinsic religiosity, and spiritual maturity to level of life satisfaction and coping resources. Unpublished doctoral dissertation. Stillwater, OK: Oklahoma State University.
- Kirkpatrick, L. A. and R. W. Hood. 1990. Intrinsic-extrinsic religious orientation: The boon or bane of contemporary psychology of religion? *Journal for the Scientific Study of Religion* 29(4):442–62.
- Ledbetter, M. F., L. A. Smith, J. D. Fischer, W. L. Vosler-Hunter, and G. P. Chew. 1991. An evaluation of the construct validity of the Spiritual Well-Being Scale: A confirmatory factor analytic approach. *Journal of Psychology and Theology* 19(1):94–102.
- Nunnally, J. C. and I. H. Bernstein. 1994. *Psychometric theory*, 3rd ed. New York: McGraw-Hill.
- Pargament, K. I. 1992. Of means and ends: Religion and the search for significance. *International Journal for the Psychology of Religion* 2:201–29.
- . 1999. The psychology of religion and spirituality? Yes and no. *International Journal for the Psychology of Religion* 9(1):3–16.
- Raskin, R. and H. Terry. 1988. A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology* 54(5):890–902.
- Seatter, R. B. G. 2001. The relationship between the Spiritual Assessment Inventory and the Rorschach. Unpublished doctoral dissertation. La Mirada, CA: Rosemead School of Psychology, Biola University.

- Shedler, J., M. Mayman, and M. Manis. 1993. The illusion of mental health. *American Psychologist* 48(11):1117–31.
- Slater, W. 1999. Defining and measuring spiritual growth: An investigation of the psychometric properties of measures of spiritual well-being and spiritual maturity. Paper presented at the annual convention of the Christian Association for Psychological Studies, Colorado Springs, CO.
- Slater, W., T. W. Hall, and K. J. Edwards. 2000. Measuring religion and spirituality: Where are we and where are we going? Manuscript submitted for publication.
- Tisdale, T. C. 1997. A comparison of Jewish, Muslim, and Protestant faith groups on the relationship between level of object relations development and experience of God and self. Unpublished doctoral dissertation. La Mirada, CA: Rosemead School of Psychology, Biola University.
- Warren, E. M. 1998. Spiritual maturity within an attachment framework. Unpublished doctoral dissertation. La Mirada, CA: Rosemead School of Psychology, Biola University.