

AN EVALUATION OF THE INCREMENTAL VALIDITY OF THE SPIRITUAL EXPERIENCE INDEX-REVISED

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ABSTRACT

An analysis of the Spiritual Experience Index-Revised confirmed the presence of two distinct dimensions: Spiritual Support and Spiritual Openness. Further analysis examined the incremental validity of each scale in comparison with personality as measured by the Five Factor Model. Spiritual Support correlated with personality agreeableness, religious attendance and prayer frequency, prayer and God satisfaction, and experience of the presence of God. Spiritual Support provided incremental variance over personality in the prediction of most religious variables, racism, sexual attitude tolerance, and life satisfaction. Spiritual Openness correlated with personality Openness to Experience, broad-minded religious self identification, but not with most religious variables. Spiritual Openness provided incremental variance over personality in the prediction of racism and sexual attitude tolerance, but not most religious variables or life satisfactions. These results support the validity and usefulness of the Spiritual Support subscale, but call into question the validity of Spiritual Openness as a spiritual construct.

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One critical problem in religious research and clinical practice is that religious or spirituality measures often reflect creedal beliefs and therefore have limited usefulness with religiously diverse populations. The Spiritual Experience Index (SEI), (Genia 1990; 1991) was developed to address this limitation and provide a measure of spiritual or faith maturity that is independent of denominational beliefs. Genia utilized a developmental criterion-based approach which characterized mature faith as a transcendent relationship to something greater than oneself and openness to spiritually diverse viewpoints. It is not dependent on a particular dogma or formal religious structure but reflects commitment without absolute certainty. Mature faith includes rational and emotional components, lacks egocentricity and magical thinking, demonstrates social interest and humanitarian concern, and is reflected in moral behaviors which reflect values, meaning, and purpose in life.

Genia (1997) has further refined the SEI. She isolated 13 of the original 38 items which describe a factor of Spiritual Support and 10 items representing Spiritual Openness. Spiritual Support (SS) reflects a reliance on spirituality for meaning, sustenance, and support. Spiritual Openness (SO) reflects an inclusive and universal approach to faith. These 23 items constitute the SEI-Revised.

Preliminary analysis of the SEI-Revised (Genia 1997) has shown many strengths including its ability to predict a number of outcomes such as religious and spiritual well being and satisfaction with one's relationship with God above the influence of Intrinsic religiousness and Quest. While Genia believes her sample adequately represented national norms of religious attendance and self-identified religious importance, she drew her sample of 286 participants from a single university and the resulting narrow demographic ranges limit the generalizability of her results. In addition, the restricted scope of personality measures provided limited ability to establish discriminant and incremental validity with respect to personality.

This present study adds to the validity assessment of the SEI-R by utilizing a nationwide sample with a more diverse age distribution, and it tests an expanded range of outcomes (life satisfaction, racism, and sexual attitudes) that are of interest to both religion and psychology. In addition, this study utilizes a widely used measure of religious maturity, the Faith Maturity Scale (FMS) (Benson, Donahue, and Erickson 1993), following the recommendations of Gorsuch (1984) to compare new scales with already established ones. Finally and most importantly, the present study contributes by using the more comprehensive Five Factor Model (FFM) of personality to more adequately test the incremental validity of the SEI-R.

Such testing of incremental validity is important because in the development and use of spiritual measures a vexing question frequently surfaces: to what extent do these instruments measure distinctly spiritual constructs, or to what extent do they measure personality through the perspective of spiritual terminology? This question has surfaced for years without adequate resolution (see Allport 1950;

Dittes 1969; Francis 1992b; King and Hunt 1971; Kirkpatrick and Hood 1990; Piedmont 1996; and Van Wicklin 1990). However the exposition and current refinement of the Five Factor Model (FFM) now offers an excellent opportunity for religious researchers to systematically assess spiritual or religious constructs in relation to personality.

Because the Five Factor Model presents a robust and adequate taxonomy of personality (Digman 1990; Goldberg 1981; McCrae and Costa 1990; Saucier and Goldberg 1996), it has been characterized by Briggs (1992) as being the model of choice for the researcher who wants to represent the broad domain of personality variables. Because this more comprehensive model of normal personality is now available, the once difficult task of assessing the distinctness of any given spiritual construct apart from personality constructs becomes much easier. This process may be accomplished quantitatively through the use of hierarchical multiple regression methods. That is, for any chosen criterion or outcome variable, a multiple regression is performed which inputs the personality model on step 1 and the selected spiritual construct on step 2. Any significant additional variance appearing in step 2 represents the contribution of the spiritual construct apart from the personality model, and suggests the possibility of a distinct and unique construct.

Through the use of the FFM this study examined the predictive efficacy of the SEI-R over and above from the contribution of FFM personality and clarified to what extent SEI-R constructs suggest something uniquely spiritual. It was hypothesized that the SEI-R would exhibit a factor structure similar to that found with Genia's normative sample, exhibit significant correlations with the Faith Maturity Scale and with spiritual behaviors, and provide significant predictive power above FFM personality in the prediction of both spiritual and secular outcomes. If the SEI-R is a valid measure of spiritual maturity free from denominational constraints, it should show itself to be robust with any mainline religious group such as represented in this study's sample.

METHOD

Participants

Three hundred and eighty participants responded to a mailed survey directed to committed members of primarily Roman Catholic Christian religious groups. Religious affiliation was 83 percent Roman Catholic, 11 percent Protestant, 6 percent Other, 0 percent Jewish, 0 percent unaffiliated, as compared to Genia's sample of 34 percent, 29 percent, 7 percent, 13 percent, and 17 percent respectively. Demographics were as follows, with Genia's normative values in parentheses: 90 percent Caucasian (81 percent), 58 percent female (66 percent), 16.6 mean number of years of education (15), and mean age 52 (22). Church attendance was high: 88 percent attended church monthly or more, compared to 48

percent in the normative sample. Almost all participants were from urban areas: 59 percent were from the eastern United States, 20 percent the midwest, 14 percent central, and 6 percent the west. Mean range of household income was \$45,000 to 60,000 per year, and 53 percent of the participants were married.

Measures

SEI-R

Developed by Genia (1997), this 23-item questionnaire was designed to measure mature faith and spirituality independent of dogma or formal religious structure. Items are answered on a 6-point scale ranging from (1) *strongly disagree* to (6) *strongly agree*. Two factors, Spiritual Support and Spiritual Openness, were identified. Cronbach's alphas were .79 for SO, .92 for SS, and .89 for the full scale. Genia notes that SS strongly correlates with intrinsic faith, religious well-being, and worship attendance. Spiritual Openness correlates positively with quest, and negatively with dogmatism. Both subscales are unrelated to depression or self-esteem. Using median splits, Genia developed a four-fold typology for scoring spiritual maturity. Those low on SS and SO are characterized as spiritually *underdeveloped*; high SS and low SO indicates *dogmatic* believers; low SS and high SO are spiritual seekers or *transitionals*; high SS and high SO are *growth-oriented*. Genia believes that SS and SO offer a new and useful way of looking at spiritual maturity.

Faith Maturity Scale (FMS)

The FMS was developed by Benson, Donahue, and Erickson (1993) to measure two metaphorical dimensions of Christian faith: maturity, a vertical faith in which a person relates directly to God, and a horizontal faith in which a person discovers God through others. It is a 38-item self report measure utilizing a 7-point scale ranging from (1) *never true* to (7) *always true*. A 12-item short version developed by Donahue was used in this study. Scale reliabilities using Cronbach's alpha were robust across age, gender, respondent type, and denomination, and range from .84 to .90 for the 38-item scale and .88 for the 12-item scale. The correlation between the 12- and 38-item scales is .94 for adults. Considerable evidence supports the validity of the FMS, and it has been used in many studies of congregations across the United States. In addition, it has consistently demonstrated incremental validity apart from personality across a number of variables and populations (Csarny 1998; Piedmont 1996).

NEO-Five Factor Inventory (FFI)

Developed by Costa and McCrae (1992) as a shorter 60 item version of the NEO Personality Inventory-Revised, the FFI operationalizes the major dimensions of personality hypothesized in the Five-Factor Model. The NEO PI-R as well as the earlier NEO-PI was developed through analysis of personality descriptors observed in scientific theories and natural language (the lexical approach), and through factor analytic methods. Measures of five major dimensions or domains of personality were developed: Neuroticism (N), representing emotional vulnerability; Extraversion (E), an indicator of positive energy; Openness to Experience (O), a tendency to seek new knowledge and experience for its own sake; Agreeableness (A), a tendency to tendermindedness, trust and compassion; and Conscientiousness (C), representing orderliness and discipline.

Items are answered on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree*, and scales are balanced to control for acquiescence. Internal consistencies for the five domains ranged from .86 to .95. Long term stability has been well demonstrated. The NEO-PI has been extensively validated (McCrae and Costa 1987; Piedmont, McCrae, and Costa 1992), and it has shown predictive utility with a large number of life outcomes such as somatic complaints, stress coping, well-being, and response to psychotherapy (Costa and McCrae 1992).

Modern Racism Scale (MRS)

Developed by McConahay (1986), the MRS measures a subtle form of racism toward blacks that is rooted in abstract principles and diffuse negative feelings, and which is usually reflected in certain symbolic issues that raise strong ambivalence. For example, one question states, "Over the past few years, blacks have gotten more economically than they deserve." The MRS is a 6-item self-rating measure and questions are answered on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree*.

The MRS has used somewhat different items over the last twenty years, and alpha coefficients for these versions have ranged from .75 to .86, while test retest reliability has ranged from .72 to .93. Validity issues were addressed through comparisons with other measures, behavioral outcomes, and experiment. The MRS has successfully predicted antiblack voting patterns, interracial perceptions and distance, and hiring decisions (McConahay, Hardee, and Batts 1981).

Two additional items in similar form were created by the researcher to measure discrimination against women. For example, one item reads, "Women are getting too demanding in their push for equal rights." These items were included to expand the usefulness of the MRS style of questioning to another issue which often surfaces conflicting feelings.

Valois Sexual Attitude Scale (VSAS)

This instrument was initially designed by Valois and Ory (1988) to evaluate attitude changes in a human sexuality program for university students. It consists of 46 5-point self-rating items addressing nine sexual topics: sexual stereotypes, masturbation, premarital intercourse, homosexuality, sexual communication, abortion, oral-genital sex, birth control, and college marriages. Responses range from *strongly agree* to *strongly disagree*, and a high score indicates more sexual attitude tolerance. Cronbach's alpha for the subscales ranged from .66 to .92. Content validity was addressed through expert review. Valois (1980) reported a 4-month stability coefficient of .85.

Because the Valois Sexual Scale contained no questions on extramarital sexual activity, the researcher added two questions utilizing a similar format to address this issue.

Index of Domain Satisfactions and Index of Overall Life Satisfaction

Developed by Campbell, Converse, and Rodgers (1976), these scales consist of a series of single questions based on one's satisfaction with everyday life domains such as marriage, job, family, and so forth. Additional questions were added by the researcher to address satisfaction with relationship to God, and satisfaction with prayer life. Participants respond according to a 7-point scale ranging from *completely dissatisfied* to *completely satisfied*. Only the two end points and the middle *neutral* point are labeled on the scale. Stability correlations for the original Index ranged from .42 to .67 for individual domains, and .76 for the entire measure.

Campbell and colleagues (1976) note the inherent difficulties in developing reliable and valid measures for life satisfactions, and in establishing reliability coefficients for the scales. They take their estimates as the bottom range. Validity was not directly addressed, but behavioral prediction and assessment of responsiveness to change led them to believe the measures performed well. Andrews and Withey (1976) evaluated the Index of Overall Life Satisfaction and estimated validities to be .73 to .79. These measures or variations on them have been used for over twenty years with considerable success.

Life-3

This measure is a 2-item global "life as a whole" quality of life scale developed by Andrews and Withey (1976). The scale asks the question, "How do you feel about your life as a whole?" and then repeats the same question approximately 15 to 20 minutes later. Responses are given according to a 7-point self rating scale known as the Delighted-Terrible Scale and range from *delighted* to *terrible*. The Delighted-Terrible scale attempts to enhance validity by providing explicit labels for each scale point and by balancing both affect

and cognition in the framing of the scale; the Life-3 enhances reliability through the equivalent of a test retest method.

Life-3 was found to be only slightly influenced by demographic variables, accounting for less than 10 percent of the variance. Internal consistency between the two items was calculated to be .81. Validity was examined through a LISREL analysis and was reported to be .77 in one sample and .82 in another. Andrews and Withey (1976) consider the Life-3 to be one of the most sensitive measures of global assessment of the respondent's own current life-as-a-whole situation.

Other scales

A number of other scales created by the researcher were used to assess self-identified religious and political positions (rated from *very conservative* to *very liberal*), frequency of prayer (rated from *never* to *more than once a day*), frequency of religious service attendance (rated from *never or seldom* to *four or more times a week*), lifetime experiences of the presence of God and being punished by God (rated from *I'm sure I have* to *no*), and forgiveness (rated from *disagree strongly* to *agree strongly*).

Analysis

Exploratory and confirmatory factor analyses on the SEI-R were performed to compare results with Genia's (1997) findings. The FFI results were standardized using gender-adjusted norms (Costa and McCrae 1992). Hierarchical multiple regressions were conducted to examine the unique predictive efficacy of the SEI-R over personality in the prediction of both religious/spiritual and nonreligious outcomes.

RESULTS

Initial analysis compared the internal consistency of each scale with the normative values reported by Genia. Coefficient alphas for the SO, SS, and Full scale were .79, .92, and .87, compared to normative values of .79, .95, and .89 respectively. See Table 1.

The SO and SS scales had means of 45 and 68 and standard deviations of 8.2 and 8.8 compared to normative means of 44 and 54 respectively (no normative standard deviations given). Thus the current sample exhibited similar spiritual openness scores but higher spiritual support compared with the initial study participants. The higher score on the SS scale is consistent with the identification of the current sample as persons who are moderately to highly religious, but the failure to detect a higher level of spiritual openness among these highly religious per-

Table 1. Descriptive Statistics and Alpha Reliabilities

Factor					Normative M	Alpha	Normative Alpha
Support	68	8.0	69	8.6	54	.92	.95
Openness	44	8.0	45	8.2	44	.79	.79
Total	112	11.0	114	12.3	—	.87	.89

Notes: ¹ N = 156; ² N = 218**Table 2.** Factor Congruence Coefficients

SEI item Number	Factor 1	Factor 2	Item Congruence
SS9 SM7	.859	.001	.998
SS23 SM37	.817	.009	.996
SS13 SM8	.811	.063	1.000
SS5 SM4	.805	-.052	.999
SS3 SM3	.792	-.079	.999
SS15 SM28	.780	-.029	.984
SS1 SM1	.668	.094	1.000
SS22 SM33	.654	.079	1.000
SS19 SM30	.655	.025	.994
SS11 SM17	.652	.082	.993
SS21 SM25	.546	-.026	1.000
SS7 SM14	.524	.119	.996
SS17 SM9	.471	.205	.959
SO12 SM31	.462	.449	.993
SO18 SM27	.174	.688	.998
SO4 SM5	.066	.630	.918
SO10 SM13	.244	.563	.999
SO16 SM18	-.014	.529	1.000
SO20 SM35	.179	.536	.932
SO2 SM11	-.220	.502	.962
SO8 SM24	.169	.503	.981
SO14 SM34	-.258	.468	.996
SO6 SM6	-.302	.448	1.000
Factor Congruence	.979	.987	.985

sons is noteworthy. The correlation between the SS and the SO factors was .07, which is identical to the normative group.

The second step in evaluating the SEI-R was to determine if the scale revealed a factor structure similar to the original 2-factor solution. The 23 items were subjected to an exploratory factor analysis following Genia's method of

Principal Axis Factoring. Because the correlation between SO and SS was .07 (ns), the constructs were considered to be orthogonal. Selection criteria of eigen values greater than one led to four factors containing 50 percent of the variance, but all items loaded primarily on factors 1 and 2, accounting for 44 percent of the variance. These results were closely similar to Genia's exploratory factor solution using the 23 items.

A forced two factor solution with varimax rotation was performed in order to compare the current data with Genia's results. Factors 1 and 2 had eigenvalues of 7.1 and 2.8 respectively, accounting for 43 percent of the variance, compared to Genia's eigenvalues of 8.6 and 2.9 accounting for 50 percent of the variance. Item loading results paralleled Genia's two factor solution.

Coefficients of congruence (Gorsuch 1983) were calculated to assess the degree of fit determined by using the factor loadings from the two factor solution of the

Table 3. Correlations of SEI-Revised Subscales with Religious and Psychological

Outcome Variable (N = 374)	Spiritual Support	Spiritual Openness
Prayer Frequency	.57**	-.01
Religious Attendance Frequency	.49**	-.03
Religious Position	-.16**	.56**
Forgiveness	.34**	-.08
Presence of God	.43**	.14**
Satisfaction with Prayer	.32**	.05
Satisfaction with God Relationship	.42**	.08
FMS Vertical	.76**	.12*
FMS Horizontal	.55**	.25**
Political Position	-.08	.48**
Discrimination Against Women	.05	-.52**
Sexual Attitude Tolerance	-.33**	.60**
Extramarital Tolerance	-.13**	.23**
Racism	-.18**	-.37**
Life Satisfaction: Life-3	.17**	.07
Whole Life Satisfaction	.14**	.09
Sexual Life Satisfaction	.19**	.00
Marriage Satisfaction	.16*	-.01
Neuroticism	-.09	-.08
Extraversion	.10	.11*
Openness to Experience	-.07	.46**
Agreeableness	.25**	.08
Conscientiousness	.10	.04

Notes: N = 212 for Marriage Satisfaction

* $p \leq .05$

** $p \leq .01$

current data set and comparing them with the original two factor Genia loadings (see Table 2).

Factor congruence was .979 for SS, .987 for SO, and .985 overall. Item congruence coefficients ranged from .918 to 1.000. Thus, the current factor data set provides good congruence with the original set.

The next step in analysis was to examine the outcomes correlating with the Spiritual Support and Spiritual Openness scales, and to assess the additional contribution of each scale above personality in the prediction of the criterion variables. Correlations are shown in Table 3.

It is noted that SS correlated in ways that are expected for a religious variable. It correlated positively with prayer frequency ($r = .57, p \leq .01$), religious attendance frequency ($r = .49, p \leq .01$), satisfaction in relationship with God ($r = .42, p \leq .01$) and prayer satisfaction ($r = .32, p \leq .01$), forgiveness ($r = .34, p \leq .01$), experience of the presence of God ($r = .43, p \leq .01$), and Faith Maturity Vertical ($r = .76, p \leq .01$) and Horizontal ($r = .55, p \leq .01$). SS had a small negative correlation ($r = .14, p \leq .01$) with religious position (a self report measure of broad-minded attitudes toward religion), and it failed to correlate with political position (a similar self report measure of broad-minded political attitudes).

The SS scale correlated with a number of social criterion variables: it showed small but significant positive correlations with both measures of life satisfaction ($r_s = .17$ and $.14, p \leq .01$), marriage satisfaction ($r = .16, p \leq .05$), and satisfaction in one's sexual life ($r = .19, p \leq .01$). SS correlated negatively with racism ($r = -.18, p \leq .01$), extramarital tolerance ($r = .13, p \leq .01$), and tolerance in sexual attitudes ($r = -.33, p \leq .01$). It failed to correlate with the measure of discrimination against women. Finally, it exhibited a significant correlation with personality Agreeableness ($r = .25, p \leq .01$), which is consistent with other research linking religiousness to personality tender-mindedness (Eysenck 1954; Francis 1992a, 1992b).

The performance of the Spiritual Openness scale was considerably different. SO failed to significantly correlate with prayer frequency, religious attendance, or forgiveness—all variables representing traditional spiritual/religious experience. However, it did evidence small but significant correlations with some spiritual and religious variables, notably experience of the presence of God ($r = .14, p \leq .01$), FMS Vertical ($r = .12, p \leq .05$), and FMS Horizontal ($r = .25, p \leq .05$). Spiritual Openness correlated positively with extramarital tolerance ($r = .23, p \leq .01$), which represents behaviors generally at odds with most mainstream religious moral values.

Unlike the SS scale, SO correlated strongly with a broad-minded religious and political position ($r_s = .56$ and $.48$ respectively, $p \leq .01$) and negatively with the measure of discrimination against women ($r = -.52, p \leq .01$). Like SS it correlated negatively with racism ($r = -.37, p \leq .01$), but unlike SS, it failed to correlate with any measure of life satisfaction. This last result is contrary to Genia's (1997) finding that SO is associated with feelings of life satisfaction.

SO correlated strongly with personality Openness to Experience ($r = .46, p \leq .01$), and exhibited a small but significant relationship with Extraversion ($r = .11, p \leq .05$). These results are consistent with the definition of the variable as representing an expansive and universal viewpoint.

Thus the performance of SO is unlike most other spiritual or religious variables which more strongly correlate with religious activities and experiences such as prayer frequency, church attendance, forgiveness, and with other mainstream religious measures such as the FMS. These results begin to call into question the construct validity of SO as a spiritual variable.

Regression analysis was able to define more clearly the nature of Spiritual Support and Spiritual Openness. For each criterion variable noted above, the personality variables of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness were entered as a block on step 1, and SS or SO was entered on step 2. The adjusted R^2 resulting from step 1 indicates the amount of variance attributable to the personality model, and the change in adjusted R^2 from step 1 to step 2 indicates the variance attributable to SS or SO after the variance attributable to personality is taken out. This result gives a measure of the uniqueness of each subscale as a predictor apart from personality. Results are summarized in Table 4.

Spiritual Support added significant variance above that of personality with regard to prayer frequency and religious attendance frequency ($\Delta R^2 = .30$ and $.22$

Table 4. Incremental Validity of SO and SS Subscales in Predicting Religious and Psychological Variables^a

	Spiritual Support			Spiritual Openness		
Prayer Frequency	.026	.299***	.56	.026	.000	-.01
Attendance Frequency	.012	.224***	.49	.012	.000	-.01
Religious Position	.128	.026***	-.17	.128	.197***	.50
Forgiveness	.030	.120***	.36	.030	.000	.03
Presence of God	.070	.183***	.44	.070	.000	.03
Satisfaction with Prayer	.073	.139***	.39	.073	.003	.09
Satisfaction with God	.073	.139***	.39	.073	.003	.09
Political Position	.149	.003	-.07	.149	.126***	.40
Women Discrimination	.077	.001	.06	.077	.196***	.50
Sexual Attitude Tolerance	.215	.112***	-.35	.215	.196***	.50
Extramarital Tolerance	.024	.011*	-.12	.024	.034***	.21
Racism	.085	.018**	-.15	.085	.076***	-.32
Life Satisfaction: Life -3	.219	.014**	.13	.219	.002	.07
Whole Life Satisfaction	.180	.005	.09	.180	.011*	.13
Sexual Life Satisfaction	.070	.023**	.17	.070	.000	-.01
Marriage Satisfaction	.060	.016*	-.14	.060	.000	.03

Notes: N is from 367 to 375.

^a Adjusted R^2

* $p < .05$; ** $p < .01$; *** $p < .001$

respectively, $p \leq .001$), prayer and God satisfaction ($\Delta R^2 = .07$ and $.14$ respectively, $p \leq .001$), forgiveness ($\Delta R^2 = .12$, $p \leq .001$), and religious position ($\Delta R^2 = .03$, $p \leq .001$). Thus SS is not subsumed by the Five Factor Model of personality, and appears to offer considerable incremental predictive power regarding these criteria of spirituality or religiousness.

Spiritual Support also added small but significant variance above personality to sexual attitude tolerance, extramarital tolerance, racism, life satisfaction, sexual satisfaction, and marriage satisfaction. Except for sexual attitude tolerance, which added a variance of 11 percent ($p \leq .001$), these added variances ranged from 1 percent to 2 percent: small but important for a very limited spiritual variable in comparison with the much broader personality model. Thus, SS is not subsumed by the Five Factor Model of personality in the prediction of these social variables.

Spiritual Openness provided no significant additional variance to prayer frequency and religious attendance frequency, prayer satisfaction and God satisfaction, or forgiveness. Thus SO offers no significant predictive power over personality in the prediction of these spiritual or religious variables.

However, SO offered a sizeable unique contribution to religious position and political position ($\Delta R^2 = .20$ and $.13$, respectively, $p \leq .001$), discrimination against women ($\Delta R^2 = .20$, $p \leq .001$), sexual attitude tolerance ($\Delta R^2 = .20$, $p \leq .001$), and racism ($\Delta R^2 = .08$, $p \leq .001$). Thus SO demonstrates that it is not subsumed by personality Openness to Experience, but offers sizeable incremental predictive power over personality to explain dimensions of these latter variables.

It also is important to note that Spiritual Openness tended to provide additional predictive power toward criteria which involved attitudes, whether religious or secular, as opposed to criteria which were based on behavior or life satisfactions. In contrast, Spiritual Support showed incremental predictive power over personality across behaviors, attitudes, and satisfactions, although some increments were small.

DISCUSSION

This study presented additional information upon which to assess the construct validity of the Spiritual Experience Index-Revised. A sample with much greater diversity in age and geographical distribution but greater specificity of denomination and degree of religiousness was used to expand understanding of the two SEI-R factors of Spiritual Openness and Spiritual Support.

Initial analysis of the performance of the SEI-R showed an internal consistency and factor structure similar to the normative results. The SS factor strongly correlated with a number of spiritual or religious behavioral and satisfaction measures, as well as with the Faith Maturity Scale, a standard measure of spiritual and religious maturity based on Christian criteria. The SS mean score was higher than the normative mean as expected for this highly religious sample.

The SO scale failed to correlate with almost all spiritual or religious behavioral and satisfaction variables, and correlated only weakly with the experience of the presence of God and the Faith Maturity Vertical Scale, but somewhat more strongly with the Faith Maturity Horizontal Scale. The SO mean score in this highly religious group was unexpectedly similar to the normative mean score.

A series of regressions was performed using religious and nonreligious criterion variables and utilizing the Five Factor personality model on the first step and either the SS or SO model on the second step. Results indicated the incremental validity of the SS model in predicting spiritual behavioral and satisfaction outcomes after the variance attributable to the personality model was removed, and somewhat weaker but significant amounts of additional variance with respect to racism, life satisfactions, and sexual attitude tolerance. However, the SO model failed to offer any predictive increment on the religious behavioral and satisfaction measures, while it did offer a wide range of additional variances with respect to the prediction of racism, sexual attitude tolerance, tolerance of extramarital sexuality, discrimination against women, religious position, and political position. SO failed to offer incremental variance to any of the life satisfaction measures except for a small contribution to whole life satisfaction.

These results appear to confirm the validity of the Spiritual Support subscale of the SEI-R for measurement of mainline Christian groups, inasmuch as Roman Catholic Christians tend to situate themselves within the mainstream of United States Christianity (Greeley 1995). SS appears to be a unique and effective predictor not only of spiritual or religious outcomes, but also of a number of important psychosocial outcomes such as racism and life satisfaction. It may prove itself useful both as a research tool and as a short measure for the clinical assessment of a person's level of spiritual meaning and support.

At the same time, results regarding the Spiritual Openness subscale cast doubt on its validity as a spiritual construct. While it provided incremental predictive capability over personality with regard to a number of psychosocial outcomes, it had little correlation with things most persons consider spiritual or religious. Given these results, it seems that SO may be describing some intentional expansiveness or broad-mindedness as a characteristic beyond personality but which does not represent a primarily spiritual construct. These results call for further clarification of the meaning of Spiritual Openness, and most importantly, continuing investigation of the research and clinical utility of the SEI-R.

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