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# The development, construct validity, and clinical utility of the spiritual meaning scale

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## Abstract

The authors constructed a measure of spiritual meaning, defined as *the extent to which an individual believes that life or some force of which life is a function has a purpose, will, or way in which individuals participate*, to supplement measures of personal meaning (mindfulness to a framework or philosophy of life) and implicit meaning (engaging in activities and valuing attitudes that people typically report as comprising an ideally meaningful life). Using a sample of 465 undergraduates, the authors selected 14 Likert-format items that exhibited desirable psychometric characteristics to constitute the Spiritual Meaning Scale (SMS). Along with measures of personal meaning, implicit meaning, and the Big Five personality dimensions, the SMS was analyzed in relationship to mental health measures (hope, depression, anxiety, and antisocial features) that had also been administered to the aforementioned sample. Hierarchical regression analyses indicated that each of the meaning variables explained variance in hope and depression beyond the variance explained by the Big Five personality factors.
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## 1. Introduction

Meaning is often conceptualized as the *ideas* that underlie an object or event (Klinger, 1998). Related to human action, this concept involves the intentions underlying behavior, that is, the reason or the "why" for behavior (as opposed to "how's" or causes, with which reasons are often confused). So when outlining his concept of meaning and its relationship to suffering, Frankl

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(1984, p. 84) references Nietzsche's observation that "If we have our own why of life, we shall get along with almost any how" (1976, p. 468). Nietzsche's observation implies that having meaning in life could affect one's mental health. While copious studies have followed such an intuition and explored meaning's relationship with mental health variables, the extent to which meaning can tell us something about mental health and personality beyond what other personality constructs can tell us (i.e. the incremental utility of assessing meaning) has not been so well explored. The current study investigated the incremental clinical utility of three distinct, meaning-related constructs relative to the Big Five personality factors. Two of these constructs (*personal* meaning and *implicit* meaning) are already well assessed by existing measures. But because we could not find a satisfactory gauge of the third meaning-related construct, that of spiritual meaning, the current study highlights the development of such a measure.

## 2. Personal meaning

One of the more well studied, psychometrically evaluated operationalizations of personal meaning involves the construct of positive life regard, elaborated by Battista and Almond (1973). Battista and Almond defined positive life regard as having a framework or philosophy for viewing one's life as well as a sense of fulfillment related to living in accord with that framework. They constructed the life regard index (LRI) to assess this construct. The LRI has two sub-scales, one measuring an individual's having arrived at a framework or philosophy of life (i.e. LRI-framework), and the other measuring the individual's perceiving herself as living in accord with that framework (LRI-fulfillment). The two sub-scales can be summed to form an overall life regard or personal meaning score.

The LRI appears adequate to excellent in terms of most tests of its reliability and validity (Chamberlain & Zika, 1988a; Debats, 1990, 1999; Debats, Drost, & Hansen, 1995; Debats, Van Der Lubbe, & Wezeman, 1993; Van Ranst & Marcoen, 1997), although troubling is the extent to which the LRI's fulfillment sub-scale to a large degree taps a sense of feeling good about life. Consider these items: *Living is deeply fulfilling, I really feel good about my life, Other people seem to feel better about their lives than I do, When I look at my life I feel the satisfaction of really having worked to accomplish something, I have real passion in my life, I get so excited by what I'm doing that I find new stores of energy I didn't know that I had, Nothing very outstanding ever seems to happen to me, I feel that I am living fully.* Such items tap directly the outcome variables that the LRI is often used to predict (such as elation, emotional well-being, and depression). These outcome variables therefore to an extent define the measure being used to predict them, and this leads to the question of confounding. Now the overlap of LRI-fulfillment with emotional health variables could reflect what many theorists have proposed, that at least part of the meaning in life construct is best conceived as an outcome variable or as a definitive component of positive psychological functioning (Ryff & Singer, 1998). However, we contend that if meaning is to be shown empirically to be of etiological significance for emotional health, its measures must not be substantially saturated with content overtly related to emotional health. Moreover, if meaning is worth investigating and measuring, it should not merely be a composite of other personality constructs, but rather have a degree of specificity and uniqueness. Because our agenda in the present investigation was ultimately to explore in a conservative manner (i.e. in terms of *discri-*

*minant* validity) the empirical relationship between meaning and mental health, we endorse the LRI-framework sub-scale, and not overall LRI or LRI-fulfillment, as the most appropriate measure of personal meaning.

## 3. Spiritual meaning

Note that the concept of positive life regard involves viewing one's individual life, but not necessarily life itself, as having meaning. This is why Yalom (1980) describes the prior definition of meaning as terrestrial meaning. The latter sort of meaning, which he calls cosmic, is a potentially related but distinct construct. When Frankl (1984, 1988) discussed meaning, he talked about it not as something that can be created or constructed by an individual, but something given to the individual by life. By using such language, he moved beyond personal meaning into cosmic, or what we call spiritual meaning. We conceive of spiritual meaning as a capital "M" Meaning around which one can form a small "m", personal meaning. We define it explicitly as *the extent to which an individual believes that life or some force of which life is a function has a purpose, will, or way in which individuals participate.* This definition captures the idea that many people have that they are participants in a meaning that transcends them. And inasmuch as we are all participants in, or parts of whatever is believed to be life's meaning, we each have particular purposes or functions to play in manifesting that meaning. This links the construct of spiritual meaning to one of *calling*, or of feeling called on by Life (or Tao, God, Being, or whatever Force it is in which one believes oneself to be a participant) to proceed in a certain direction. Although scales do exist that measure constructs related to spirituality and transcendence, a measure of the construct is desirable that does not contain affective content, that has a high amount of specificity and discriminant validity, and that is therefore less likely to be confounded with emotional health constructs. Further, a measure is required that connects concepts of transcendence and spirituality *explicitly* to an individual's sense of meaning. Hence, a key aim of the current study was to construct such a measure, which we have called the Spiritual Meaning Scale (SMS).

## 4. Implicit meaning

Wong (1998) labels as *implicit meaning* the construct people imply when they say "meaning". Using qualitative and then factor analytic techniques, he isolated seven factors that are normatively viewed as "comprising an ideally meaningful life." These factors are achievement (pursuit and attainment of significant life goals), relationship (or general social adeptness), religion (having affirmative beliefs about relationship with the divine), self-transcendence (engagement in selfless pursuits), self-acceptance (a humble acceptance of one's limitations), intimacy (having emotionally close relationships), and fair treatment (perceiving a degree of justice in life). Wong constructed the Personal Meaning Profile (PMP) as a measure of the extent to which individuals report exemplifying these seven factors in their own lives. He constructed the measure based on factor analyses and the extent to which subjects rated each item as "characteristic of an ideally meaningful life." The latest version of the PMP consists of seven sub-scales corresponding to the

seven categories listed above. The sub-scales can be summed to form an overall PMP score. Note that although Wong's scale contains self-transcendence and religion sub-scales, they are different than the construct measured by the SMS. The SMS is tied explicitly to beliefs about some transcendent purpose from which one derives a sense of meaning, whereas the implicit meaning sub-constructs of religion and self-transcendence are not linked explicitly (only implicitly—hence the name, implicit meaning) to finding meaning in life.

## 5. Clinical utility of the LRI-framework, SMS, and PMP

Within various populations, the LRI-framework has been found to be positively related to elation, happiness, positive affect, life satisfaction, psychological well-being, and spiritual well-being; and negatively related to anxiety, depression, psychological distress, negative affect, agoraphobia, somatization, interpersonal sensitivity, sleep disturbance, hopelessness, and obsessive–compulsive symptoms (Chamberlain & Zika, 1988b; Debats, 1990; Debats et al., 1993; Harris & Standard, 2001; Scannell, Allen, & Burton, 2002; Zika & Chamberlain, 1992). Being a relatively recently constructed measure, there is not much information on the clinical utility of the PMP. What data there are, though, are promising, as five of the PMP's seven factors were correlated with the Beck Depression Inventory ($r$'s ranging from $-0.37$ to $-0.64$) and all seven were related to Wong's measure of perceived psychological well-being, ($r$'s ranging from 0.22 to 0.44; Wong, 1998). Regarding spiritual meaning, assuming that the construct is related intimately to that of spirituality, the mounting evidence suggesting a salubrious role for spiritually-related constructs in the promotion of mental health (Bergin, 1983; Emmons, Cheung, & Tehrani, 1998; Gartner, Larson, & Allen, 1991; George, Larson, Koenig, & McCullough, 2000; Levin & Chatters, 1998; Pardini, Plante, Sherman, & Stump, 2000) implies that there would be utility in measuring spiritual meaning and therefore constructing the SMS.

What is conspicuous about meaning research is a lack of analysis of the *relative* usefulness of assessing meaning. Even for studies utilizing the LRI-framework, there is a dearth of investigation of whether personal meaning has relationships to mental health variables that are unique from the relationships of other personality constructs with mental health variables. The objectives, therefore, of the current study were to construct an adequate self-report measure of spiritual meaning (the SMS), and to assess its *incremental* clinical utility as well as that of the latest, revised version of the LRI-framework (LRI-R-framework, Debats, 1998) and the PMP (Wong, 1998). Four aspects of mental health were selected to serve as dependent variables. Depression and anxiety were selected due to their being common and well-known affective problems from which individuals suffer. The variable of hope was selected, because the construct of meaning appears particularly relevant to it: Frankl (1984) proposed that having meaning, especially the spiritual sort measured by the SMS, allows individuals to sustain hope even in virtually hopeless situations. Finally, we thought it important to look at a mental health variable that is notable more for its effects on others and society than for its effects on the individual suffering from it, so the variable of antisocial features was assessed. As described below, we analyzed the ability of the LRI-R-framework, PMP, and SMS to explain variance in measures of these mental health variables beyond the variance that could be explained in them by a measure of the Big Five personality factors of Neuroticism, Conscientiousness, Agreeableness, Openness to experience, and Extra-

version. Needless to say, we hypothesized that the meaning variables would be negatively related to depression, anxiety, and antisocial features, and positively related to hope, and that the meaning measures would explain variance in these mental health variables beyond that explained by the Big Five.

## 6. Methods

### 6.1. Participants

Four hundred and sixty five undergraduates enrolled in introductory psychology courses at Texas A&M University completed the listed self-report measures for course credit. The resultant sample was relatively young and homogeneous. The mean age was 19.12 years, 389 participants (84%) were Caucasian, 47 (10%) were Hispanic, 11 (2%) were African-American, 7 (2%) were Asian-American, 3 (<1%) were Native-American, and 8 (2%) were of other unspecified ethnicity. Regarding spiritual orientation, 418 participants (90%) were Christian, 8 (2%) were Agnostic, 7 (2%) were Atheist, 4 (1%) were Jewish, 3 (<1%) were Buddhist, 2 (<1%) were Hindu, 1 (<1%) was Deist, 20 (4%) were of other unspecified spiritual orientation, and 2 (<1%) declined to identify spiritual orientation. Finally, 215 participants (46%) were female, 247 (52%) were male, and 3 declined to identify their gender (1%).

### 6.2. Construction of the SMS

Eighty-three experimental items were generated for the SMS and administered to the sample described above. Many face-valid items were generated based on the conceptualization of spiritual meaning as *belief that life or another power of which life is a function has a purpose, will, or way in which individuals participate*. Additionally, current research on meaning, particularly Wong's (1998) work with implicit meaning, as well as Frankl's (1984, 1988) classic writings were central to the item generation process. Participants rated each item on a 5-point, Likert scale ranging from *I totally disagree* to *I totally agree*. Items from the initial item pool were eliminated that were significantly positively correlated with a measure of social desirability (the tendency to "fake good"), or that were significantly negatively correlated with a measure of need for cognition (tendency towards objective thinking). This step was taken because we wanted high SMS scores to reflect the respondents' genuine attitudes rather than the tendency to respond with the most socially desirable response. Regarding need for cognition, we thought it important that high SMS scores reflect a genuine search for truth and wrestling with ideas rather than an unthinking acceptance of ideas due to socialization. All 83 items were factor analyzed, and the ones loading below 0.30 on the main factor that emerged were eliminated. We had administered these items to a sample of 450 students previously, and items were eliminated that did not load above 0.30 on the main, emergent factor in both samples. Also considered was the degree to which items were positively correlated with the measures of implicit and personal meaning. Items that were significantly positively correlated with such measures were preferred for retention. Finally, a group consisting of two professors of analytical philosophy, two experts on research of spiritual

variables in psychology, and seven graduate students in clinical psychology rated the degree of fit of each item with the spiritual meaning construct as we have defined it. [1] Items receiving a mean score below 3 on a 5-point scale in terms of their fit with the spiritual meaning construct were eliminated.

The 14 items remaining after this stage of content refinement constituted the final version of the SMS the characteristics of which are reported in Section 7. The 14 SMS items had a coefficient alpha of 0.89.

### 6.3. Materials

*Personal meaning.* As a measure of personal meaning, the authors have already discussed the adequacy of the Life Regard Index-framework sub-scale (LRI-framework, Battista & Almond, 1973), which contains 14 items. We used Debats' (1998) version of the LRI (the LRI-R), which is slightly altered from the original LRI in that its items are in a different order, one word was deleted from three items, and the items are rated on a 3-point rather than a 5-point scale. Harris and Standard (2001) found the LRI-R-framework to have a coefficient alpha of 0.83.

*Implicit meaning.* As a measure of implicit meaning, the personal meaning profile's (PMP, Wong, 1998) reliability and validity have substantial support (Wong, 1998). The PMP is a 57 item inventory consisting of seven sub-scales, the items of which are rated on a 7-point scale. The sub-scales can be analyzed individually or they can be summed to give a single implicit meaning score. The overall PMP score served as an indicator of implicit meaning in the current study. Wong (1998) has reported a coefficient alpha of 0.93 for the PMP.

*Depression, anxiety, and antisocial features.* Depression, anxiety, and antisocial features were measured with the depression, anxiety, and antisocial features scales of the Personality Assessment Inventory (PAI), which is a more face-valid alternative to the MMPI that measures constructs central to the assessment and treatment of psychopathology, and which has demonstrated extensive construct, criterion, and face validity (Morey, 1999). For a US census matched sample, coefficient alphas of 0.87, 0.90, and 0.84 were found for the depression, anxiety, and antisocial features scales, respectively (Morey, 1991). Items for the PAI scales are rated on a 4-point scale.

*Hope.* Due to the particular relevance of meaning to hope that Frankl (1984) posited, we assessed two distinct forms of hope, a goal oriented form measured by Snyder's Adult State Hope Scale (Snyder et al., 1996), and a form with increased spiritual and interpersonal focuses assessed by the Herth Hope Scale (Herth, 1991). Snyder's scale (the SHS) has demonstrated good construct validity and has a coefficient alpha ranging from 0.90 to 0.95 (Lopez, Ciarlelli, Coffman, Stone, & Wyatz, 2000; Snyder, 2002; Snyder et al., 1996). It consists of two factors, one pertaining to an individual's perceived will to certain ends, and another to the person's awareness of pathways to those ends. The scale contains six items to which participants respond on an 8-point scale. Herth's measure of hope (the HHS), which also has exhibited good construct validity (Arnau, 2001; Herth, 1991), taps a broader construct than Snyder's instrument, assessing an additional component related to an individual's perceived support from and spiritual connectedness with others.

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[1] The authors thank Drs. Sarkar and Baker of Louisiana State University, Dr. Koenig of Duke University, Dr. Pargament of Bowling Green State University, and their associates at Texas A&M for their assistance in the process.

The measure has 30 items, each rated on a 4-point scale. Alpha coefficients ranging from 0.75 to 0.94 have been reported for the HHS (Herth, 1991).

*Social desirability.* A shortened version of the Marlowe–Crowne Social Desirability scale (MCSD, Crowne & Marlowe, 1964), which has exhibited adequate construct validity (Crowne & Marlowe, 1964), was used as the measure of social desirability. Called short form A of the MCSD, the scale developed by Reynolds (1982) has substantially better psychometric characteristics than the original MCSD (Loo & Thorpe, 2000). Short form A of the MCSD is an eleven item, true/false test with a reported coefficient alpha of 0.59 (Loo & Thorpe, 2000).

*Need for cognition.* The Need for Cognition scale from the Rational–Experiential Inventory (NFC, Epstein, Pacini, Denes-Raj, & Heier, 1996; Pacini & Epstein, 1999) is a valid and reliable measure of individuals' tendencies towards rational information processing. It is related to the enjoyment of effortful, objective thought, has a positive relationship with openness to experience, has negative relationships with categorical thinking, naïve optimism, and racism, and has a coefficient alpha of 0.90 (Epstein et al., 1996; Pacini & Epstein, 1999). The NFC has 20 items which participants rate on a 5-point scale.

*Five Personality Factors.* Goldberg (1999) has developed the International Personality Item Pool (IPIP), which is a public domain pool of 1250 concisely worded phrases that assess personality attributes. Using the IPIP, Goldberg compiled five, 10-item scales that conform well and compare favorably to the domain scales of the NEO-PI-R (Costa & McCrae, 1992). These five scales, the items of which are rated on a 5-point scale, served as the measures of Neuroticism, Conscientiousness, Agreeableness, Openness to experience, and Extraversion. Goldberg (in press) reports that the IPIP scales have coefficient alphas ranging from 0.75 to 0.85.

## 6.4. Procedure

In groups no greater than 50, participants completed all the listed inventories. Hierarchical regression analyses were used to test the ability of the meaning measures to predict variance in depression, anxiety, antisocial features, and hope relative to the IPIP measure of the Big Five, and to test the ability of the newly constructed SMS to predict variance in these mental health constructs relative to the LRI-R-framework and PMP.

## 7. Results

### 7.1. SMS reliability and validity

*Reliability.* The 14 items constituting the final version of the SMS form a single scale inventory, which had a coefficient alpha of 0.89. When these items were subjected to principal components analysis, two factors emerged with eigenvalues greater than one, but a scree test and parsimony suggested the extraction of only one factor. This factor accounted for 41% of the variance in item responses. As seen in Table 1, all items loaded at 0.55 or above on this factor. Descriptive statistics for the SMS across demographic variables are listed in Table 2.

*Convergent and divergent validity.* As was necessitated by the process of item selection, the SMS had moderate to large correlations with the other measures of meaning. Its correlation with the

Table 1
Principal components analysis factor loadings for SMS items

| Item | Component matrix factor loading |
|---|---|
| There is no particular reason why I exist (−) | 0.67 |
| We are each meant to make our own special contribution to the world | 0.68 |
| I was meant to actualize my potentials | 0.62 |
| Life is inherently meaningful | 0.60 |
| I will never have a spiritual bond with anyone (−) | 0.55 |
| When I look deep within my heart, I see a life I am compelled to pursue. | 0.62 |
| My life is meaningful | 0.72 |
| In performing certain tasks, I can feel something higher or transcendent working through me | 0.62 |
| Our flawed and often horrific behavior indicates that there is little or no meaning inherent in our existence (−) | 0.61 |
| I find meaning even in my mistakes and sins | 0.56 |
| I see a special purpose for myself in this world | 0.76 |
| There are certain activities, jobs, or services to which I feel called | 0.60 |
| There is no reason or meaning underlying human existence (−) | 0.67 |
| We are all participating in something larger and greater than any of us | 0.62 |

$N = 465$.

*Note:* When administering the SMS, items are listed in the order as they appear in this table. Subjects are asked to respond to the items on a 5-point scale where 1 = I totally disagree, 2 = I partially disagree, 3 = I'm in between, 4 = I partially agree, and 5 = I totally agree.

Table 2
Descriptive statistics for the Spiritual Meaning Scale

| | Mean | SD | $N$ |
|---|---|---|---|
| *Gender* | | | |
| Females | 61.09 | 7.40 | 215 |
| Males | 55.98 | 9.39 | 247 |
| | | | |
| *Ethnicity* | | | |
| Black | 60.09 | 9.13 | 11 |
| Asian | 55.14 | 6.07 | 7 |
| Caucasian | 58.65 | 8.84 | 389 |
| Hispanic | 57.36 | 8.33 | 47 |
| Native-American | 48.67 | 11.93 | 3 |
| Other Ethnicity | 58.39 | 8.89 | 8 |
| | | | |
| *Spiritual Orientation* | | | |
| Agnostic | 50.75 | 10.00 | 8 |
| Atheist | 38.71 | 8.60 | 7 |
| Buddhist | 51.67 | 8.02 | 3 |
| Christian | 59.21 | 8.28 | 418 |
| Deist | 56.00 | NA | 1 |
| Hindu | 60.00 | 2.83 | 2 |
| Jewish | 43.50 | 11.71 | 4 |
| Other Spiritual Orientation | 56.10 | 9.21 | 20 |
| | | | |
| Total sample | 58.39 | 8.89 | 465 |

PMP was $r = 0.67$ ($p \leqslant 0.001$), and its correlation with the LRI-R-framework was $r = 0.49$ ($p \leqslant 0.001$). The LRI-R-framework and the PMP had a correlation of $r = 0.56$ ($p \leqslant 0.001$). The data thus indicate that all three measures exhibited adequate convergent characteristics.

We mentioned earlier our intention of selecting items for the SMS that were not related to social desirability and not related negatively to need for cognition. In the current sample, the SMS had Pearson correlations of $r = 0.07$ ($p > 0.05$) with short form A of the MCSD and $r = 0.21$ ($p \leqslant 0.001$) with the Need for Cognition scale of the Rational–Experiential Inventory. So the process of item selection resulted in the SMSs not being contaminated by social desirability. Further, the SMS had a *positive* relationship with need for cognition. The data thus imply that high SMS scores are not a function of socially desirable responding or closed minded thinking. Rather, higher SMS scores are linked to *increased* enjoyment of and engagement in objective thinking Table 3.

## 7.2. Correlations of meaning variables with mental health variables

Table 4 speaks not only to the SMS's clinical relevance, but also to that of the PMP and LRI-R-framework. The SMS had a large, positive correlation with one hope measure (HHS) and a small, positive correlation with the other hope measure (SHS). Further, it was moderately negatively correlated with depression (PAI-dep), and it had small, negative correlations with antisocial features (PAI-ant) and anxiety (PAI-anx). The LRI-R-framework had a small, negative correlation with anxiety, a moderate, negative correlation with depression, and a large, positive correlation with both hope measures. The PMP had high, positive correlations with both hope measures, a high, negative correlation with depression, and small, negative correlations with anxiety and antisocial features.

## 7.3. Variance explained in mental health variables by meaning measures beyond that explained by Neuroticism, Conscientiousness, Agreeableness, Openness, and Extraversion

The next analysis was aimed at testing the three meaning measures' incremental clinical utility. In the current sample, Neuroticism, Conscientiousness, and Extraversion had Pearson correlations with the PAI-Dep of 0.65, −0.41, and −0.38, respectively (all $p$'s $\leqslant 0.001$); Neuroticism and

Table 3
Pearson correlations of mental health measures with meaning measures

| Scale/sub-scale | HHS | SHS | PAI-Dep | PAI-Anx | PAI-Ant |
|---|---|---|---|---|---|
| SMS | 0.62** | 0.31** | −0.42** | −0.19** | −0.26** |
| LRI-R-framework | 0.60** | 0.51** | −0.46** | −0.25** | −0.11 |
| PMP | 0.71** | 0.52** | −0.54** | −0.28** | −0.22** |

$N = 465$.

SMS = Spiritual Meaning Scale, LRI-R-framework = Life Regard Index Revised Framework sub-scale, PMP = Personal Meaning Profile, HHS = Herth Hope Scale, SHS = Snyder Hope Scale, PAI-Dep = Personality Assessment Inventory Depression scale, PAI-Anx = Personality Assessment Inventory Anxiety scale, PAI-Ant = Personality Assessment Inventory Antisocial Features scale.

** $p \leqslant 0.001$.

Table 4
Variance in mental health measures predicted by meaning measures beyond that predicted by the five personality factors of Neuroticism, Conscientiousness, Agreeableness, Openness, and Extroversion

| Scale/sub-scale | Improvement in prediction and Beta weight | SMS | PMP-total | LRI-R-framework |
|---|---|---|---|---|
| SHS | Increase in adjusted $R^2$ | 1[a] | 0.07[b] | 0.07[b] |
|  | β | 0.11* | 0.33** | 0.32** |
| HHS | Increase in adjusted $R^2$ | 0.14[b] | 0.17[b] | 0.10[b] |
|  | β | 0.43** | 0.51** | 0.38** |
| PAI-Dep | Increase in adjusted $R^2$ | 0.03[b] | 0.04[b] | 0.02[b] |
|  | β | −0.20** | −0.25** | −0.18** |
| PAI-Anx | Increase in adjusted $R^2$ | 0 | 0 | 0 |
|  | β | 0.01 | 0.01 | 0 |
| PAI-Ant | Increase in adjusted $R^2$ | 0.03[b] | 0.02[b] | – |
|  | β | −0.20** | −0.20** | – |

$N = 465$.
Big Five personality factors measured by Goldberg's domain scales from the International Personality Item Pool
SMS = Spiritual Meaning Scale, LRI-R-framework = Life Regard Index Revised Framework sub-scale, PMP = Personal Meaning Profile, HHS = Herth Hope Scale, SHS = Snyder Hope Scale, PAI-Dep = Personality Assessment Inventory Depression scale, PAI-Anx = Personality Assessment Inventory Anxiety scale, PAI-Ant = Personality Assessment Inventory Antisocial Features Scale.
* Beta significant at $p \leqslant 0.01$.
** Beta significant at $p \leqslant 0.001$.
[a] Incremental $F$ statistic significant at $p \leqslant 0.01$.
[b] Incremental $F$ statistic significant at $p \leqslant 0.001$.

Extraversion had correlations with the PAI-Anx of 0.68 and −0.28, respectively (all $p$'s $\leqslant 0.001$); Conscientiousness and Agreeableness had correlations with PAI-Ant of −0.25 and −0.42, respectively (all $p$'s $\leqslant 0.001$); Neuroticism, Conscientiousness, Agreeableness, and Extraversion had correlations with the Herth Hope Scale (HHS) of −0.56, 0.44, 0.30, and 0.43, respectively (all $p$'s $\leqslant 0.001$); and Neuroticism and Conscientiousness had correlations with the Snyder Hope Scale (SHS) of −0.43 and 0.48, respectively (all $p$'s $\leqslant 0.001$). The five major personality factors therefore appear to account for much variance in mental health variables, and for the SMS, PMP, and LRI-R-framework to predict variance beyond that predicted by the five personality factors would be an impressive indicator of the *unique* role that meaning can play in promoting mental health.

  Five separate, hierarchical regression analyses were performed in which the SHS, HHS, PAI-Dep, PAI-Anx, and PAI-Ant were dependent variables. For each analysis, the Big Five personality factors were entered in step one as predictors, and the SMS was added as a predictor in step two. As can be seen in Table 4, the SMS significantly improved prediction of variance for the HHS, SHS, PAI-Dep, and PAI-Ant. The table also shows five similar regression analyses performed with the PMP, and four more performed with the LRI-R-framework—No regression was performed for LRI-R-framework predicting PAI-Ant, because the two variables did not have significant Pearson correlations. Table 4 indicates that the PMP and LRI-R-framework improved

prediction of variance for most of the mental health measures beyond the Big Five. Results thus suggest that spiritual meaning, personal meaning, and implicit meaning are *uniquely* related to psychological well-being relative to the five major personality factors.

*7.4. Variance explained in mental health variables by the SMS beyond that explained by the LRI-R-framework and PMP*

Because the SMS was the most recently constructed of the meaning measures being evaluated, a final series of hierarchical regression analyses was performed to assess its unique relationships with mental health relative to personal and implicit meaning. Five separate regression analyses were conducted in which the PMP and LRI-R-framework were entered in step one and the SMS in step two as predictors of PAI-Dep, PAI-Ant, PAI-Anx, the HHS, and the SHS. Results of these analyses, presented in Table 5, indicate that the SMS added a significant amount of variance to predictions of the HHS, the SHS, and PAI-Ant. However, the Beta for its prediction of the SHS was negative, indicating that the SMS is inversely related to the portion of the SHS not accounted for by its relationship with the LRI-R-framework and PMP.

## 8. Discussion

### 8.1. SMS construct validity

Several characteristics of a group of items comprising a new measure called the Spiritual Meaning Scale (the SMS) have been analyzed that attest to the scale's construct validity. The SMS's internal consistency and homogeneity are evinced by its high Cronbach's $\alpha$ and the factor loadings for the principal components analysis of its items. Face relevance of item content to our definition of spiritual meaning is supported by the fact that items selected for inclusion in the SMS had to have received a mean score of 3 or above on a 5-point scale in terms of their fit with our

Table 5

Variance in mental health measures predicted by the SMS beyond that predicted by the LRI-R-framework and the PMP

|  | PAI-DEP | PAI-ANX | PAI-ANT | SHS | HHS |
|---|---|---|---|---|---|
| Increase in adjusted $R^2$ | 0.00 | 0.00 | 0.03[a] | 0.01[b] | 0.02[a] |
| $\beta$ | −0.08 | 0.03 | −0.22[*] | −0.14[**] | 0.21[*] |

$N = 465$.

SMS = Spiritual Meaning Scale, LRI-R-framework = Life Regard Index Revised Framework sub-scale, PMP = Personal Meaning Profile, HHS = Herth Hope Scale, SHS = Snyder Hope Scale, PAI-Dep = Personality Assessment Inventory Depression scale, PAI-Anx = Personality Assessment Inventory Anxiety scale, PAI-Ant = Personality Assessment Inventory Antisocial Features scale.

[*] Beta significant at $p \leqslant 0.001$.

[**] Beta significant at $p \leqslant 0.005$.

[a] Incremental $F$ statistic significant at $p \leqslant 0.001$.

[b] Incremental $F$ statistic significant at $p \leqslant 0.005$.

definition of perceived spiritual meaning, as judged by the well-qualified group described earlier in this article. The SMS therefore appears to assess a single construct related to individuals' perceiving themselves as participants in the purpose of some transcendent Life Force and deriving meaning from such participation. Attesting to the SMS's convergent validity are its correlations with personal and implicit meaning. The scale's lack of relationship with social desirability and its positive correlation with need for cognition speak to the SMS's divergent validity. That is, it does not appear to be related to responding in a positively biased manner for the sake of making oneself look good, and higher SMS scores are related to increased tendency rather than decreased tendency towards objective thinking. There might be a concern that the SMS's positive correlation with need for cognition could bias the test against those who use intuition and feelings to find meaning. However, research shows that preference for objective thought and preference for intuition/emotion are actually independent, orthogonal constructs, not opposite poles of a single continuum (Epstein et al., 1996; Pacini & Epstein, 1999). Thus, the correlation of the SMS with tendency towards objective thought indicates not that those scoring high on SMS meaning avoid intuition and emotion, but that they are likely to have wrestled with the subject of spiritual meaning in their own minds rather than having thoughtlessly accepted the most conveniently available worldview.

## 8.2. Clinical relevance of spiritual meaning, personal meaning, and implicit meaning

The SMS was correlated with several measures of psychological health, and hierarchical regression analysis was used to test the scale's incremental clinical utility with respect to the Big Five personality variables. Hierarchical regression analysis was also used to test the SMS's incremental clinical utility with respect to measures of personal meaning and implicit meaning. With respect to the correlations, spiritual meaning had inverse relationships with depression, anxiety, and antisocial features, and a positive relationship with hope. The regression analyses implied that spiritual meaning is related to depression, antisocial features, and hope beyond the relationships of these variables with the Big Five. This is noteworthy considering that Neuroticism, (lack of) Extraversion, and (lack of) Conscientiousness are virtually definitive of many mental health constructs. Moreover, the SMS accounted for significant variance in hope and antisocial features in addition to the variance accounted for by the LRI-R-framework and PMP. This is impressive considering the broad range of the implicit meaning construct (i.e. containing seven components including intimacy, sociality, religiosity, self-transcendence, achievement, self-acceptance, and fair treatment). The SMS was uniquely related to increased amounts of hope as measured by Herth's scale, which has a more spiritual/philosophical thrust than does Snyder's purely goal-focused scale. However, the SMS had a *negative* Beta for its unique relationship with Snyder's measure of hope, suggesting that some aspect(s) of spiritual meaning might be detrimental to the more cognitive-behavioral and purely goal-focused aspects of hope. Nevertheless, overall results suggest that spiritual meaning as assessed by the SMS is related to increased hope as measured by both measures; it is related to decreased depression, anxiety, and antisocial characteristics; and it is uniquely linked to depression, hope, and antisocial characteristics relative to the Big Five. These results, in combination with the SMS's distinct item content, suggest that it may have broad clinical utility and could make a significant contribution to analyses of the relationship between meaning and mental health.

Another aim of the current study was to extend knowledge about the relevance of personal and implicit meaning to psychological health. Personal meaning is the extent to which individuals are mindful to a system of valued goals to which their behavior and other life events may refer. This construct is adequately assessed by the LRI-R-framework, which was found in the present study to be inversely related to depression and anxiety, positively related to hopefulness, and which predicted variance in depression and hopefulness beyond that predicted by the Big Five personality factors. Implicit meaning is the extent to which individuals report containing those qualities, exhibiting those behaviors, or having had those experiences that people tend to deem "meaningful". This broad construct is well-measured by the PMP, which was found in the present study to be inversely related to depression, anxiety, and antisocial characteristics, and positively related to hopefulness. Further, it predicted variance in hopefulness, depression, and antisocial characteristics in addition to the variance predicted by the Big Five personality factors. Thus, all three meaning constructs investigated in the current study appear related to psychological health beyond the relationship of the Big Five with psychological health. Such relationships are particularly noteworthy because the SMS, PMP, and LRI-R-framework are conservative measures of meaning in that they are unconfounded by affective or emotional content.

## 8.3. Study weaknesses

Of foremost concern is that the relationships of the SMS with personal meaning, implicit meaning, need for cognition, and social desirability, as well as the results of the factor analysis of the SMS, were guaranteed inasmuch as items were selected for the SMS that exhibited the desired relationships and patterns of homogeneity. Replication of these results is therefore needed. Also, there is a need to test the SMS in more diverse populations. The present sample was far less diverse than is desirable, and the SMS ought to be investigated in less Christian, less Caucasian populations, as well as in clinical populations. And as always, clinical application cannot be endorsed until *longitudinal* analyses of the relationship of meaning with mental health occur. That is, the current study leaves relationships over time unexamined, and the extent to which changes in meaning temporally precede, follow, or co-occur with changes in psychological well-being requires specifying. There has been no longitudinal work with the SMS or PMP. However, there have been two longitudinal analyses of the LRI-framework, which suggested that patients with high initial levels of personal meaning have better outcomes in response to psychotherapy (Debats, 1996) and are less likely to maintain drug addiction (Katz, 1988 as cited in Debats, 1998) than those with low levels of personal meaning. Finally, if having high levels of meaning is conceptualized as being a buffer against high stress situations, then a large portion of meaning's effect on mental health might be manifested only in interaction with stress. Studies should thus be conducted to determine the degree to which the relationship of meaning with mental health is moderated by stress.

## 8.4. Implications and future directions

The most pressing tasks for future studies are to correct weaknesses found in the present study, to specify the relationship between meaning and mental health *over time*, and to examine

the interaction of meaning with stress. Also, the different correlates of conceptually distinct sub-constructs of meaning could be explored. While each of the variables assessed in the current study gets at individuals' experiences of their lives as having direction and coherence, personal meaning taps these themes broadly and in a way that need not be derived from overarching, metaphysical beliefs/experiences. Spiritual meaning is clearly more likely to involve deriving meaning from something transcendent. Whereas personal meaning and spiritual meaning are overtly related to a person's subjective experience of her life as meaningful, implicit meaning appears to get at a different component, the attitudes and behaviors that would cause others observing the individual to judge her life as meaningful. The different benefits and liabilities of exhibiting varying levels of each of these constructs will prove an interesting area of study.

We note in closing that discerning the variables on which meaning acts causally is not necessarily more important than isolating those variables that causally act on meaning. Psychotherapy, for instance, is not aimed solely at overcoming disorder but also to perpetuating and amplifying positive aspects of living. Meaning is a good in itself insofar as some patients show up for therapy because they desire to increase their connection with the heart, pulse, or spirit of life. An intriguing question involves the degree to which meaning might be enhanced by interventions as common as challenging negative self-schemata or dysfunctional object relations. Perhaps nothing opens an individual up more to meaning than simply overcoming the "bad object" or "negative self-schema"—freeing up, that is, an individual to commune without blinders with reality, to perceive without distortion the sublime fruits that life's relationships and experiences offer. Of course, the current study has shown that meaning is not just a "growth" construct but is of relevance to traditional clinical constructs, and we encourage researchers to investigate how aspects of meaning might mediate the therapeutic effects of various interventions on traditional clinical variables. Use of the newly developed SMS, the LRI-R-framework, and the PMP will be valuable in conducting such investigations.

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