A SURVEY OF MEASURES OF SPIRITUAL AND TRANSPERS.ONAL CONSTRUCTS: PART ONE-RESEARCH UPDATE

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Since the publication of MacDonald, LeClair, Holland, Alter, and Friedman (1995), an article which reported on available measures of constructs relevant to transpersonal research, the authors of the present paper have continued to monitor the literature in search of additional information in the area of psychometric testing related to spirituality and transpersonal psychology. Although we have seen an increased use of these measures, as well as an emergence of several new instruments designed to tap spiritual and transpersonal concepts, in scientific journals in general, we also have noted a continuing problem discussed in MacDonald et al. (1995). This concerns the lack of organized progress in empirical developments. That is, despite the fact that more research appears to be occurring, there are still few cumulative trends where investigators are incorporating (or even citing) and building upon previous research. This endemic problem has also been observed by others (e.g., Weaver, Kline, Samford, Lucas, Larson, & Gorsuch, 1998). Ostensibly, an intelligible and progressive body of knowledge cannot grow if scientists do not, or cannot, perceive a coherent area of theory and research within which their ideas and data can be contextualized and interpreted.

Taking the aforementioned into consideration, the purpose of this article is to provide the results of our ongoing literature searches with two specific aims in mind, namely to (a) advocate the increased use of psychometric instruments in transpersonal and spiritual research to further scientific development in the field and (b) aid in bringing some order to the growing body of empirical literature by providing information on studies that have utilized a number of the more promising standardized instruments of spiritual and transpersonal constructs. Due to their extensiveness, our findings are

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reported in two parts which are embodied in separate articles. The first part (i.e., this paper) is a summary of information on empirical research that used any of the 20 instruments described at length in the prior test survey completed by MacDonald et al., (1995). We elected to use a "test-driven" instead of "topic-driven" format of presentation because it provides information about available findings in a structure that helps clarify the usefulness of the previously described tests and furthers their possible utilization in future research. The second article provides detailed overviews of ten additional instruments we consider important and which were either not mentioned or, if mentioned, not described in detail in the previous MacDonald et al. paper. In addition, the second article provides citations for an additional number of new measures that have appeared recently and which may prove to have utility in the field.

LITERATURE SEARCHES: PARAMETERS

Ongoing literature searches were completed between 1995 and 1999 through both formal (e.g., computerized database searches) and informal (e.g., authors' knowledge of emerging literature) means. The last computer searches, which involved PsycINFO and Medline Online databases, were completed in September 1999. Search terms involved the name of each measure and consisted of the following: Spirituality Assessment Scale, Spiritual Orientation Inventory, Index of Core Spiritual Experience, Mystical Experiences Scale, Peak Experiences Scale, Intrinsic Religious Motivation Scale, Self-Expansiveness Level Form, Transpersonal Orientation To Learning, Ego Grasping Orientation, East-West Questionnaire, Paranormal Beliefs Scale, Assessment Schedule for Altered States of Consciousness, Integration Inventory, Boundary Questionnaire, Personal Philosophy Inventory, Holistic Living Inventory, Death Transcendence Scale, Temperament and Character Inventory, Phenomenology of Consciousness Inventory, and the Spiritual Well-Being Scale. Other search terms, which were used in combination, consisted of spirituality, spiritual, transpersonal, measurement, and assessment.

RESULTS OF LITERATURE SEARCHES

Research was found for 19 of the 20 tests described in MacDonald et al., (1995) (i.e., all but the Integration Inventory) and is reported below. It should be noted that although we made efforts to be comprehensive in the literature we surveyed, our searches were not exhaustive (e.g., we did not complete recent searches on other databases). As such, it is likely that there are many other studies involving most measures that we did not find and which are not reported here. Also, to minimize redundancy, this article does not include any literature was cited in MacDonald et al., (1995). The reader is encouraged to refer to the 1995 paper for information on test development and validation and, in some cases, descriptions of relevant empirical research.

Spirituality Assessment Scale (SAS; Howden. 1992). The SAS was used in one study. MacDonald (1997, in press) completed a large scale factor analytic study which utilized numerous measures of spirituality and related constructs. Factor analysis of the four SAS subscales (i.e., Unifying Interconnectedness, Purpose and Meaning in Life, Innerness, and Transcendence) along with 10 other instruments showed that the SAS scores loaded primarily on one of the seven factors found. This
factor, labeled Existential Well-Being, also housed a strong negative loading from the Ego Grasping Orientation (see below). The SAS Transcendence subscale was seen to produce a secondary loading on a factor identified as embodying spiritual experience, and the SAS Innerness and Unifying Interconnectedness subscales generated secondary loadings on another factor recognized as reflecting non-theistic spiritual beliefs.

*Spiritual Orientation Inventon’ (SOI: Elkins, Hedstrom, Hughes, Leaf, & Saunders 1988). The search for information on the SOI yielded four studies. First, Zainuddin (1993) factor analyzed the nine SOI dimensions (i.e., Transcendent Dimension, Meaning and Purpose in Life, Mission in Life, Sacredness in Life, Material Values, Altruism, Idealism, Awareness of the Tragic, and Fruits of Spirituality) and obtained a two-factor solution, which was interpreted as reflecting the experiential and value dimensions of spirituality. MacDonald (1997, in press) factor analyzed the SOI dimensions with 10 other related instruments and found that it predominantly contributed to a non-theistic spiritual beliefs factor. However, the SOI Transcendent Dimension and Fruits of Spirituality were found to contribute to another factor identified as relating to the positive aspects of pursuing one's spirituality. The SOI Transcendence Dimension also generated an elevated loading on a spiritual experience factor. In another study, Tloczynski, Knoll, and Fitch (1997) used scores on the SOI and another instrument tapping religious ideology to categorize participants into five groups (i.e., High Spirituality, High Religious Ideology, High Combined, Moderate Combined, and Low Combined) and then compared the groups on measures of self-actualization and psychopathology. They found that the High Spirituality group obtained significantly higher scores than the Low Combined group on several subscales of the self-actualization measure. Differences between the groups were also found on a measure of Type A personality traits. Lastly, Ellason (1992), compared SOI scores of persons with and without multiple personality disorder (MPD) and found that the MPD group showed higher levels of overall spiritual orientation. On a subscale level, the MPD group obtained higher scores than the non-MPD group on SOI Sacredness of Life, Meaning and Purpose in Life, Mission in Life, and Awareness of the Tragic. Subsequent correlational analyses indicated that dissociation was not related to spiritual orientation. Also, a measure of ego resiliency was found to positively associate with the SOI Transcendent Dimension and Fruits of Spirituality.

*Index of Core Spiritual Experience (INSPIRIT: Kass, Friedman, Leserman, Zuttermeister, & Bensoll, 1997). Six studies were uncovered for the INSPIRIT. MacDonald (1997, in press) included the INSPIRIT along with ten other tests in his factor analytic study and found the measure to contribute most appreciably to a factor identified as religiousness, and less so to a second factor relating to the positive gains obtained from spirituality. Though MacDonald obtained a cogent spiritual experience factor, the INSPIRIT did not load on it. Upton (1998) correlated the INSPIRIT to four measures of transpersonal constructs (i.e., Ego Grasping Orientation, Self-Expansiveness Level Form, Boundary Questionnaire, and the Temperament and Character Inventory Self-Transcendence Dimension) and found significant correlations with all instruments. A highly elevated coefficient was obtained with the Temperament and Character Inventory scale, while coefficients of low to moderate strength were found with the remaining tests. Shapiro, Schwartz, and Bonner (1998)
found that INSPIRIT scores increased when it was used as an outcome measure in a controlled study examining the effects of a short-term stress reduction meditation program. Alleman (1993) used the INSPIRIT along with some other related measures and found scores to be elevated for lesbian participants. McBride, Arthur, Brooks, and Pilkington (1998) used the INSPIRIT to create three participant groups (i.e., High, Medium and Low levels of intrinsic spirituality) which were obtained through a family practice residency clinic. They found an association between INSPIRIT scores and a measure of health and physical pain. Finally, VandeCreek, Ayres, and Bassham (1995) provide empirical information on the INSPIRIT with a sample of medical and surgical outpatients and associated family members, including the description of subscales they obtained with the instrument.

*Mystical Experiences Scale (M-Scale; Hood, 1975).* Numerous studies were found for the M-Scale. Focusing first on more measurement-oriented articles, Reinert and Stifler (1993) replicated the M-Scale item-level factor structure as found by Caird (1988), but found little evidence in support of the validity of the factors. Block-Olexick (1993) examined the psychometric properties of the M-Scale through a comparison of persons who demonstrated problems with alcohol versus individuals who were in the process of recovering from alcoholism. She found evidence in support of M-Scale score reliability and factorial validity, and moderate support for the instrument’s convergent and discriminant validity. MacDonald (1997, in press) utilized the eight rational subscales of the M-Scale in a factor analysis along with 10 other related measures and found that the subscales all loaded heavily on a factor relating to spiritual experience. The M-Scale Religious Quality subscale was also found to produce a modest secondary loading on a factor identified as religiousness.

In six studies, the M-Scale was utilized as a variable to predict and/or examine group membership with samples differing in experiential and belief system backgrounds. In the first, Stitler, Greer, Sneck, and Dovenmuehle (1993) found, via discriminant analysis, that the M-Scale alone could differentiate normals from psychiatric inpatients with psychotic disorders and senior members of contemplative and mystical groups but was unsuccessful at distinguishing between the latter two groups. When the M-Scale was used in conjunction with the Ego Grasping Orientation (see below) and a measure of narcissistic personality, however, Stitler et al. uncovered a two-dimensional discriminant function which allowed for a moderately high degree of accuracy in prediction of membership for all three groups. In a second study, Buechele (1989) used the two M-Scale factor scores along with measures of personality variables, orientation to religion, and report of charismatic gifts to correctly classify Catholic charismatics and Catholic parishioners with a fair degree of accuracy into three groups (i.e., prayer group charismatics, charismatic parishioners, and noncharismatic parishioners). In a similar vein, Herron (1992) used the items of the M-Scale in combination with items drawn from other sources in the development of a questionnaire which produced significantly higher scores for spiritual (e.g., Christian, Zen, Yoga) practitioners compared to persons without affiliation or interest in spiritual practice. Majeski (1998) found the M-Scale General Mysticism Factor to significantly differ across meditators and non-meditators. Also, Mercer and Durham (1999) used a modified version of the M-Scale and found that persons differing in sex role and religious affiliation obtained different...
scores for mystical experience (e.g., feminine and androgynous subjects scored higher, as did Catholics compared to Protestants). Finally, Smith (1989) found a significant difference in M-Scale scores between persons identified as experienced versus novice dreamers.

Six additional investigations were found involving the M-Scale. Two of these used the M-Scale to examine the relation of mystical experience to creativity (Bray, 1989; Cowling 1983). However, neither study produced meaningful results. Bray (1989) also did not find a relation between M-Scale scores and a measure of time experience. Jones-Barlock (1991) did not find any age differences in M-Scale scores in a sample of women. Shafer (1982) found the M-Scale to be correlated with reported psychic experiences and with imagery vividness during an ESP test. Swartz and Seginer (1981) observed that individuals scoring high on the M-scale exhibited less destability (i.e., a motor skill) upon body rotation. Finally, Francis and Thomas (1996) correlated the M-Scale to a measure of Eysenck’s three dimensional model of personality and obtained a significant coefficient with extraversion but not with neuroticism or psychoticism.

Peak Experiences Scale (PES; Mathes, Zel'On, Roter, & Joergel; 1982). The search for literature on the PES generated two studies. MacDonald (1997, in press) included the PES as well as 10 other related tests in his factor analytic study and found the instrument to load most appreciably on a factor identified as spiritual experience. In the other study, Mathes (1982) found the PES to correlate with measures of hypnotic susceptibility and romantic love.

intrinsic Religious Motivation Scale (iRMS; Hoge, 1972). The search for documents on the IRMS produced seven studies. In one investigation, Hoge and Can’ol (1973) failed to find a relationship between intrinsic religious motivation and racial prejudice. In another, the IRMS, along with measures of related constructs, was used to successfully predict adults’ perception of internal control (Kivett, Watson, & Busch, 1977). Two studies examined the relation of the IRMS to depression but produced disparate results, Koenig (1995) observed an inverse relation between IRMS scores and depression when using a prison inmate sample while IRMS scores were found to be unrelated to depression in a sample of nursing home residents (Commerford & Reznikoff, 1996). An additional study suggested that intrinsic religious motivation as tapped by the IRMS might be a moderating variable between death anxiety and religiosity (Thorson, Powell, Abdel-Khalek, & Beshai, 1997). Similarly, Clements (1998) found that higher intrinsic religious motivation, as per the IRMS, was related to less fear of death. Finally, MacDonald (1997, in press) found the IRMS to contribute to a religiousness factor when it was factor analyzed with 10 other measures of similar constructs.

Self-Expansiveness Level Form (SELF; Friedman, 1983). The search for documents on the SELF produced a number of studies and articles. First, MacDonald (1997, in press) included the SELF subscales (i.e., personal, middle, and transpersonal) in his factor analysis of 11 spiritual and transpersonal measures and found that they formed an independent factor that contained no elevated loadings from any other measures. MacDonald, Gagnier, & Friedman (1999) attempted to explore the psychometric
properties of the SELF and found the measure to demonstrate adequate reliability and factorial validity. Correlations with measures of related constructs (e.g., Assessment Schedule of Altered States of Consciousness; Ego Permissiveness Inventory; TCI Self-Transcendence) generated some evidence of convergent validity, but it was noted that the coefficients were of low magnitude and, in some cases, contrary to theoretical expectation. MacDonald et al. also found, via correlational and factor analyses, the SELF Transpersonal subscale to be unrelated to the five factor model of personality. Upton (1998) completed some similar analyses and found (a) evidence of factorial validity, (b) some support for convergent validity, and (c) significant though marginally strong correlations between the SELF subscales and the Openness to Experience Dimension of the NEO Personality Inventory-Revised, a measure of the five factor model of personality. Majeski (1998) used the SELF in combination with the M-Scale and the Self-Transcendence Dimension of the Temperament and Character Inventory to examine differences between meditators and non-meditators and obtained significant MANOVA results. However, when the SELF was examined in isolation, no significant differences were obtained. Bursten (1989) utilized the SELF as part of a larger questionnaire to explore the transpersonal factors related to leadership and social transformation and found, via factor analysis, evidence supporting the factorial validity of the Personal and Transpersonal subscales. Finally, Friedman and MacDonald (1997) used the SELF to illustrate how psychometric instruments could inform and aid transpersonally-oriented clinical assessment.

Ego Grasping Orientation (EGO: Knoblauch & Falconer; 1986). The search for the EGO yielded three studies. The first study demonstrated that this measure, in conjunction with a test of narcissism, could separate both hospital staff members and members of a contemplative group from a group with psychoses and religious delusions (Stifler et al. 1993). Furthermore, when this instrument was used in conjunction with a measure of mystical experiences that could separate the hospital staff from the other two groups, increased accuracy in sorting these groups resulted. MacDonald (1997, in press) utilized the EGO in a factor analysis of 11 measures of transpersonal constructs and found the instrument to load heavily and negatively on a factor labeled existential well-being. A third study specifically examined the validity of this measure (Uehara, Compton & Johnson, 1997). The researchers concluded that the EGO would be improved as a measure of Taoist mental health if used in conjunction with other scales tapping East-West orientation, self-esteem, social interest, and depression.

Transpersonal Orientation to Learning (TOTL; Shapiro & Fitzgerald, 1989). The TOTL was found to have been used in only one study. In his factor analysis of 11 measures of spiritual and transpersonal constructs, MacDonald (1997, in press) found two of the four TOTL subscales (i.e., Mystical/Occult/Paranormal Techniques Applied to Schools and Transcendent Consciousness) to produce marked loadings on a factor identified as reflecting paranormal beliefs. In addition, three TOTL subscales (i.e., the two mentioned above along with Fantasy Techniques Applied to Schools), were observed to form an independent and uncorrelated factor.

East-West Questionnaire (EWQ: Gilgen & ClO, 1979). The search for the EWQ generated six studies, Compton (1983) found that the EWQ could differentiate Eastern-oriented meditators from Western-oriented individuals who had never meditated or
practiced a martial art. A second study examined issues related to the response format of the measure and observed that sex-role preference may impact EWQ scores (Gilgen & Barnholtz, 1992). Diakonova & Gilgen (1998) obtained a positive relation between Western-oriented scores on scores of measures of authoritarianism. Hur (1992) found that Chinese and American students differed in the Easternness of their belief systems, with especially notable differences seen in EWQ subscales tapping spiritual beliefs and rationality. MacDonald (1997, in press) included the two EWQ spirituality subscales (i.e., Man and the Spiritual- Eastern and Western, respectively) in his factor analysis of 11 spirituality and transpersonal measures and found them to load heavily on a factor labeled religiousness. Finally, Braithwaite and Scott (1991) provide an overview of the EWQ as a measure of values.

Paranormal Beliefs Scale (PBS; Tobacyk & Milford, 1983). The search for documents on the PBS yielded 13 studies. Several center upon the factorial structure of the test and, in particular, discuss whether the PBS items are best captured by tive oblique versus seven orthogonal factors (Haraldsson, & Houtkooper, 1996; Lawrence 1995a, 1995b, 1997a, 1997b; Tobacyk, 1995a, 1995b). Thalbourne (1995), who found the PBS to be unrelated to affiliation to a religious faith, also discusses concerns regarding the PBS factor structure. The remaining research using the PBS focused upon a range of variables. Tobacyk, Wells, and Miller (1998) compared a group of persons reporting out-of-body experiences to a non-reporting group and found the former to obtain significantly higher scores on PBS Psi Beliefs. Spiritualism, and Extraordinary Life Forms subscales. Groth-Marnat and Pegden (1998) examined the relation of the PBS to measures of sensation seeking and locus of control: they observed that a greater external locus of control was associated with greater PBS total scores and with the PBS subscales of Spiritualism and Precognition. Further, a positive association was found between sensation seeking and the PBS Psi Beliefs and Superstition subscales. Saucer, Cahoon, and Edmonds (1992) investigated the relation between the PBS and measures of atheistic beliefs and hypnotic susceptibility and obtained non-significant findings. Persinger and Richards (1991) found that the PBS differentially relates to anomalous temporal lobe signs as a function of sex. Lastly, MacDonald (1997, in press) included the seven PBS subscales in his factor analysis of 11 tests and found six of the seven subscales to appreciably load on a factor identified as paranormal beliefs. The PBS Traditional Religious Beliefs subscale was seen to contribute to a religiosity factor.

Assessment Schedule for Altered States of Consciousness (ASASC; van Quckelbergh, Altstoffcr-Gleich, & Hertweck, 1991). Three studies were uncovered that used the ASASC. MacDonald (1997, in press) utilized 13 of the 14 ASASC subscales (i.e., all but the Personal Data subscale), in both correlational and factor analyses in an effort to validate a multidimensional measurement model of spirituality. The ASASC subscales tapping paranormal beliefs and behaviors (i.e., Esoterics, Parapsychology, Own View) were observed to relate most notably to indices of paranormal beliefs while the Positive Mystic Experiences was found to associate most strongly explicit spiritual experience measures. The ASASC Negative Mystic Experiences subscale was observed to inversely relate to measures of existential well-being. All of the ASASC subscales, except Parapsychology, Own View were seen, via factor analysis, to load heavily on a factor identified as a generalized non-ordinary
experiences dimension. In a second study, MacDonald, Gagnier, and Friedman (1999) also used the ASASC for test validation purposes, except they focused their efforts on the SELF. In general, the ASASC subscales did not correlate with the SELF subscales in a theoretically consistent manner. Finally, MacDonald and Holland (1999) obtained significant correlations between the ASASC subscales and a measure of complex partial epileptic like signs.

**Boundary Questionnaire (BQ: Hartmann, 1991).** The search for documents on the BQ produced three studies. One study examined the measure with a sample of adolescents and found that internal consistency, sex differences, and both dream recall and the experience of nightmares were related to the measure in a fashion similar to previous findings on adults (Cowen & Levin, 1995). A second study found a positive correlation between the BQ and a personality measure supporting that the boundary construct can be viewed as an aspect of personality (Sand & Levin, 1996). Upton (1998) found the BQ total score and a number of its subscales to be significantly correlated to the INSPIRIT, TCI Self-Transcendence dimension and NEO-PI-R Openness to Experience.

**Personal Philosophy Inventory (PPI: Persilger & Makarec, 1987, 1993).** Twelve studies using the PPI were obtained in our searches. One article (Persinger & Makarec, 1991) reports on empirically observed sex differences in PPI scores while several papers explore the impact and/or implications of sex differences in PPI scores in relation to several variables. These include MMPI Schizoid and Hypomania scales (Persinger 1991a): paranormal beliefs (Persinger & Richards, 1991); elicitation of childhood memories and False Memory Syndrome (Persinger, 1994): tactile-visual cross-modal matching (Chellew & Persinger, 1994): visual search times (Makarec & Persinger, 1995); childhood imaginings, exotic beliefs, and logical inference making (Persinger & Makarec, 1991-1992); and church attendance and reported religious experience (Persinger, 1997). Persinger (1991b) found significant PPI score differences between a group of persons reporting a religious experience during adolescence compared to a group of individuals who did not report such experiences. Persinger (1993) obtained significant correlations between paranormal and religious beliefs and scores on the PPI Complex Partial Epileptic-Like Signs (CPELS) subscale. Richards and Persinger (1991) found a significant relation between the CPELS subscale and a measure of dissociative experiences. Finally, MacDonald and Holland (1999) observed the CPELS to differentially relate to measures of religiousness, spirituality, and non-ordinary experience (CPELS associated the strongest and most consistently with non-ordinary experience and weakest with religion variables).

**Holistic Living Inventory (HLI: Stoudenmire, Batllvll, Pavlov, & Temple, 1985).** Document searches for the HLI generated only one study. Leitschuh (1993) used the HLI in a multivariate study looking at the relation of coping disposition and holistic living to perception of health and life satisfaction and found that the HLI Spiritual subscale positively related to life satisfaction.

**Death TrailScendence Scale (DTS: Hood & Morris, 1983).** The DTS was found in only one study. MacDonald (1997, in press) used the DTS to validate a multidimensional model of spirituality. MacDonald observed that the DTS Mystical
Experiences subscale relates most markedly to measures of spiritual experiences and the DTS Religious subscale correlates strongly with measures of spiritual and religious beliefs and practices.

**Temperament and Character Inventory (Tel; Cloninger; 1996; Cloninger. Svrakic. & Przybeck. 1993).** The search for documents on the TCI yielded over 45 articles using this measure. However, when we constrained our search to articles explicitly reporting on the TCI Self-Transcendence dimension, we ended up with seven studies. It should be noted that the literature we obtained utilized various forms of the TCI (e.g., some use the full version of the instrument while others use a short 125 form). Also, as a point of information, the TCI Self-Transcendence dimension has been revised and expanded to include five subscales instead of just three (Cloninger, 1996). The five subscales are Self-Forgetfulness and Fresh Experience versus Self-Conscious Experience; Transpersonal Identification versus Self-Isolation; Spiritual Acceptance versus Rational Materialism; Enlightened versus Objective; and, Idealistic versus Practical. Interestingly, little research has appeared which has employed the five-subscale version. Nonetheless, and turning to the research obtained, Majeski (1998) found that groups of meditating and non-meditating women, respectively, produced significantly different scores on two of the TSI Self-Transcendence subscales (i.e., Self-Forgetfulness and Transpersonal Identification). Ruchkin. Eise­mann. Haeggloef. and Cloninger (1998) compared a group of Russian male delin­quent adolescents to control subjects and found that the delinquents had a higher level of self-transcendence, as well as higher levels on other scales of the instru­ment. In another study. Gendall. Joyce. Sullivan and Sulik (1998) showed that self­transcendence correlated with an eating questionnaire and an aspect of eating called cognitive restraint in a sample of women. Tanaka. Sakamoto. Kijima and Kitamura (1998) found the TCI Self-Transcendence dimension and two other TCI dimensions (i.e., Harm Avoidance and Self-Directedness) to significantly predict scores on a depression scale. Also. Hansene. Reggers. Pinto. Kijiri. Ajamier and Ansseau (1999). compared persons with major depression to healthy controls and found the former to exhibit, among other noted differences. higher self-transcendence scores. Sayon. Hill. Svrakic, Przybeck. et al (1996) observed that TCI Self-Transcendence was highly correlated with notable levels of Axis I psychopathology in a sample of psy­chiatric outpatients. Lastly, based upon the available research. Cloninger. Svrakic. Sayon and Przybeck (1999) argue that self-transcendence may be predictive of the likelihood to develop mood disorders or psychosis or may even be a subclinical form of these disorders.

1995). On a different note, Pekala, Forbes, and Contrisciani (1988-89) used the PCI to examine the experiential effects of stress management techniques (e.g., hypnosis, progressive relaxation, deep breathing) and found that the techniques were not phenomenologically equivalent. Lloyd and Gannon (1998-1999) noted significant differences in PCI scores for persons undergoing treatment experiences involving relaxation and catharsis, respectively. Pekala and Ersek (1992-1993) observed via scores on the PCI and a measure of attention that the subjective effects of firewalking are characterized by increased levels of rationality and volitional control and accompanied by an absorbed attentional style. Morgan (1987) had 28 individuals complete the PCI both before and after trance dancing and found significant differences in pre- and post-PCI scores in terms of body image, time sense, perception, meaning, attention, and state of awareness. Maurer, Kumar, Woodside and Pekala (1997) used the PCI as a measure of hypnoidal states of consciousness and saw that monotonous drumming was associated with higher subjective trance levels. Maitz and Pekala (1990-1991) were able to use the PCI and a measure of attention to demonstrate phenomenological differences between near death experiences and other states of consciousness. Finally, Morrison and Hunt (1996) examined the effects of demand characteristics and response set on PCI scores in comparison to interview self-report measures and found that the PCI was unable to differentiate between actual meditators and persons role-playing as meditators.

Spiritual Well-Being Scale (SWBS; Paloutzian & Ellison, 1982; Ellison, 1983). The search for documents on the SWBS yielded 18 articles. D'Costa (1995) and Schoenrade (1995) reviewed the SWBS and concluded that the instrument has acceptable psychometric properties. Scott, Agresti and Fitchett (1998) examined the SWBS using a psychiatric inpatient sample and found evidence of a three dimensional factor structure. Further, and contrary to earlier research, they found no indications that ceiling effects compromised the SWBS with this sample. Another study focused on ethnic differences in this measure and found that the factor structure of the SWBS differed across groups of Caucasians and African-Americans, respectively (Miller, Flemming, & Brown-Anderson, 1998). Kelly (1993) attempted to revise the SWBS to address some of its psychometric deficiencies as found with highly religious populations by either rewording existing items or substituting new ones. She noted that the revised scale generated a more normal score distribution and fewer respondents were found to obtain the maximum score. Also, she observed that the revised SWBS produced a three dimensional factor structure. MacDonald (1997, in press) used the SWBS subscales in his efforts to validate a five factor measurement model of spirituality and found the Religious Well-Being subscale to relate appreciably to measures of spiritual and religious beliefs and practices while the Existential Well-Being subscale was seen to associate most strongly with measures of similar constructs. Turning to more applied research, Brisben (1993) found with a sample of adolescents that SWBS scores produced low positive correlations with measures of parent-adolescent communication, and moderate positive coefficients with self-esteem. Borman and Dixon (1998) completed a study comparing substance abuse participants in 12-step outpatient programs with those in other outpatient programs. They found that both groups increased significantly in spirituality as measured by the SWBS with no significant difference between the two groups. Henderson (1992) found no significant difference between samples of adult children of
alcoholics (ACA) and normal adults on the total SWBS and both of its subscales. However, after reclassifying participants into groups based upon scores on the Children of Alcoholics Screening Test, he observed that ACA obtained lower Existential Well-Being scores. Mickley, Soeken and Belcher (1992) found in a sample of women with breast cancer that women with an intrinsic religious orientation obtained higher spiritual well-being scores. In addition, SWBS Existential Well-Being was seen to be most associated with hope in these women. Landis (1996) observed with a sample of persons with diabetes mellitus that SWBS scores were inversely related to problems associated to living with chronic illness and with uncertainty. In a study using gynecologic oncology patients, Gioella, Berkman, and Robinson (1998) found that women with gynecological cancers (other than ovarian) obtained higher SWBS scores were obtained by older patients, married patients, and Catholic patients, respectively. Richards, Owen, and Stein (1993) used the SWBS as an outcome measure for a religiously oriented therapy group for perfectionism and found that as the treatment progressed, SWBS Existential Well-Being scores increased. Pritt (1998) explored the spiritual correlates of reported sexual abuse in a sample of Mormon women compared to a group of non-sexually abused women and found the former to obtain lower SWBS scores. Kamya (1994) observed in a sample of African immigrants that SWBS scores had a significant positive correlation to hardiness, self-esteem, and coping resources. Rasmussen and Johnson (1994) found, via step-wise multiple regression analyses, that SWBS scores were significantly and negatively related to death anxiety. Finally, two studies examined the presence of spiritual well-being in health care professionals. Gray (1989) found that both nursing students and professional nursing reported a high degree of spiritual well-being as measured by the SWBS. Further, attendance at religious services was seen to be related to SWBS Religious Well-Being scores. Ellis, Vinson, and Ewigman (1999) examined physicians' attitudes and practices regarding the spiritual concerns of their patients and found high SWBS scores among respondent physicians.

CONCLUSION

As stated in the introduction, the purpose of this paper is to (a) advocate the use of standardized psychometric instruments in transpersonal areas of research, and (b) aid in bringing clarity to the existing and emerging scientific literature. When we consider the status of research on the aforementioned tests, although it is apparent that numerous research topics have been investigated, certain topics, as well as measures, appear to have garnered the most attention. In particular, topics such as non-ordinary states of consciousness (e.g., meditative, hypnotic, dissociative, and the like), coping, health and wellness, and the implications of spiritual and transpersonal phenomena for therapeutic interventions, seem to represent the majority of literature we uncovered. Further, the M-Scale, PCI, and SWBS are the assessment tools which are clearly most commonly employed in the reviewed research. It would appear that future spiritual and transpersonal research utilizing any of these three measures has a clear basis in existing scientific knowledge, and would contribute to a cumulative and systematic body of empirical findings. Likewise, use of the other measures reviewed that have some precedence in previous research is considered preferable as compared to investigators continuing to, in a piecemeal fashion, devise custom measures for each study undertaken. Notwithstanding these observed trends.
it is our opinion that ongoing psychometric research is needed for all of the measures included in this review and that further development of these tools constitutes the basis for many worthwhile projects for future study. Finally, it should be emphasized that researchers should exercise appropriate caution in their use and interpretation of data arising from any of these instruments based on our limited knowledge about them at this time. Certainly, although many of these measures are promising, we believe it prudent for researchers in this domain to exhibit rigorous sensitivity to methodological concerns.

**NOTE**

Readers are encouraged to contact the first author at the address provided if they are aware of any literature involving the measures discussed in this paper which has not been included either in the present article or in MacDonald et al. (1995).

**REFERENCES**


view versus questionnaire. *CUNY/Forest Psychology*, 37(2), 112-113.


corporate concepts.

ence, *Contemporary Hypnotherapy*, 8(1), 95-104.


An analysis of phenomenological patterns of consciousness of individuals of differing susce­

cerning consciousness, attention, and immunity, *IllagilliatlOllr, Cognition & Perso­
nalitY*, 12(3), 207-229.


Pekala, R. & Kumar, V. (1987). Predicting hypnotic susceptibility via a self-report instrument:


and hypomanic scales in a normal population: Men and women are similar but for differ­ent reasons, *Perceptual and Motor Skills*, 73(2), 519-518.


Persinger, M. A. (1993). Paranormal and religious beliefs may be mediated differentially by
subcortical and cortical phenomenological processes or the temporal (limbic) lobes,
*Perceptual and Motor Skills*, 76(1), 247-251.

Persinger, M. A. (1994). Elicitation of "childhood memories" in hypnosis-like settings is asso­
ciated with complex partial epileptic-like signs for women but not for men: Implications


STIFLER, K., GREER, I., SNECK, W., & DONNEMUIRLE, R. (1993). An empirical investigation of


