Spirituality in Practice: Relationships Between Meaning in Life, Commitment and Motivation

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Increasing numbers of people are searching for meaning and spiritual significance in the workplace. Research in the field of psychiatry has consistently shown a sense of meaning in one's life to be an important correlate of mental health and well-being. In this study, we examined the relationships between a person's sense of meaning in life, with life orientation variables, biographic variables, work commitment and work motivation. Through testing six hypotheses, we found significant associations between sense of meaning in life, positive work orientations, career commitment and work motivation. Our findings point to a spiritual source of work motivation and commitment, a more fundamental source than covered in existing motivation theories — commitment and motivation can also be expressions of a sense of meaning in one's life. This study improves understanding of workplace spirituality in practice.

Keywords Spirituality in the workplace, Meaning in Life, Work Commitment. Work Motivation Without work, all life goes rotten.
But when work is soulless, life stifles and dies.

Albert Camus

ver the past few years, more and more people have embarked on a quest for meaning, and sought answers to the questions of the human soul in the workplace (Chalofsky, 2003). However, historically, the creators of work behavior theories concentrated almost exclusively on people's unconscious and rational nature, bypassing spiritual and existential issues. By contrast, spirituality centers on one's ontological quest – spiritual beings that question their existence and want to feel that their existence has meaning and significance. This implies behavior outside the existing unconscious, rational and logical paradigms.

The increasing interest in the topic of spirituality in organizations cannot be ignored. Many authors explained the importance of workplace spirituality in many publications in popular literature, scholarly journals and at top tier conferences (Dent, Higgins and Wharff; 2005; Fry, 2005; Klenke, 2005; Parameshwar, 2005). Because work is generally a central part of human existence, and so much time is spent at work, much of our spiritual odyssey occurs within the context of the workplace (Duchon and Plowman, 2005). If a personal transformation is to take place, some of it is likely to take place at work, as people search for a way to connect their working lives with their spiritual lives. Despite its importance and growth in popularity and attention, spirituality in the workplace has received limited empirical attention. There has been a corresponding call for more scientific inquiry into workplace spirituality (Giacalone and Jurkiewicz, 2003). Responding to this call, we examine the relationship between workplace spirituality with work commitment and work motivation in this study.

Theory development of workplace spirituality is in its infancy and construct clarity is lacking as result (Dent, Higgins and Wharff, 2005). Although several definitions and measures of workplace spirituality have been proposed (Fornaciari, Sherlock, Ritchie and Dean, 2005; Klenke, 2005), the many different definitions are inconclusive and vague (Giacalone and Jurkiewicz, 2003; Kolodinsky, Giacalone and Jurkiewicz, 2004; Polley, Vora and SubbaNarasimha, 2005). It is difficult to understand and research a phenomenon until one can clearly define the construct precisely.

In spite of ambiguity in defining spirituality, there is agreement in literature on the importance of meaning in life as an integral element of spirituality (Cash, 2000; Kriger and Seng, 2005; Myers, Sweeney and Witmer, 2000; Stanard, Sandhu and Painter, 2000). In contrast to the encompassing construct of spirituality, meaning in life has been defined clearly and researched empirically for more than 40 years. From this, De Klerk (2005) suggests researching workplace spirituality through focusing on one of its main elements, meaning in life, while the definition and measurement of spirituality in the workplace is being clarified. His proposed research agenda makes researching workplace spirituality empirically sound and practically possible. Rather than adding another definition of workplace spirituality to the many already published, we opted to apply De Klerk's (2005) proposal in this study. The purpose of this research is to investigate the relationships between a person's sense of meaning with life and work orientation variables, work commitment and work motivation.

LITERATURE REVIEW AND RESEARCH QUESTIONS

Spirituality and Meaning in Life

The construct of spirituality includes concepts such as transcendence, purpose, wholeness, altruism, universality and meaning in life (Cavanagh, 1999; Fry, Vitucci and Cedillo, 2005; Cash, 2000; Stanard et al., 2000). Spirituality is also about a deep sense of wholeness or connectedness to the universe – a sense of the existence of and a connectedness to a Higher Power (Miller, 2004) – which can be (but not necessarily is) expressed as religious dogma, rituals and rites (Stanard, et al., 2000). Spirituality can also be defined as the desire to find ultimate purpose in life and to live accordingly (Cavanagh, 1999; Cash, 2000). Others include hope, faith, altruistic love and having a vision in defining spirituality (Fry, 2003). Duchon and Plowman (2005) define workplace spirituality as a workplace that recognizes that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community.

From the multiple definitions of spirituality, three main themes prevail; most definitions relate spirituality to meaning in life, a sense of unity with the universe and the awareness of a 'life force.' These themes represent the main elements contained in the construct of spirituality and meaning in life is a dominant element of spirituality. In fact, spirituality is sometimes described as a desire to find ultimate purpose in life, and the search for meaning in one's

life is an essential part of one's journey towards spiritual awareness (Cavanagh, 1999; Frankl, 1984, 1992).

Meaning in life thus stems from the encompassing construct of spirituality. Stating that their lives are meaningful implies that (a) they are committed to a worthwhile purpose, (b) they perceive their lives as related to or fulfilling this purpose, (c) they see potential meaning in all circumstances, even in suffering, and (d) as a result they experience fulfillment and a feeling of significance (Battista and Almond, 1973; Frankl, 1984; Reker, 1994). The term 'purpose' is often used as a synonym for meaning in life. 'Meaning in life' ('meaning') is defined in this article as identifying and fulfilling a higher purpose for living (including working), resulting in a feeling that one's existence is significant in some way.

Confusion can easily arise regarding the definition of the construct of meaning in life when this construct is applied to the work situation. Meaning in life should be clearly distinguished from related constructs such as the meaning of work and meaningful work. Although the constructs meaning of work and meaningful work are related to meaning in life, they do not equate to meaning in life. Their origins are not necessarily seated in spirituality, and they are much narrower constructs. Meaning of work is about the role of work in human lives and covers mainly the sociological reasons why people work. One of the reasons is that it makes life meaningful (Gill, 1999; Morse and Weiss, 1955). Meaningful work is about those working conditions that are motivating;, the construct includes aspects such as autonomy, responsibility and task significance, identity, complexity, challenge and variety (Chalofsky, 2003).

Meaning in Life as a Scientific Psychological Construct

Crumbaugh and Maholick (1964) were the first researchers to adopt a psychometric approach to measuring meaning in life, as conceptualized by Frankl (1959), with their Purpose in Life Test. Several improved instruments followed, such as Battista and Almond's (1973) Life Regard Index. Empirical support for the psychometric soundness of these instruments is well documented, and research supports the proposition that a meaning in life dimension can be measured scientifically (Chamberlain and Zika, 1988; Debats, Van der Lubbe and Wezeman, 1993).

Research on meaning has been conducted mainly in the fields of psychiatry and clinical psychology and focused primarily on the relationship(s) between meaning in life and psychological well-being. These studies have consistently shown correlations between meaning and concepts such as social participation

(Chamberlain and Zika, 198), internal locus of control (Phillips, 1980), self-esteem and self-concept (Chamberlain and Zika, 1988), positive life experiences and well-being (Reker, Peacock and Wong, 1987; Scannell, Allen and Burton, 2002), successful life changes (Heatherton and Nichols, 1994), resistance to stress and coping (Edwards and Holden, 2001; Reker, 1994; Moomal, 1999) and successful aging and acceptance of death (Reker, 1994; Debats and Drost, 1995). Meaning in life appears to be one of the usual properties of normal functioning although it is not necessarily a prerequisite for normal functioning.

By contrast, a lack of meaning in life (meaninglessness) consistently correlates with a lack of psychological well-being and the presence of psychopathologies such as anxiety (Zika and Chamberlain, 1992), uncontrollable stress and burnout (Harlow, Newcomb and Bentler,1986), depression (Phillips, 1980; Scannell et al., 2002; Zika and Chamberlain, 1992), suicidal ideations (Edwards and Holden, 2001; Harlow et al., 1986), alcoholism and substance abuse (Crumbaugh, 1968; Debats, 1999), neuroticism and psychoticism (Crumbaugh, 1968; Zika and Chamberlain, 1992).

From the consistent correlations of meaning in life with psychological well-being and meaninglessness with a lack of well-being, we postulate that a sense of meaning in life will promote positive life and work orientations. Thus our first hypothesis:

H1 Meaning in life will promote positive orientations towards work and life orientations associated with psychological well-being.

We selected variables from various theoretical and empirical perspectives to assess this hypothesis. Frankl (1992) asserts that people compensate for a lack of meaning by overindulging in work or trivial activities. Heintzman and Mannel (2003) describe solitude as important to spiritual wellness. From this background, we selected variables such as working hours, making time to be alone and not finding it difficult to be alone. Not all people find the meaning of their life in work, and work is not necessarily central to everyone's life (Frankl, 1992). This guided us to variables such as making time for leisure, friends or family, and participating in sport or hobbies. These variables also represent aspects of a meaningful and healthy work/life balance (De Klerk, 2005; Heintzman and Mannell, 2003). Strength of religious conviction is clearly a spiritual issue (King, 2003), more so than belonging to a specific religious domination. We thus selected strength of religious conviction as a measure of spiritual wellness, an essential part of well-being (Myers et al., 2000).

Meaning in life leads to a self-transcendent approach to life and work (Frankl, 1984; Fry, 2005; Fry et al., 2005; Markow and Klenke, 2005). Spreading one's wealth can be a spiritual act of transcendence and a positive life orientation (Schervish and O'Herlihy, 2002). From this, we included active involvement in community or welfare work and regular financial contributions towards such work as measures of transcendence. Those who find meaning in their work are likely to approach their jobs more positively (Frankl, 1992; Baum and Stewart, 1990; Morse and Weiss, 1955). For this reason, we selected variables such as satisfaction with career progress, willingness to continue working, and continuing with the same job in the absence of financial necessity. Meaning in life correlates with making successful life changes (Heatherton and Nichols, 1994). People who find meaning in life are thus expected to seek and find work that is aligned with their sense of purpose (De Klerk, 2005). Since employees are active creators of their work and tasks, we selected making substantial career changes as a variable pointing to a positive work orientation.

Research results have been contradictory among studies seeking to show a relationship between meaning in life and biographic variables such as gender, qualifications, marital status, cultural heritage, religious orientation and age. Although some studies found relationships between meaning and age (Reker, 1994; Reker et al., 1987) and gender (Harlow et al., 1986; Sargent, 1973), most studies failed to find relationships between meaning in life and biographic variables (Crumbaugh and Maholick, 1964; Debats et al., 1993; Debats, 1999). Because of the lack of a clear relationship between meaning and biographic variables, Debats (1999) argues the quest for meaning in life is a universal phenomenon and a basic human drive – it changes its appearance through one's life cycle, but never disappears. From this argument and to control for external variance, we derived our second hypothesis:

H2 Meaning in life is not influenced significantly by biographic variables.

Most previous studies did not include work related biographic variables when researching such relationships with meaning in life. We thus added work related biographic variables to the biographic variables already mentioned, namely fields of study and employment, years with employer, and seniority in organization,.

Work Commitment and its Relationship to Meaning

The ultimate sense of meaning is arguably reached if a person finds both life and work meaningful (Chalofsky, 2003). In this state people are motivated to work and be committed to their work. But, depending on the extent to which

non-work roles compete with work roles, individuals may not be equally committed to their work. There is little agreement on many facets of work commitment, but several studies describe work commitment with the constructs of work values, job involvement, organizational commitment and career commitment (Randall and Cote, 1991; Blau, Paul and St. John, 1993; Cohen, 1999).

Values are principles that lay the foundations for motivation and attitudes (Elizur, 1984). Work values refer to beliefs, opinions and attitudes about what is right and preferable in the workplace (Furnham, 1990). Frankl (1984) proposes that values aid in the search for meaning, and that values supply meaning in the situations that typically occur in life. Thus, there is a conceptual relationship between meaning and work values, especially when work is central to a person's life.

Job involvement refers to identification with and emotional commitment to their present job (Kanungo, 1982). Riipenen (1997) found job involvement to be related to well-being and positive life affects (such as happiness, satisfaction, self-esteem), especially when people experience need fulfillment in their jobs. By contrast, he found job involvement to be related inversely to negative life affects (such as anxiety, depression, hopelessness). The relationships of job involvement with these variables correspond with the relationships that other studies found between meaning and meaninglessness and the same variables. Also, many find meaning through their work (Baum and Stewart, 1990). A job is the practical expression of a career and a job includes the activities through which a person makes a positive contribution to the world. Meaning in life appears to influence a person's level of job involvement, as a job can be an expression of a person's sense of meaning in his or her life.

Career commitment refers to people's motivation to work in a chosen vocation or in a chosen career role (Carson and Bedeian, 1994). If their sense of purpose is congruent with their occupations or careers, their work becomes an expression of meaning (Savickas, 1991). An individual's business career can be a path of spiritual growth – a career becomes a path to personal enlightenment, leading through the mastery of material skills to spiritual growth and self-knowledge (Konz and Ryan, 1999). It seems reasonable to deduce that in cases where careers are aligned with a sense of meaning in life, careers become related to a higher calling. Therefore, people strongly identify with their careers, almost as a spiritual calling, show resilience to stick to this calling in the face of adversity, and engage in career planning in order to make the most out of their careers.

As organizational commitment has been found to be an outcome of the other facets of work commitment (Cohen, 1999), we did not explore its relationship with meaning in life in this study. Still, Sanders, Hopkins and Geroy (2004) found correlations between spirituality and organizational commitment. It appears the other three facets of work commitment – namely work values, job involvement and career commitment – are also influenced by a sense of meaning in life. We thus reason that finding meaning in their existence should influence their levels of work commitment positively. It is from this argument that we derived the third hypothesis:

H3 Meaning in life will influence work commitment, as measured through work values, job involvement and career commitment.

Work Motivation and its Relationship to Meaning in Life

Work motivation is about that which energizes, directs and maintains work related behavior (Pinder, 1998). Creators of work motivation theories historically concentrated almost exclusively on humans' unconscious and rational nature (for example, expectancy theory, equity theory, or goal-setting theory), and worker productivity (Michaelson, 2005). The developers of these theories assumed either that people are driven by needs, or that they are rational maximisers of personal utility. Although research does indeed provide considerable support for these theories, calculative models of behavior do not account for the full range of behavior, such as nonpredictable, or so-called irrational behavior (Leonard, Beauvais and Scholl, 1995). These theories also do not account for the spiritual dimension of behavior, the dimension of meaning.

Several authors argue that motivation and the intent to exert any effort belong to the realm of meaning. As early as 1964, Victor Vroom suggested that work must make sense to individuals before they will perform it. He called for the choice to work to be the principal focus of work motivation research (Vroom, 1964). Frankl (1959, 1984, 1992) asserts that the primary human motivational force is a striving to realise or find meaning in life. He calls this a "will-to-meaning" (Frankl, 1984, p. 121). Fry (2003) describes conceptual links between aspects of meaning in life (a calling, making a difference) with intrinsic motivation and commitment. Michaelson (2005) and Steers, Mowday and Shapiro (2005) suggest the extent to which people seek meaning in their work needs more investigation in the field of work motivation. Clearly, motivation theories are needed that cater for higher order motives (such as searching for meaning in life) that cannot be explained through mechanistic predictions.

Sargent (1973) is the only researcher that empirically examined the relationship between meaning in life and work motivation as far as we could establish. He explored whether work motivation can be seen as a manifestation of a person's will-to-meaning as described by Frankl (1959). Sargent (1973) found that work-motivated people tend to have higher Purpose in Life (PIL) scores and tend to evaluate the concept of work more favorably than do nonwork-motivated individuals. He also found a significant tendency for individuals with high PIL scores to evaluate key life concepts (such as work, the organization, purpose, family, leisure and life) more favorably. Sargent's (1973) results provide empirical evidence for the postulated correlations between meaning and work motivation. Apart from Sargent's, studies have neglected to look at motivational drives originating from within the spiritual dimension. Two work motivation theories in particular appear to be related to meaning in life: intrinsic motivation and goal attainment.

Intrinsic motivation refers to the desire to perform an activity because you expect a subjective reward or expect to experience internally gratifying feelings and satisfaction from participation in a particular activity (Pinder, 1998). Intrinsic motivation is also related to aspects such as autonomy, relevance and feelings of competence and self-determination (Leonard et al., 1995). Those who see their work as fulfilling tend to work with more vigor and purposefulness. High internal motivation can then be argued to be the result of the purposefulness of the work and the meaningfulness of the individual's contribution. Meaning in life correlates positively with internal locus of control (Phillips, 1980), an important part of intrinsic motivation. A person's will-to-meaning can thus be a source of intrinsic motivation.

Goal setting is a most effective motivator (Locke and Latham, 1990). Goals serve as a basis for motivation and direct behavior. Research has already shown that meaning and goals are related in spheres of life other than work. For instance, Battista and Almond (1973) found a relationship between meaning in life with higher goal-positions, life-goals and success in goal attainment. Congruence between purpose and goals is a key determinant of intrinsic motivation (Elliot and Dweck, 1988). Meaning in life appears to influence goals and goal orientation positively.

The construct of meaning in life can help to explain how and why workers are motivated. From the discussion, we postulate that finding meaning in their existence should influence one's level of work motivation positively – therefore, our fourth hypothesis:

H4 Meaning in life will positively influence work motivation as measured through intrinsic motivation and goal orientation.

Meaning and work centrality

People play various roles in their lives, thus make choices and have different beliefs about the degree of importance of work in their lives. The role that work plays in a person's life refers to work involvement, or work centrality (Kanungo, 1982). Although Sargent's (1973) study revealed relationships between meaning in life and work motivation, the relationships were weaker than expected. Based on his correspondence with Viktor Frankl about his findings, Sargent (1973) inferred that work centrality might mediate the relationship between a sense of meaning and the level of work motivation. He reasoned that only some people find their life meaning in their work. This conclusion also holds true for the relationship between meaning and work commitment, especially with regard to work values. Most studies equate work values with the Protestant work ethic (PWE) - a dedication to work that manifests as long hours at work with little time for recreation and leisure (Furnham, 1990). A strong PWE would impinge on time available for meaningful activities other than work. An appreciation of time as an exhaustible resource in a finite life gives meaning (Howard and Howard, 1997); we thus expect a strong relationship between meaning and work values only when work is central to a person's life.

We thus expect work centrality to act as a mediating variable in the relationship between meaning in life and work motivation, and in the relationship between meaning in life and work commitment. In other words, people who have found meaning in their lives and whose work is central to their existence will measure higher on work motivation and work commitment than those who have found meaning in their lives, but whose work is not central to their lives. It is on this proposition that we base our next hypothesis:

H5 Work involvement mediates the relationships between meaning in life and work commitment, and between meaning in life and work motivation.

Several studies testify to the importance of work in experiencing of life as meaningful (Gill, 1999; Morse and Weiss, 1955). Although work can be the epitomy of human existence, it does not follow that people have to work to find their lives meaningful, or that meaningful work necessarily leads to a meaningful life (Frankl, 1992). Studies confirm that not all people find their life meaning through their work and that having a job is not a sufficient nor even a necessary condition for attainment of meaning in one's life (Debats, 1999; O'Connor and Chamberlain, 1996). People without work can live more meaningful lives than those who cling neurotically to their jobs to gain a false sense of self-worth or security (Frankl, 1992). Those who see their jobs as

hampering the achievement of their full potential find it difficult to uphold a sense of purpose. In such instances, work becomes a source of frustration, boredom, and feelings of meaninglessness. Although it can be frustrating, it is arguably possible that people can experience their lives as meaningful without being involved in meaningful work in their daily employment. Our sixth hypothesis is therefore,

H6 Meaning in life is not influenced by work centrality.

METHODS

Sample and Participants

The six hypotheses were explored and tested by means of survey research. We selected the sample from employees in the managerial levels of six South African organizations spanning six industries (refining, retailing, mining, engineering, administration and manufacturing). Morse and Weiss (1955) show that work centrality and meaningful work are more important for white-collar workers than for blue-collar workers. We thus restricted our sample to white-collar workers (represented by the managers) to control for sampling error. Through systematic sampling from the alphabetical registers of managerial level employees, we randomly selected at least 100 subjects from each of the participating organizations. We took great care to control for external variances and to ensure confidentiality and anonymity. Of the 705 subjects, 458 responded to the self-administered questionnaires, yielding a response rate of 65 percent.

The mean age of the respondents was 43 years, with a maximum age of 62 and a minimum age of 27. Respondents older than 40 years formed 60 percent of the sample. This is typically the age when people settle in their careers and come to terms with their occupational roles. The respondents were predominantly male and white (90 percent and 91 percent respectively). The majority (93 percent) of the respondents listed their religious affiliation as Christianity. In this sample, 85 percent of the Christians described themselves as Protestants. Of the respondents, 96 percent have a National Diploma or higher as their highest qualification. Of these, 42 percent had Bachelor's or Honors degrees and 27 percent had Master's degrees or doctorates. The respondents reported long work hours (the reported mean was 50 hours a week), and 87 percent of the sample reported that they worked longer than the officially required 40 hours each week. Of the respondents, 24 percent worked around 50 hours a week and 22 percent worked 55 hours or longer. In this sample, 87 percent of the respondents came from middle management, and 11

percent from senior and top management. In general, the sample can be seen as knowledge workers and as a true "white-collar" sample.

Measures

All the constructs were measured with validated scales. We measured meaning in life with Battista and Almond's (1973) Life Regard Index (LRI); work centrality with Kanungo's (1982) Work Involvement Questionnaire (WIQ); and the facets of work commitment were measured with Kanungo's (1982) Job Involvement Questionnaire (JIQ), Carson and Bedeian's (1994) Career Commitment Scale (CCS), and Ho and Lloyd's (1984) Australian Work Ethic Scale (AWES). We measured work motivation with Warr, Cook and Wall's (1979) Intrinsic Motivation Measure (IMM), and Vandewalle's (1997) Goal Orientation Instrument (GOI).

Battista and Almond (1973) developed the 28-item LRI to measure meaning in life as described by Frankl (1959). The LRI is divided into two subscales, Framework (FR) and Fulfillment (FU), each composed of 14 items, half phrased positively, half phrased negatively. The FR subscale measures the ability of people to see their lives within some perspective and having derived a set of life-goals from it. The FU scale measures the degree to which people see themselves as being in the process of fulfilling this framework or life goals. Battista and Almond's (1973) data show the FR and FU subscales correlate highly with the total LRI scale (.94 and .93 respectively). Through structured interviews, interviewers were able to identify 14/14 of high meaning in life respondents correctly, and 14/16 of low meaning in life respondents (p < .001), proving discriminant validity of the LRI. The testretest reliability of the Life Regard Index was high at .94 (Battista and Almond, 1973). Several studies testify to the satisfactory psychometric properties of the LRI (Chamberlain and Zika, 1988; Debats, 1990; Debats et al., 1993; Debats and Drost, 1995).

Kanungo (1982) developed the 6-item WIQ to make a distinction between work centrality (work involvement) and job involvement. He reports an Alpha coefficient of .75 and a test-retest correlation .67 for the WIQ. Morrow (1993), and Paullay, Alliger and Stone-Romero (1994) provide support for the WIQ measure. In the same study, Kanungo (1982) developed the 10-item JIQ as a conceptualisation of job involvement. He reports an Alpha coefficient of .87 and a test-retest coefficient of .85. Studies by Blau (1985), Paterson and O'Driscoll (1990), and Van Wyk, Boshoff and Owen (1999) (to a South African sample) provide support for the JIQ.

Carson and Bedeian (1994) developed the 12-item CCS as a measure of career commitment. Three factors that could be interpreted as career identity, career resilience and career planning, with Cronbach Alpha coefficients above .81, remained in their measure. A correlation of .63 (corrected value = .75) between Blau's (1985) career commitment measure and the CCS provides evidence for convergent validity (Carson and Bedeian, 1994).

Ho and Lloyd (1984) developed the 7-item AWES to measure PWE. Their AWES scale consists of a one-factor solution with a Cronbach Alpha coefficient of .76. They report a correlation .65 of the AWES with Mirels and Garrett's (1971) PWE scale and 0.59 with Blood's (1969) PWE scale, demonstrating convergent and concurrent validity. Furnham (1990) provides support for the AWES as a sound psychometric measure.

Warr et al. (1979) developed the 6-item IMM as a measure of intrinsic motivation, through two structured interview studies. Factor analysis yielded a single factor with the Alpha coefficients .48 and .76 respectively for the two studies. Test-retest over a 6-month period indicates a test-retest correlation coefficient of .65 (Warr et al., 1979). Vandewalle (1997) conceptualized three dimensions of goal orientation in the 13-item GOI: learning goal orientation (a desire to develop by acquiring new skills and competencies); prove goal orientation (the desire to prove one's competence); and avoidance goal orientation (the desire to avoid difficult goals). His study found three factors with Cronbach Alpha values ranging between .85 and .89, and test-retest correlation coefficients between .57 and .66 for the three factors. Our previous conceptualization of the relationship between meaning in life and goal orientation suggests that meaning would be negatively related to a desire to avoid difficult goals. As "not desiring to avoid" represent a double negative, we reverse-scored the items in this dimension to remove the double negative, making it rather a measure of willingness to face difficult goals. We omitted the "prove" dimension of the GOI as we did not regard it as relevant to the purpose of this study.

We combined all the instruments in one questionnaire, but kept the different instruments separate. Original scales were honored not to risk the validity and reliability of the scales, but items within the LRI were randomized to avoid the probability of response sets. We started the questionnaire with the AWES, which we judged to be the least emotionally sensitive instrument. The potentially emotional threatening LRI was the last instrument in the questionnaire, followed by the biographic and life orientation questions. We pretested the questionnaire against five people to evaluate the comprehensibility and emotional affect of the questionnaire.

Procedures

The first analysis was to subject all the scales together to a Principal Factor Analysis with Direct Quartimin Rotation of the axes (PFA) to assess discriminant validity. After the PFA, we removed items that did not show loadings equal to or larger than .25 on only one factor, and repeated PFA until all remaining items conformed to this requirement. It is risky to apply psychometric instruments developed in Northern America and Australia to members of a South African culture without revalidating the instruments (Van Wyk, Boshoff and Owen, 1999). The next step was to factor analyze the responses to each instrument with a similar process of PFA to determine whether their factor structures were similar to those described by previous studies.

We assessed the normality of the distribution of the responses by means of Univariate Analysis. The results pointed out that only work involvement, career commitment (but not its three dimensions), work values, and the goal orientation dimensions (but not goal commitment itself) conformed to the requirements of normal distributions ($p \geq .05$). We thus reverted to nonparametric statistical methods for further analyses. We used Spearman Intercorrelation Coefficients (Spearman's Rho) to examine correlations between meaning and the variables measured on continuous scales in assessing Hypotheses 1 to 5. This method was also used to study relationships between meaning and the facets of work commitment and dimensions of work motivation. The Wilcoxon Rank Sum test was applied to examine the relationship between meaning and groups of variables measured on discrete scales in testing Hypotheses 1 and 5. To test Hypothesis 6, we used Pearson Partial Correlation Analysis to explore the role of work involvement as a mediating variable.

RESULTS

Factor Structures of the Instruments

When all the scales together were subjected to PFA, three clear factors emerged which correlated with the three main factors that we are concerned with in this study, namely meaning in life, work commitment and work motivation. Work involvement items loaded with the work commitment items on factor two, not as a separate factor. In the final PFA, 12 of the original 78 items did not load \geq .25 on only one factor and were removed. Factor 1 contained all the remaining meaning in life items and three career commitment items, Factor 2 contained all the work commitment and work

involvement items, while Factor 3 contained all the work motivation items plus one career commitment item. The result of this PFA is shown in Table 1.

Table 1 Final PFA fo the Meaning of Life, Work Commitment and Work Motivation Factors

Construct		Number of Items	
-	Factor 1	Factor 2	Factor 3
1. Meaning in life	25		
2. Work Commitment	3	24	1
3. Work Motivation			13
Alpha	.93	.90	.83
Intercorrelations			
Factor 1	00.1		
Factor 2	0.16	1.00	
Factor 3	0.41	0.19	1.00

Although there was not a perfect correlation between the factors and the three main constructs in this study, the three factors closely represent the constructs. We contend that these results provide sufficient evidence of discriminant validity.

The next step was to subject each scale with its original items independently to PFA. Battista and Almond (1973) and Debats et al. (1993) found the LR1 to be two-dimensional, but our results indicated a one-factor solution consisting of 26 items after removing two items that did not load ≥ .25 on only one factor. We obtained the same one-factor solution for the WIQ as described by Kanungo (1982), with all six items showing satisfactory loadings. Similar to Kanungo (1982), we obtained the one-factor solution of the JIQ, but had to remove one item in the final PFA. Our PFA of Carson and Bedeian's (1994) CCS provided supporting evidence for their three-factor solution; all 12 items loaded satisfactorily on the three factors respectively. We found support for Vandewalle's (1997) two-factor solution of the GOI. All nine items loaded satisfactorily on either one of the factors. All seven items of the AWES loaded satisfactorily in the PFA. In the PFA of Warr et al.'s (1979) IMM, we

found that five items loaded satisfactorily, but one item had to be removed as it did not load \geq .25. Table 2 provides a summary of the results of the PFAs.

Table 2 Final Items and Response Sets for All Scales

Scale	Factors	Original	Items	Response Sets		
		Items	Retained	f	α	
LRI		28	26	.33 to .76	.93	
WIQ		6	6	.32 to .73	.77	
ЛQ		10	9	.46 to .74		
CCS		12	12	.46 to .90	.77	
	Career resilience	4	4	.48 to .90	.79	
	Career planning	4	4	.59 to .77	.79	
	Career identity	4	4	.46 to .74	.73	
AWES		7	7	.34 to .79	.78	
GOI		9	9	.50 to .90	.51	
	Learning goals	5	5	.55 to .86	.84	
	Difficult goals	4	4	.50 to .90	.81	
IMM		6	5	.43 to .69	.71	

Although the factor structures of the various constructs did not reveal an exact resemblance to those in the original development of the instruments, the factor structures closely represented the original structures. Furthermore, the instruments were cleaned from items that did not load satisfactorily. We are therefore satisfied that the "cleaned" individual instruments are portable to the South African sample in this study.

Relationships between Meaning and the Biographic and Lifestyle Variables

Table 3 and Table 4 set out the results of our investigation of the first two hypotheses. The variables that fail to show significant correlations with meaning ($p \le .05$) are set out in Table 3 and the variables that have statistically significant relationships with meaning are set out in Table 4.

Table 3 Variables that Lack Statistically Significant Relationships with Meaning

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Variable	Chi- square	Spearman's Rho Correlation
Gender	0.57	-
Qualifications	2.93	-
Field of study	6.77	-
Field of current employment	13.22	-
Marital status	0.92	-
Ethnic grouping (race)	2.71	-
Culture/social heritage	14.01	-
Religious orientation	0.39	-
Number of years with current employer	*	0.002
Age	-	05

n = 458, p > 10

We view all the variables in Table 3 as biographic-type variables and regard the variables in Table 4 to be work and life orientation variables. The only exception to this observation is job seniority. However, we argue that seniority is an outcome of other variables rather than a true biographic variable. Although working hours show a significant correlation with meaning, the common variance (1.6 percent) is very small; we therefore argue that this variable does not show a practical significant correlation with meaning. The data in Tables 3 and 4 support Hypotheses I and 2.

Table 4 Variables that Have Statistically Significant Relationships with Meaning

Variable	Chi-square	Spearman's Rho Correlation
Actual working hours	~	0.16**
Job seniority	17.18***	-
Making substantial career changes	7.45**	_
Satisfaction with career progress	47.60***	-
Willingness to continue working in the absence of financial necessity ^a	4.05*	-
Willingness to continue with the same job in the absence of financial necessity b	21.84***	-
Purposely making time to be alone	10.98***	_
Comfortable being alone in the absence of activities	6.38*	~
Purposely make time for leisure	19.22***	
Purposely make time for family & friends	8.63**	_
Active participation in a sport/hobby	14.36***	_
Active involvement in community/welfare activities	15.78***	_
Making regular financial contributions to community/welfare causes	7.22***	-
Having a strong religious conviction	43.27***	_

n = 458, * p < .05, ** p < .01, *** p < .01

Relationship of Meaning with Work Commitment and Work Motivation

Table 5 shows the results of the Spearman's Rho procedure, testing Hypotheses 3, 4 and 5. Although the correlation between meaning and work involvement is statistically significant (p < .0001), the correlation is low at .17, and the common variance very low at only 2.9 percent. We argue that this relationship cannot be regarded as practically significant and that Hypothesis 3 is not supported by the data.

Table 5 Results from Spearman's Rho Coefficients of Factor Variables

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	Variable	1	2	3	4	5	6	7	8	9	10	[]
1.	Meaning											
2.	Work Involvement	.17***										
3.	Career commitment	.49***	.27***									
4.	Career identity	.31***	,04	.71***								
5.	Career resilience	.46***	.22***	.72***	.19***							
6.	Career planning	.25***	.34***	.63***	.16*	.34***						
7.	Intrinsic motivation	.35***	.20***	.33***	.11*	.31***	.31***					
8.	Job involvement	.10*	.62***	.31***	10,-	.25***	.50***	.27***				
9.	Work values	.18***	.37***	.25***	.07	.26***	.22***	.20***	.28***			
10.	Goal orientation	.41***	.06*	.30***	.18***	.31***	.17***	.33***	.01	Ш		
11.	Learning goals	.37***	.12**	.36***	.15**	.36**	.24***	.44***	.16***	18***	.39***	
12.	Difficult goals	.33***	0}	.21***	.16***	.20***	.06	.11**	.08	.02	.86***	.33***

In terms of Hypothesis 4, the correlations between the facets of work commitment and meaning vary. Career commitment and all three of its factors show significant relationships with meaning (p < .0001, career commitment = .31, career identity = .46, career planning = .25). Although the correlation between meaning and work values is statistically significant (p < .0001), the correlation is low at .18 and the common variance of this relationship very low at 3.3 percent. We argue that this relationship is not

^a 71% of respondents indicated they would continue to work if they won a large sum in a lottery

b 42% indicated they would continue in the same job if they won a large sum in a lottery

practically significant. Similarly, even though the correlation between meaning and job involvement is statistically significant (p < .05), the correlation is low at .10, and the common variance of this relationship is less than 1 percent. We thus regard this relationship also as practically insignificant. We conclude that the data support Hypothesis 4 in terms of career commitment, but not for work values and job involvement.

In terms of Hypothesis 5, all the correlations between meaning and the dimensions of work motivation are statistically significant. Meaning correlates significantly with intrinsic motivation (r = .35), goal orientation (r = 41) and the dimensions of goal orientation (learning goals, r = .37 and difficult goals, r = .33). We conclude that the data provide support for Hypothesis 5.

Work Involvement as a Mediating Variable

We used Pearson Partial Correlation Analysis (PPCA) to remove the effect of work involvement on the relationship between meaning and the dimensions of work commitment to test Hypothesis 6 – work involvement acting as a mediating variable between meaning in life, work commitment and work motivation. In Table 6, we compare the results of the PPCA with the results from the Spearman's Rho analysis set out in Table 5. The comparison was designed to provide insight into whether the relationships between meaning and the dependent variables changed significantly once the effect of work involvement was removed.

From Table 6 it is clear that work involvement does not have a significant mediating effect on the relationship between meaning and the dependent variables. Only one of the relationships (between meaning and career orientation) changed more than 2 percent when the effect of work involvement was removed. We thus reject Hypothesis 6; work involvement does not play a mediating role between the relationships of meaning in life with work commitment and work motivation.

DISCUSSION

Theoretical and Managerial Implications of the Findings

The finding that intrinsic motivation and goal orientation are related to meaning in life is significant and has important implications for our understanding of motivation and on work motivation theories. We found confirmation that work motivation, as described in terms of goal orientation and intrinsic motivation, is related to the spiritual level, which is more fundamental than the psychological levels previously recognized. Although

Table 6 Correlation coefficients of meaning with dependent variables

	Correlation with meaning							
Variable	Work involvement effect not removed (Spearman's Rho5)	Work involvement effect removed (PPCA)	Common variance difference					
Career orientation	.49 ***	.47 ***	2.10 %					
Career identity	.31 ***	.30 ***	0.13 %					
Career resilience	.46 ***	.44 ***	1.86 %					
Career planning	.25 ***	.29 ***	-1.83 %					
Intrinsic motivation	.35 ***	.33 ***	1.55 %					
Job involvement	.10 *	01	0.96 %					
Work values	.18 ***	.13 **	1.61 %					
Goal orientation	.41 ***	.40 ***	0.90 %					
Learning goals	.37 ***	.36 ***	0.97 %					
Difficult goals	.33 ***	.34 ***	0.60 %					

n = 458, * p < .05, ** p < .01, *** p < .001

we did not prove causality in this study and cannot conclude that meaning causes intrinsic motivation or goal orientation, we infer it might indeed be the case. Although much has been published on intrinsic motivation, meaning in life apparently has not been seen as a contributing factor — an aspect that needs correction. It appears that meaning acts as a source of intrinsic motivation, or that intrinsic motivation might be an expression of a sense of meaning in a person's life.

Similarly, in most of the literature and research on goal orientation, the focus is its calculative and instrumental aspects. We have found in this study that meaning in life correlated significantly with willingness to face difficult goals and goals to learn new things. We conclude that goal orientation is also related to non-calculative behavior, behavior that arises from the spiritual level rather than the cognitive level. It appears that meaning in life gives direction, impetus and energy to goals, especially goals generated from an intrinsic drive.

Managers as leaders moved into the role to provide assistance in the search for meaning as the spiritual quest for meaning in life at the workplace became greater (Fry, 2003; Fry et al., 2005; Kriger and Seng, 2005). Managers and organizations should benefit if they respond appropriately to this need and

focus more on motivation from a spiritual perspective than on motivation based merely on the rational part of human nature. Where there has been a general lack of motivation or commitment among employees, managers have traditionally tried to correct the situation by changing the physiological and psychological environment of the workplace. They often neglect the spiritual dimension in their focus on positive and negative reinforcement. Motivational levels in an organization improve when managers help employees to find meaning in their lives, to find a greater cause to live and work for. Thereby employees become intrinsically committed and motivated, as they work to fulfil this purpose. Unless employees find meaning and purpose in what they do, motivation and commitment efforts are unlikely to be optimal.

The study highlights an important relationship between people's sense of meaning in life and their careers. It appears as if people with a sense of meaning view their careers differently and attend differently to their careers; perhaps also because of higher levels of intrinsic motivation. The correlations between meaning and career commitment provide evidence for this observation. People with higher scores on meaning are also more inclined to make substantial career changes. Perhaps it is to align their careers with their sense of meaning in life. One can speculate that this might lead to stronger identification with their careers, more career planning and more career resilience once they have made a career change. In addition, respondents who claimed a sense of meaning report that they associate more with their careers than with their present jobs and are more willing to work in the absence of financial necessity. Respondents who reported that they would continue with their present jobs if they had no financial need to work also ranked higher on meaning than those who noted they would not.

From the correlations between respondents' scores on meaning with their satisfaction with career progress, we found further evidence for the observation that people with a sense of meaning in life view their careers differently. As neither career progress, nor satisfaction with career progress was defined explicitly, each respondent interpreted progress subjectively. Even respondents in junior management might have indicated that they were completely satisfied with their career progress if they felt that they achieved what was within the range of their potential. Although these findings and speculations warrant further research, it is clear that organizations will benefit from helping employees in their quest to align their careers with the meaning in their lives.

Viktor Frankl was one of the most influential authors on meaning in life. The findings in this study provide support for several of Frankl's assertions on

meaning in the workplace. For instance, we did not find significant relationships between meaning, working hours and valuing work according to PWE. People who score higher on meaning do not necessarily experience an obligation to fill their lives with hard work or value work for its own sake. This supports Frankl's (1992) assertion that people compensate for a lack of meaning by overindulging in work. The relationship between people's score on meaning and their inclinations to make time to be alone and not finding it difficult to be alone, correlates with Frankl's (1984) view that people compensate for a lack of meaning in life by indulging in trivial activities. In our research, meaning in life is not related significantly with work centrality. This is in line with Frankl's view that not all people find the meaning of their life in work and that work is not necessarily central to everyone's life. People's sense of meaning in life correlate significantly with a healthy and balanced lifestyle, as operationalized by making time for leisure, active participation in sport or hobbies and making time to spend with family or friends - a spiritual approach to life (Heintzman and Mannell, 2003). These findings are in line with those of previous studies that found correlations between meaning in life and mental well-being, providing convergent validity for this study. It appears as if people who experience meaning in their lives are more inclined to universal spiritual values such as purity of intention, unselfishness and self-transcendence (Delbecq and Leigh-Taylor, 2000; Reave, 2005) and longer term spiritually valued attitudes such as pride in work and ethical behavior (Cavanagh, 1999) than PWE.

Although the specific religion affiliation of the respondents do not correlate significantly with meaning in our study, we found that the strength of the respondents' religious convictions show significant correlations with meaning in life. As strength of religious conviction is more a spiritual issue than belonging to a specific religious domination (King, 2003), this finding confirms meaning in life as an element of spirituality. We found more support for this assertion in the correlations between meaning and a self-transcendent approach to life (active involvement in community or welfare work and regular financial contributions towards such work).

Work values and work centrality result from social learning processes (Kanungo, 1982; Paullay et al., 1994). As our data did not yield significant relationships between meaning and these variables or with biographic variables, we argue that meaning stems from other origins than from social learning processes. These results provide empirical support to Debats' (1999) postulation that the desire for meaning in life is a universal phenomenon and a basic human drive – it changes its appearance through one's life cycle, but never disappears.

Limitations and Future Research

The main limitation of the present study is its inability to prove causality. More insight would have been gained if we could have understood individual causes and the temporal sequencing of the relationships. Still, much insight was gained into the role of meaning in life at work and in the workplace. The results from this study cannot be generalized beyond the constructs and context of this study. Intrinsic motivation and goal orientation are not representative of the whole construct of work motivation – the generalizability of these results is limited to these measures. Although we took great effort to obtain a representative and heterogeneous sample, the sample was homogenous. In as far as respondents' biographic profiles may influence people's attitudes and orientations towards work and life, the richness of the results of the present study suffered from the homogeneity of the sample.

Focusing on one of the main elements of spirituality – meaning in life – is not an exact representation of the encompassing construct and as such does not provide comprehensive coverage of the richness entrenched in the construct of spirituality. Nevertheless, by examining spirituality through the role of meaning in life, much insight was gained into correlations and relationships of workplace spirituality. While the definition of spirituality in the workplace is being clarified, this approach can provide useful and practical direction for empirical research into workplace spirituality.

Theory conceptualization appears to be stronger than empirical evidence at this stage. The strengthening of theory regarding meaning in life in the workplace should thus rely heavily on empirical studies in future. Specifically, we call for studies to confirm relationships between meaning and work-related constructs and to provide insight into causality in such relationships. Future studies should explore how to find meaning in life and how the variables measured in this research change once people discover meaning in life. Future research could explore the role that organizations' formal vision, mission and values statements play in employees' sense of meaning. Researchers can examine how organizational culture and leadership styles influence employees' sense of meaning in life. Little is known about the role of meaning in life in the workplace and research possibilities are almost unlimited at present.

CONCLUSION

Spirituality in the workplace is a rapidly growing field of interest, not only in popular literature, but also in scholarly journals and at top tier conferences,

such as the annual Academy of Management meetings (Fry, 2005; Klenke, 2005; Prameshwar, 2005). Growing numbers of organizations are moving towards work arrangements that can be described as spiritual. However, it appears that many authors find it difficult to move from a conceptual view of workplace spirituality to a practical view. Through the rigor of empirical research, this study has made some progress towards dealing with spirituality in the workplace on a practical level. In this study, we confirmed that meaning in life is a spiritual construct with a definite and substantial influence in the workplace - an influence that cannot be ignored. The primary contribution of the study is its confirmation of the relationships between meaning in life with career commitment and work motivation. We have shown that facets and aspects of work commitment and work motivation also operate at the spiritual level, a deeper level than previously anticipated in most literature on commitment and motivation. It provides a new perspective and an improved understanding of motivation and commitment. It provides some insight into the fundamental question of why people are motivated or committed at all,

These insights open new approaches and new research areas. By adopting a meaning-based view towards spirituality, we have made spirituality in the workplace a simple and workable concept, rather than a philosophical notion; we have made much progress towards a greater understanding of workplace spirituality in practice.

REFERENCES

- Battista, J. and Almond, R. (1973) The development of meaning in life, *Psychiatry*, 36, 409-427.
- Baum, S.K. and Stewart, R.B. (1990) Sources of meaning through the lifespan, *Psychological Reports*, 67, 3–14.
- Blau, G., Paul, A. and St. John, N. (1993) On developing a general index of work commitment, *Journal of Vocational Behavior*, 42, 298-314.
- Carson, K.D. and Bedeian, A.G. (1994) Career commitment: Construction of a measure and examination of its psychometric properties, *Journal of Vocational Behavior*, 44, 237–262.
- Cash, K.C. (2000) A framework for accommodating religion and spirituality in the workplace, *Academy of Management Executive*, 14(3), 124–135.
- Cavanagh, G.F. (1999) Spirituality for managers: Context and critique, *Journal of Organizational Change Management*, 12, 186–199.
- Chalofsky, N. (2003) An emerging construct for meaningful work, *Human Resource Development International*, 6, 69 84.

- Chamberlain, K. and Zika, S. (1988) Measuring meaning in life: An examination of three scales, *Personality and Individual Differences*, 9, 589—596.
- Cohen, A. (1999) Relationships among five forms of commitment: An empirical assessment, *Journal of Organizational Behavior*, 20, 285–308.
- Crumbaugh, J.C. (1968) Cross-validation of Purpose in Life Test based on Frankl's concepts, *Journal of Individual Psychology*, 24, 74–81.
- Crumbaugh, J.C. and Maholick, L.T. (1964) An experimental study in existentialism: The psychometric approach to Frankl's concept of noögenic neurosis, *Journal of Clinical Psychology*, 20, 200–207:
- Debats, D.L. (1999) Sources of meaning: An investigation of significant commitments in life, *Journal of Humanistic Psychology*, 39, 30-58.
- Debats, D.L. and Drost, J. (1995) Experiences of meaning in life: A combined qualitative and quantitative approach, *British Journal of Psychology*, 86, 359–379.
- Debats, D.L., Van der Lubbe, P.M. and Wezeman, F.R. (1993) On the psychometric properties of the Live Regard Index (LRI): A measure of meaningful life, *Personality and Individual Differences*, 14, 337–345.
- De Klerk, J.J. (2005) Spirituality, meaning in life and work wellness: A research agenda, *International Journal of Organizational Analysis*, 13, 64-88.
- Delbecq, A.L. and Leigh-Taylor, C. (2000) Business leadership as a spiritual discipline, *Physician Executive*, March/April, 21-25
- Dent, E.B., Higgins, M.E. and Wharff, D.M. (2005) Spirituality and leadership: An empirical review of definitions, distinctions, and embedded assumptions, *The Leadership Quarterly*, 16, 625-653.
- Duchon, D. and Plowman, D. (2005) Nurturing the spirit at work: Impact on work unit performance, *The Leadership Quarterly*, 16, 807-833.
- Edwards, M.J. and Holden, R.R. (2001) Meaning in Life, and suicidal manifestations: Examining gender differences, *Journal of Clinical Psychology*, 57, 1517-1535.
- Elliot, E.S. and Dweck, C.S. (1988) Goals: An approach to motivation and achievement, *Journal of Personality and Social Psychology*, 54, 5-12.
- Elizur, D. (1984) Facets of work values: A structural analysis of work outcomes, Journal of Applied Psychology, 35, 379-389.
- Fornaciari, C.J., Sherlock, J.J., Ritchie, W.J. and Dean, K. L. (2005) Scale development practices in the measurement of spirituality, *International Journal of Organizational Analysis*, 13, 28-49.
- Frankl, V.E. (1959) From Death-camp to Existentialism. Boston: Beacon Press.
- Frankl, V.E. (1984) Man's search for meaning: Revised and updated. New York: Washington Square Press.

- Frankl, V.E. (1992) Meaning in industrial society, *The International Forum for Logotherapy*, 15, 66-70.
- Fry, L.W. (2003) Toward a theory of spiritual leadership, *The Leadership Quarterly*, 14, 693-727.
- Fry, L.W. (2005) Introduction to *The Leadership Quarterly* special issue: Toward a paradigm of spiritual leadership, *The Leadership Quarterly*, 16, 619-622.
- Fry, L.W., Vitucei, S. and Cedillo, M. (2005) Spiritual leadership and army transformation: Theory, measurement and establishing a baseline, *The Leadership Quarterly*, 16, 835-862.
- Furnham, A. (1990) The Protestant Work Ethic: The psychology of work-related beliefs and behaviours. London: Routledge.
- Giacalone, R.A. and Jurkiewicz, C.L. (2003) Toward a science of workplace spirituality, In Giacalone, R.A. and Jurkiewicz, C.L. (Eds.), *Handbook of Workplace Spirituality and Organizational Performance*. New York: M.E. Sharp.
- Gill, F. (1999) The meaning of work: Lessons from sociology, psychology, and political theory, *The Journal of Socio Economics*, 28, 725–743.
- Harlow, L.L., Newcomb, M.D. and Bentler, P.M. (1986) Depression, self derogation, substance use, and suicide ideation: Lack of purpose in life as mediational factor, *Journal of Clinical Psychology*, 45, 5–21.
- Heatherton, T.D. and Nichols, P.A. (1994) Personal accounts of successful purses failed attempts at life change, *Personality and Social Psychology Bulletin*, 20, 664-675.
- Heintzman, P. and Mannell, R.C. (2003) Spiritual functions of leisure and spiritual well-being: Coping with time pressure, *Leisure Sciences*, 25, 207–230.
- Ho, R. and Lloyd, J. (1984) Development of an Australian work ethic scale, Australian Psychology, 13, 321–332.
- Howard, B.S. and Howard, J.R. (1997) Occupation as spiritual activity, *The American Journal of Occupational Therapy*, 51, 181–185.
- Kanungo, R.N. (1982) Measurement of job and work involvement, *Journal of Applied Psychology*, 67, 341–349.
- King, P.E. (2003) Religion and identity: The role of ideological, social, and spiritual contexts, *Applied Developmental Science*, 7, 197–220.
- Klenke, K. (2005) Introducing spirituality, *The International Journal of Organizational Analysis*, 13, 4-7.
- Konz, G.N.P. and Ryan, F.X. (1999) Maintaining an organizational spirituality: No casy task, *Journal of Organizational Change Management*, 12, 200–210.
- Kolodinsky, R.W., Giacalone, R.A. and Jurkiewicz, C.L. (2004) Exploring personal, organizational, and interactive workplace spirituality outcomes, paper presented at the 2004 Annual Meeting Academy of Management, New Orleans.

- Kriger, M. and Seng, Y. (2005) Leadership with inner meaning: A contingency theory of leadership based on the worldviews of five religions, *The Leadership Quarterly*, 16, 771-806.
- Leonard, N.H., Beauvais, L.L. and Scholl, R.W. (1995) A self-concept-based model of work, American Academy of Management, *Best Papers Proceedings*, 322–326.
- Locke, E.A. and Latham, P.G. (1990) A Theory of Goal Setting and Task Performance. Englewood Cliffs, NJ: Prentice-Hall.
- Markow, F. and Klenke, K. (2005) The effects of personal meaning and calling on organizational commitment: An empirical investigation of spiritual leadership, *International Journal of Organizational Analysis*, 13, 8-27.
- Michaelson, C. (2005) Meaningful motivation for work motivation theory, Academy of Management Review, 30, 235-238.
- Miller, E. (2004) The Development and validation of a new measure of spirituality, North American Journal of Psychology, 6, 423-430.
- Myers, J.E., Sweeney, T.J. and Witmer, J.M. (2000) The wheel of wellness.

 Counseling for wellness: A holistic model for treatment planning, *Journal of Counseling and Development*, 78, 251-266.
- Moomal, Z. (1999) The relationship between meaning in life and mental well-being, South African Journal of Psychology, 29, 42-49.
- Morse, N.C. and Weiss, R.S. (1955) The function of work and the job, *American Sociological Review*, 20, 191-198.
- O'Connor, K. and Chamberlain, K. (1996) Dimensions of life meaning: A qualitative investigation at mid-life, *British Journal of Psychology*, 87, 461–478.
- Parameshwar, S. (2005) Spiritual leadership through ego-transcendence: Exceptional responses to challenging circumstances, *The Leadership Quarterly*, 16, 689-722.
- Paullay, I.M., Alliger, G.M. and Stone-Romero, E.F. (1994) Construct validation of two instruments designed to measure job involvement and work centrality, *Journal of Applied Psychology*, 79, 224–228.
- Phillips, W.M. (1980) Purpose in life, depression, and locus of control, *Journal of Clinical Psychology*, 36, 661–667.
- Pinder, C.C. (1998) Work Motivation in Organizational Behaviour. Englewood Cliffs, NJ: Prentice-Hall.
- Polley, D., Vora, J., and SubbaNarasimha, P.N. (2005) Paying the devil his due: Limits and liabilities of workplace spirituality, *International Journal of Organizational Analysis*, 13, 50-63.
- Randall, D.M. and Cote, J.A. (1991) Interrelationships of work commitment constructs, *Work and Occupations*, 18, 194–212.
- Reave, L. (2005) Spiritual values and practices related to leadership effectiveness, *The Leadership Quarterly*, 16, 655-687.

- Reker, G.T. (1994) Logotheory and logotherapy: Challenges, opportunities, and some empirical findings, *The International Forum for Logotherapy*, 17, 47-55.
- Reker, G.T., Peacock, E.J. and Wong, P.T.P. (1987) Meaning and purpose in life and well-being: A life span perspective, *Journal of Gerontology*, 42, 44-49.
- Riipenen, M. (1997) The relationship between job involvement and well-being, *The Journal of Psychology*, 131, 81–89.
- Sanders, J.E., Hopkins, W.E., Geroy, G.E. (2004) Spirituality-leadership-commitment relationships in the workplace: An exploratory assessment, Academy of Management *Best Papers Proceedings*, A1–A7.
- Sargent, G.A. (1973) Motivation and meaning: Frankl's logotherapy in the work situation. Doctoral dissertation Graduate Faculty of the School of Human Behavior, United States International University, San Diego.
- Savickas, M.L. (1991) The meaning of work and love: Career issues and interventions, *Career Development Quarterly*, 39, 315–325.
- Scannell, E.D., Allen, F.C.L. and Burton, J. (2002) Meaning of life and positive and negative well-being, *North American Journal of Psychology*, 4, 93-113.
- Schervish, P.G. and O'Herlihy, M.A. (2002) The spiritual secret of wealth: The inner dynamics by which fortune engenders care, *New Directions for Philanthropic Fundraising*, 2002, 23-40.
- Stanard, R.B., Sandhu, D.S. and Painter, L.C. (2000) Assessment of spirituality in counseling, *Journal of Counseling & Development*, 78, 204–210.
- Steers, R.M., Mowday, R.T., Shapiro, D.L. (2005) Meaningful motivation for work motivation theory, *Academy of Management Review*, 30, p 238-238.
- Vandewalle, D. (1997) Development and validation of a work domain goal orientation instrument, *Educational and Psychological Measurement*, 57, 995–1016.
- Van Wyk, R., Boshoff, A.B. and Owen, J.H. (1999) Construct validity of psychometric instruments developed in the United States, when applied to professional people in South Africa, South African Journal of Economic and Management Sciences, SS 1, 1-72.
- Vroom, V.H. (1964) Work and motivation. New York: Wiley.
- Warr, P., Cook, J. and Wall, T. (1979) Scales for the measurement of some work attitudes and aspects of psychological well-being, *Journal of Occupational Psychology*, 52, 129–148.
- Zika, S. and Chamberlain, K. (1992) On the relationship between meaning in life and psychological well-being, *British Journal of Psychology*, 83, 133–146.