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Development and Psychometric Evaluation of the Wikoff Spiritual Focus Questionnaire

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DEVELPOMENT AND PSYCHOMETRIC EVALUATION OF THE
WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

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Abstract

Spirituality is a concept that has been a part of nursing since nursing began. In every culture spirituality is a component of healing. However, in the United States, nurses seldom assess the concept of spirituality and the patient's spiritual needs are often not addressed. Wikoff Spiritual Focus Questionnaire was designed to help nurses assess and meet the patient's spiritual needs. A review of literature revealed that spirituality was comprised of a relationship between a Higher Power, Self, Others, and Nature which resulted in a sense of being, knowing and life purpose. A fifth dimension of Religion was identified through a pilot study of the Wikoff Spiritual Focus Questionnaire. The purpose of this study was to refine and test the psychometric properties of the Wikoff Spiritual Focus Questionnaire (WSFQ). Psychometric analysis of the WSFQ was used to refine the questionnaire from 50-items to 20-items using the results from item analysis and exploratory factor analysis. The final 20-items were tested for internal consistency reliability and confirmatory factor analysis. The WSFQ was validated with a convenience sample (N=256) of women using exploratory factor analysis and with a sample of acute care inpatients (N=200) using confirmatory factor analysis.

The resulting analysis revealed that the five components (a relationship with a Higher Power, Self, Others, Nature and Religion) were demonstrated have a Coefficient Alpha that ranged from .89-.96. The confirmatory factor analysis yielded a mediocre fit to the postulated five-factor solution. There is strong support for the ongoing use and testing of this questionnaire. Recommendations include continued evaluation using a larger sample size and in combination with the nursing care plan. This tool can provide nursing with method of measuring spiritual importance in the patient's life and can then

lead to developing appropriate nursing interventions to improve spiritual coping and in improved healing overall.

DEDICATION

This dissertation is dedicated to my husband Jim Wikoff. Jim died just four months before the completion of this dissertation making this a bittersweet accomplishment. I would never have accomplished this goal without his unfailing support, his encouragement and dedication to "our" goal. Jim's love has sustained me through the final phase of this accomplishment.

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CHAPTER 1

INTRODUCTION

Implicit in the holistic practice of professional nursing is care for a patient's biophysical, psychosocial and spiritual needs. While the biophysical and psychosocial components of care have received significant attention from theorists and researchers alike, the area of spirituality has long been neglected (Burkhardt, 1989; Martsolf & Mickley, 1998).

Spirituality-based research in the early 20th century focused largely on religion and the client's participation in religious activities. During the mid-twentieth century, the morés of society changed and the focus on spirituality became less. There has been a lack of research studying the affect of religiosity or spirituality on the patient's well being until the last decade. The nursing literature mirrored society by refocusing on the spiritual component of the human condition and by seeking to define spirituality in a modern context beginning in 1988 (Kahn & Steeves, 1995). Nursing researchers and writers started working to apply the concepts of spirituality within their nursing practice during this ear.

After a dozen years of trying to define spirituality, nursing concluded that spirituality was a complex and enigmatic concept (Foley, Wagner, & Weskel, 1998; Kellehear, 2000; Martsolf & Mickley, 1998; McSherry & Draper, 1998). McSherry and

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Draper (1998) suggested that nursing faced a challenge of finding a generally acceptable definition of spirituality, while taking into account the importance and relevance of the phenomenon to clinical practice. In addition nursing needed to consider the uniqueness of the meaning of spirituality to the individual. While nursing was being challenged to define the concept of spirituality, the spiritual needs of patients could not be forgotten or ignored until a consensus on a definition was achieved. Addressing the spiritual needs of clients is essential if nursing was to remain holistic in its approach to patient care.

In contemporary nursing practice, spirituality has been a required area of assessment during a patient's admission to an acute care setting. Patients are asked to state their religious preference and whether they wished to see the chaplain. The subject is then largely dropped unless the patient brings it up again in another context. The national accrediting body (Joint Commission on Accreditation of Healthcare Organizations [JCAHO], 2002) has begun to focus on this area and is requiring nurses to ask more questions regarding a patient's spiritual needs. However, there remains little guidance to bedside nurse on how to deal with spiritual needs.

While nursing has recognized the need for nurses to provide holistic care and meet the spiritual needs of the patient, neither tools nor methods have been developed to ensure that nursing can meet these goals. A thorough review of the theoretical and research literature demonstrated a preponderance of thought on the importance of relationships in an individual's spirituality (Burkhardt, 1989, 1994; Carson, 1989; Dyson, Cobb, & Huston, 1997; Foley, Wagner, & Waske; 1998; Golberg, 1998; Govier, 2000; Hungelmann, Kenkel-Rossi, Klassen, & Stollenwerk, 1989). It is from this literature that

a measure of spiritual focus was developed using relationships between an individual and a Higher Power, the self, others, nature and religion as the foundation.

The purpose of this study is to describe the development of a tool to guide nurses when they assess a patient's spirituality. There will be a discussion of the evaluation of the psychometric properties and validity of the Wikoff Spiritual Focus Questionnaire in this dissertation. This research will also contain a statement of the problem evaluating spirituality and its significance to nursing. In addition, issues centering on the conceptualization of spirituality are covered. Instrumentation and psychometric issues regarding the development of a tool to measure spirituality will conclude this section.

Statement of the Problem

It is essential that nursing complete a spiritual assessment on a patient in order to provide optimal holistic care, however, this does not always occur in practice. This gap between the ideal and reality is directly related to the absence of a tool for measuring spiritual needs and practices. Measuring spirituality is not a simple concept that has a physiological aspect or a quantifiable value such as pain. Rather, spirituality, like its definitions is amorphous and it is therefore difficult to provide a *shape* or structure for assessing it. Regardless, meeting the spiritual needs of patients has become a nursing imperative and must be addressed.

Since, nurses' function best when provided with appropriate tools to measure, assess, and plan outcomes of care, an instrument to measure spirituality was needed. The tool must lend itself to easy completion by the patient or family member if it is to provide

guidance for the nurse. A tool that can measure or identify spiritually based items of importance would be beneficial to the provision of care.

Current Measures of Spirituality

In order to understand a nursing phenomenon tools specifically designed and tested for the phenomena of interest are necessary. In nursing thus far, there are tools designed to measure religiosity and there are tools to measure how spiritual one considers one self to be, called measures of spirituality. However, these tools are conceptually limited based on two important issues. Many members of contemporary society, while stating a religion of preference are, often not actively practicing or participating members of a religious organization. Nevertheless, these individuals may consider themselves very spiritual. Secondly, the amount of spirituality an individual ascribes to gives little information to the bedside nurse who is either assessing or implementing a plan for spiritual care.

Religiosity

Measures of religiosity are plentiful, as cited by Hill and Hood, Jr. (1999), and the unnecessary duplication of scales hampers the advancement of research into the concept of spirituality. Measures to ascertain religiosity focus primarily on religious beliefs, practices, attitudes, the religious experience and religiousness. Within the framework of religiosity little can be determined regarding spirituality since many individuals profess to be spiritual yet may not participate in any formal religion or religious practices. Therefore, measures of religiosity have little accuracy or meaning in the patient population.

Spirituality

Conceptually, religion is a component of spirituality in modern society. While spirituality can occur without religion, religion rarely occurs without spirituality. Tools described as spiritual assessment measures are designed to measure spiritual development or spiritual maturity (Hill & Hood, Jr., 1999). None of these tools seek to determine what is spiritually important to an individual. Furthermore, methods for scoring tools focus on measuring the amount of spirituality, not the import of spirituality. A high score equals a high level of spirituality, whereas, a low score means an individual is not spiritual or spirituality is of little importance (Hill & Hood, Jr., 1999). While measuring the importance of spirituality to an individual is necessary, the measure or measures used should assist the nurse in determining what interventions would ensure the patient's spiritual needs are met.

Furthermore, measures of spirituality are needed to guide the nurse caregiver directly toward appropriate interventions to treat spiritual distress or enhance spiritual coping while a patient is hospitalized. As a result measures of spirituality need to be focused on what the individual identifies as important and not what is deemed important to the researcher, theologian or nurse. Currently, there are no tools designed to assist the nurse to meet a patient's spiritual needs or even determine what those needs might be.

Confounding the conceptualization of spirituality is the lack of consensus in defining spirituality for nursing. One useful definition, given by Foley, Wagner, and Waskel (1998) in their study of spirituality in older women, described spirituality as a multifaceted concept specific to the spiritually lived experience of an individual. In

summary this statement suggests spirituality is specific to what the individual says is important.

Measuring Spirituality

In the realm of spirituality there are many existing tools, yet none measure what an individual deems is important spiritually. Hill and Hood, Jr. (1999), in their discussion of measures of religiosity, suggested that the development of new measures must be justified based on an absence of existing measures psychometrically adequate for the task. Furthermore, consideration of new measures needs to occur when the conceptual or theoretical issues require modification of existing measures or there are no tools available for the study of particular constructs.

Currently, in clinical practice, there are no tools for the bedside nurse to use when assessing a patient's spirituality. While there are tools used in the research arena and there are questions about the religious background and spiritual needs in the patient database, these are quite limiting for the bedside nurse seeking to be holistic in meeting a patient's needs. The tools that exist are long, cumbersome and offer little guidance for the nurse once armed with the additional information.

The other method of meeting the patient's needs is through direct questions on patient databases (Taylor, 2002). On many databases throughout the country questions consist of "What is your religion?" and "What religious needs can we meet while you are hospitalized?" If the questions asked are not identical to the ones above then similarly worded questions occur within the databases.

These questions, while important, are limiting and offer little direction to the nurse providing care. If a nurse is unfamiliar with a particular religion and its beliefs the

nurse is hindered in determining nursing interventions with exception of calling on the services of the chaplain of that faith. Taylor (2002) advocated an additional question or two to determine spiritual distress, then an advanced assessment of greater depth if indicated. However, these questions and answers are difficult to enter into a nursing database for a new admission. Furthermore, the questions recommended may be difficult for a nurse to ask. For example, how does the nurse deal with the answer to "What kinds of spiritual concerns bother you most?" if it is beyond the extent of his/her knowledge? Lastly, there was no support for the reliability or validity regarding these types of assessment questions.

A New Assessment Tool

It is this lack of a reliable and valid tool that has led to the formation of the Wikoff Spiritual Focus Questionnaire (WSFQ) (Wikoff, 2001). The original 50-item questionnaire was designed to establish which spiritual relationships were important to the patient and thereby give directions for nursing interventions. As the tool developed it was edited from 50 items to 39-items based on testing in a small sample and discussion with experts in the area. The 39-items were considered to be too long for patients who were acutely ill by the author and the test site. The questions were then evaluated for ease of understanding by patients and experts and modified resulting in a final 20-item questionnaire. The purpose of this dissertation was to test the tool in a clinical setting among an inpatient sample population.

Significance to Nursing

The central contribution of this research to nursing practice is to provide a useful, simple, self-administered tool for the assessment of spiritual focus. This tool provides the nurse with direction related to a patient's spiritual relationships. By recognizing the patient's spiritual focus nurses will be better able to meet patient spiritual needs through appropriate and patient specific interventions.

This research advances nursing science in general. Since there has been no tool that can be used to measure what is important spiritually, this tool provides nursing with a new method to explore the nature of spirituality in the acute care population. This tool is relatively simple and applicable to a broad population. Nursing science, therefore, benefits from the development of a new tool and from the outcomes of the study.

Summary

Assessing on admission how a person engages in spiritual expression or seeks spiritual fulfillment difficult to accomplish through existing tools, therefore it is necessary and appropriate to develop a new method. Development of a new tool requires analysis of conceptual issues and psychometric properties of existing tools, as well as a thorough review of the literature.

CHAPTER 2

REVIEW OF THE LITERATURE

Spirituality is an area of growing interest among nursing scholars today. While nursing literature has always included some aspects of spirituality, a review of relevant literature on spirituality shows an increase of articles covering this concept over the last decade. Nursing scholars have shown increased momentum towards defining and measuring spirituality in different situations, however there is a great amount of work left undone. The greatest discussion, thus far, has been on defining spirituality with less emphasis on the measurement of spirituality.

Spirituality has been positively linked with health and healing in individuals with assorted chronic conditions (O'Neill & Kenney, 1998). Because of this linkage, nurse need to give greater consideration and interest to this concept. The dramatic surge in the volume of theoretical and research articles alone attests to this interest during the 1990s (Burkhardt, 1989, 1994; Kahn & Steeves, 1995). The first portion of this chapter will cover a critical analysis of the literature on spirituality. A discussion on spirituality and religion will follow. A third component will consist of a critical analysis of measurement tools. A description of unmeasured dimensions and the case for the development of a new measurement tool will conclude this chapter.

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Components of Spirituality

Spirituality is an abstract concept with multiple interpretations derived from the various sciences of psychology, sociology, theology, medicine and nursing. However, for the purposes of this proposal, the focus is primarily on the nursing literature. The root word is spirit, which Nichols (2001) defined as the "animating principle of life"(p. 1265) or an aspect of the mind or soul. Spiritual pertains to the spirit or soul as different from the physical nature, as the seat of the moral or religious nature, related to sacred things or matters, even religious (Nichols, 2001). Spirituality was best defined as the quality or fact of being spiritual (Nichols, 2001). These rather vague definitions are of little help when nursing seeks to meet the spiritual needs of patients.

From the beginning of nursing, spirituality has been an important consideration. Florence Nightingale viewed spirituality as a science (Macrae, 1995). Nightingale rationalized that our knowledge and understanding of God should be continually evolving with an emphasis on relationships with God, self and nature. This emphasis was consistent with many of the contemporary authors' definition of spirituality (Burkhardt, 1989, 1994; Dyson, Cobb, & Forman, 1997; Labun, 1988; Reed, 1992; Walden, 1996). Much of the literature described spirituality in the context of relationships. It is these relationships that can serve as a foundation for meeting client's spiritual needs.

While Florence Nightingale described the importance of spirituality and meeting the patient's needs, there has only been a resurgence of interest in this area in the last 15 years. During the early and mid parts of the 20th century, research in this arena largely encompassed looking at religiosity. Examples, of this research found in Argyle & Beit-Hallahmi, (1975) included studies examining church participation and age differences

between men and women's beliefs and the importance placed on certain beliefs, such as transcendence. From the mid-1960s until the late-1980s, there was little focus on spirituality in nursing literature. Therefore, the discussions of the definitions of spirituality began in the late 1980's.

Spirituality as a Relationship

Labun (1988) defined spirituality as an aspect of the person expressed through interpersonal relationships and through a transcendent relationship with a Higher Power that has a relational nature. These interpersonal relationships produce feelings of love, faith, hope and trust, giving meaning to life and a reason for being.

While Labun's work was largely unidirectional, Nagai-Jacobsen & Burkhardt (1989) focused on the interconnectedness between self, others, nature, and an Ultimate Being. They described the relationships between the groups of self, others, nature and an Ultimate Being as requiring harmony. It was this harmony, which allowed the nurse to recognize an individual's spirituality and nurture the needs of the client.

Stoll (1989) echoed this relationship by describing spirituality as dynamic in nature with an ebb and flow. Stoll suggested a vertical and horizontal dimension to a person's spirituality. The vertical dimension had to do with the person's transcendent relationship with a higher being-God. The horizontal dimension related to "one's beliefs, values, life-style, quality of life, and interactions with self, others and nature" (p. 7).

Carson (1989) advanced Stoll's discussion of the vertical and horizontal process occurring in spirituality. Carson believed that the "person's awareness of the transcendent values is inherent in all relationships and activities of life. The vertical process moves the individual into a closer relationship with a higher being" (p. 26). Individuals may develop

the horizontal process without ever developing the vertical process or vice versa. This suggested that a strong relationship with a Higher Power might grow for an individual while the other relationships languish. Moreover, in still others the reverse may be true suggesting that the developmental component of spirituality was very individualized.

In the same manner, Burkhardt's (1989)conceptual analysis described spirituality as experiencing harmony in relationship with self, others, divinity and the environment. Burkhart further stated that the area of spirit and spirituality was often less than the ideal; nevertheless, the need for attentiveness to spirituality and spiritual concerns of clients was necessary for nurses and other health care professionals.

In a later definition, Reed (1992) included elements such as the self-transcendent nature of human beings, spirituality as various forms of connectedness necessary for human development, and a multidimensional nature of spirituality. Spirituality "refers to the propensity to make meaning through a sense of relatedness to dimensions that transcend the self in such a way that empowers and does not devalue the individual" (p. 350). This relatedness described the key to defining spirituality. First, there was the intrapersonal, which was a connectedness to one's self. Second, there was the interpersonal relatedness that was connectedness with others and the natural environment. A transpersonal relatedness, the third point, referred to a sense of relatedness to the unseen, God, or power greater than self and ordinary resources. This conceptualization of spirituality emphasized the wholeness of the person in terms of connectedness with instead of separateness from the environment, of self-transcendence from a life span developmental perspective (Kahn & Steeves, 1995).

Interviews of twelve adult women from the Appalachia region provided the sample for Burkhardt's (1994) qualitative research study on spirituality. The theme that emerged from the interviews was spirituality as a unifying force giving meaning and shape to life including the same dimensions of self, others, nature and a Higher Power. These connections were the ultimate manifestation of the concept.

A concept analysis by Walton (1996) concluded that the operational definition of spiritual relationships relied on the person involved in the relationship(s). These relationships were then described as a relationship to a Higher Power, self, others, or nature. Again, the reiteration of the same dimensions combining to describe an individual's spirituality.

Dyson, Cobb, and Forman (1997) also described the importance of the relationships between self, others and God, the search for meaning in life, and hope as a spiritual need. In their literature review, they discussed the same themes reported by the other authors.

The common definition of spirituality based on the literature consisted of multiple components or dimensions including the relationship with self, nature and others, and the belief in a Higher Power. The transpersonal representation was in the upward direction, a look toward God as an Ultimate Power or the act of transcendence in rising above the ordinary. The horizontal relationships were those relating to self, others and nature. The intrapersonal aspect of spirituality consisted of knowing who one was and having a purpose or meaning to one's life and that represented by the inner values. The relationship with others was best described as the connection made between individuals that result in meaning and purpose to life. Lastly, the relationship with nature represented

the spiritual benefit derived from the natural world/environment. Clearly, over almost the last decade and a half, nursing has pondered and explained spirituality in context of relationships. These relationships with a Higher Power, self, others and nature or the environment were the essence of the definitions of spirituality. It was therefore important to assess these relationships as a vanguard to meeting the spiritual needs of our patients.

Spirituality and/or Religion

In defining spirituality, it is important to discuss the differences between spirituality and religion. Historically, religious participation or church attendance was the basis of research in the area of spirituality. Many studies that have examined health or healing have looked at the influence participation in a formal religion played on the individual's well being (Argyle & Beit-Hallahmi, 1975; Argyle, 2000). These studies found a positive correlation between church attendance and longevity and health. Today many individuals do not profess or practice a formal religion, yet consider themselves spiritual (Burkhardt, 1989; Taylor 2002). Therefore, participation in religious activities or formal religion as a measure of spirituality in today's population alone probably does not reflect accurately beliefs regarding spirituality. As recently as the 1970s and early 1980s, definitions of spirituality in nursing literature were synonymous with institutionalized religions (Labun, 1988). In medical literature, religious activities are still the measure of spirituality (Koenig, Cohen et al., 1997; Koenig, George, Hays, Larson, & Blazer, 1998).

In a concept analysis covering nursing literature from 1963 to 1989, Emblum (1992) identified the words used consistently for spirituality and religion. A description of religion was that of an organized system of worship or body of thought. Emblum described spirituality as "the quality of forces which activate or influence us, the life

principle that pervades an entire being, inspires transcendence, or animates existence"(p. 45). Emblum broke the two definitions down into taxonomy of words and found only seven words or phrases in common between religion and spirituality. These were being, belief, ethical code/moral code, existence, faith, forces and universe. Because of the lack of similarity between the two, Emblum concluded that they served as two distinct concepts within nursing.

Nevertheless, Dyson, Cobb, and Forman (1997) suggested that since "the Judeo-Christian tradition of western society cannot be avoided, it is therefore probably unrealistic to separate religion and spirituality entirely"(p. 1184). Thus, a component of spirituality was religion or religiosity. Nagi-Jacobsen and Burkhardt (1989) stated that religion provided a platform for the expression of spirituality.

Recently, Govier (2000) identified five components of spirituality. These components included reason, reflection, religion, relationships and restoration. According to Govier religion was a component of spirituality, which often served as a vehicle for expressing spirituality.

There was a link throughout the literature between the components of religion and spirituality. While it may be true that one can be spiritual without religion, it is much harder to be religious without being spiritual. This linkage between the two that serves as the basis for including religion as one of the dimensions considered in the tool development.

Existing Measurement Tools

The literature review described earlier in this proposal identified four major components or dimensions to an individual's spirituality. An analysis of existing tools

showed that while a number of tools may examine elements of spirituality, there currently

wasn't a tool that examined where an individual places their spiritual emphasis.

Nevertheless, there have been many tools developed over the years to measure some

component of spirituality and/or religiosity (Hill & Hood, Jr., 1999). These tools have

looked at many different aspects of the individual's spiritual and religious experience.

Moreover, many researchers develop single or multiple questions to measure spirituality

without developing or using an existing tool (Taylor, 2002). The analysis of three tools

purported to measure the spiritual relationships of an individual was part of this

dissertation. These tools were also the ones seen most frequently in quantitative research

examining some aspect of spirituality.

The Spiritual Well-Being Scale. The most frequently used scale was the Spiritual

Well-Being Scale (SWBS) developed by Ellison & Paloutzain (as cited in Hill & Hood,

Jr., 1999). This tool has been used by Crigger, (1996); Ferrell, Grant, Funk, Otis-Green,

& Garcia, (1998); and Hill & Hood, Jr., (1999). The development of this 20-item Likert-

type scale as a general measure of the subjective quality of life occurred to measure the

psychological dimensions of spirituality. It has two subscales that look at religious well-

being and existential well being. Religious well-being was thought to measure the

vertical dimension on how one perceived the well-being of their personal life in relation

to God. The existential well-being was concerned with how well the person had adjusted

to self, community and surroundings. Because of its existential component, this tool was

appropriate for use with the religious as well as with the atheists and agnostics. The

literature reported that the internal consistency was strong with a Coefficient Alpha of

.89-.94 in studies mentioned above. However, this tool provided little direction for

nursing, it was intended to measure the psychological dimensions of how spiritually well an individual feels.

The Spiritual Perspective Scale. A second tool used in numerous nursing research studies (Gray & Beard, 1999; Humphreys, 2000; Tuck, Pullen, & Lynn, 1997) to measure spirituality is the Spiritual Perspective Scale (Reed, 1986). This scale measured the extent to which one holds spiritual views during spirituality related interactions. It also measured ones' awareness of the inner self, connection with a higher being, nature, and others. The Coefficient Alpha for this tool ranged from .87 in Humphrey's study to .91 in Gray and Beard's research. The average score on theses dimensions among clinical groups was 4.157 – 4.530 on a 1-6 scale. Tuck, Pullen, and Lynn (1997) found a mean of 5.334 in elder nurses, 40 years and above, which was higher than previous scores among nurses. This finding was explained as a function of the age of the sample suggesting spirituality became more important as one aged. Tuck, et al. described the tool as a measure of one's spiritual perspective. The challenge with this scale was that it was summative in nature, resulting in sum of spirituality; again this was not useful in the clinical setting.

The JAREL Spiritual Well-Being Scale. The third tool frequently used in research was the JAREL Spiritual Well-Being Scale (Hungelmann, Kenkel-Rossi, Klassen, & Stollenwerk, 1989). This tool evaluated the harmony that existed as a function of interconnectedness between self, others, nature and a Higher Power and had a Coefficient Alpha of .88 (Marsh, Beard, & Adams, 1999). This tool was used to create a score where the higher the score, the higher the level of spiritual well-being. In their study on nurses, Marsh, et al, found that the higher the spiritual well-being, the less burnout occurred. The

finding purported spiritual well-being was important in stress management. Factor analysis on this tool resulted in three categories-faith/belief, life/self responsibility and life satisfaction/self actualization. The factor analysis complete by Marsh et al. proved that the study focus less on religion and more on spirituality. This suggested that it might be useful in the general population. However, this tool was summative and resulted in a total score of spiritual well-being.

The three most commonly used tools were excellent examples of measures of spirituality; yet, none provided the answer to what was most important to the individual. These tools, while useful in many research projects with good reliability, offered little assistance to the nurse in determining the spiritual needs of the client. The summative nature of each tool sought to determine if the individual was in distress, but offered little information about the kind of distress or what could restore a sense of wholeness. Therefore, a fresh and innovative look at spirituality from a framework of spiritual focus was imperative.

Description of Unmeasured Dimensions

The tools previously described did not identify the importance of the different types of relationships in spirituality or where an individual might place the focus of their spirituality. In large part, the design of these tools determined a score for an individual regarding their spirituality. The higher the scores occurred with the more spiritual the individual. The unmeasured dimension was the individual emphasis of these relationships. In addition, the tools did not measure the strength of these spiritual relationships. Lastly, the scoring of existing tools was cumulative suggesting spiritual

well-being was the sum of all components or dimensions, whereas, scoring components separately was necessary to direct nursing interventions.

Case for the Development of a New Measurement Tool

There was an alignment between the measurements of the connections or relationships of clients and the measurement of the importance of spirituality in this population. Measuring an individual's level of spirituality merits consideration, as does measuring the central point of that spirituality in order to better meet the needs of our patients and direct nursing interventions. This lack of an understanding of spiritual emphasis left the bedside nurse searching for responses to spiritual issues or ignoring the area entirely.

Since Reed (1992) believed, that the empirical study and the application of spirituality in practice was possible, it was important to use methods of science and praxis as a basis for epistemological assumption. Reed believed that connectedness was the key to unlocking the meaning of spirituality, since it represented a relationship with others, God and the environment.

However, Hall (1997) suggested that the concept of spirituality had been confounded with a belief in God resulting in nurses more focused on religions than spirituality. Hall further believed that because of the acceptance of the connection between religion and spirituality, nursing has limited itself to understanding doctrines and not spirituality as a quality of human life. The link between religion and spirit was in the search for meaning. Hall recommended the use of harmonious interconnectedness, inner strength, being, knowing and doing as labels to provide a beginning point in spiritual research. Herriott (1992) furthered this thought in her work on spirituality and aging,

stating the need for further research into this global concept through the development of measures of spirituality. The basis of Herriott's rationale was the preponderance of qualitative studies and the lack of quantitative studies on the concept. In measures of spirituality, Walton (1996) suggested that self-reporting was the most important way to validate a patient's response.

It was from applying the above considerations that a tool was developed. The new tool seeks to measure the most important relationships of spiritually and, while including religiosity, does not focus exclusively on that construct. This tool on spiritual focus will seek to examine the central point of an individual's moral, sacred or religious interest, outlooks, feelings or beliefs as demonstrated by the importance of relationships with a higher power, nature, self, others and religion.

Measuring the amount of spirituality or its importance was merely the starting point. It served as the antecedent to determining the type of interventions appropriate for patients with spiritual needs. According to Wright (1998), nurses were professionally responsible for providing spiritual care, yet nurses remained reluctant to meet these needs. Wright cited reasons that included the lack of education, fear of invading privacy, lack of time and lack of understanding one's own spirituality. An assessment of how an individual met their spiritual needs assist the nurse in providing nursing interventions in concert with the patient. In a regional descriptive study, Sellers and Haag (1998) sought to explore what nursing interventions oncology, parish and hospice nurse used in direct patient care. They found the top interventions were referral to a spiritual advisor (minister, chaplain), prayer, active listening, therapeutic communication, conveying acceptance, instilling hope and clarifying client's spiritual values through a spiritual

history as the top seven. The importance of relationships was not present in any of the interventions except the referral to a spiritual advisor and possibly prayer. What is supporting the importance of an individual's relationships with self, others, the environment or a higher power? A greater focus needs to be placed on the where the individual places the importance in spiritual relationships to then form more effective interventions for care. Therefore, it was the premise of this study that an understanding of the importance of these relationships lead to better outcomes for patients overall.

CHAPTER 3

METHODOLOGY

This chapter will discuss the development of the tool for spiritual focus known as the Wikoff Spiritual Focus Questionnaire (WSFQ). Initially the tool was a 50-item questionnaire and it was refined using several statistical processes to reduce the tool to 20 items for the final phase. The phases involved in this tool's development and refinement were initial development, exploratory factor analysis in a community group and confirmatory factor analysis among acute care inpatients. A discussion of the initial development, exploratory factor analysis in a community group will occur in this chapter. The discussion of the outcomes of confirmatory factor analysis takes place in Chapter 4.

Initial Instrument Development and Evaluation

This phase will describe the development of the tool including definitions, dimensions and the development of sample items. Spirituality as previously discussed related to dimensions of spirituality described in nursing literature. Based on the literature the operational definition of spirituality for this tool was: *Spirituality is composed of relationships between an individual with a Higher Power, Self, Others, and Nature.* The definition religiosity was relevant, since for some spirituality and religious faith cannot be separated. Therefore, the five dimensions included in the WSFQ are a Higher Power, Self, Others, Nature, and Church/Religion.

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Instrument Development

In keeping with these definitions expert nurses participated in describing images, components and manifestations of spirituality. These ideas helped develop items under the five components of the WSFQ as visual images or pictures. For example, the use of images of prayer, calmness and serenity facilitated the creation of items for the tool.

Item Identification and Formation Process

The literature review, including the review of multiple tools on religiosity (Hill and Hood, Jr., 1999), and discussions with chaplains and nursing colleagues formed the basis for the items developed for the WSFQ. Initially 10 items were written for each dimension for a total of 50 items (See Appendix A) to ensure an adequate coverage of the content based on the literature. In compliance with Mischel's (1989) recommendation, each item within a dimension was homogeneous. Using the standardized Flesh-Kincaid readability score within Microsoft Word the language of the items was at a sixth grade reading level.

The emphasis placed on a relationship with a Higher Power, Supreme Being or God is the first dimension of the WSFQ. The use of the dimension called *a relationship with a Higher Power* determined the importance or relevance to the individual of their spiritual relationship with a Higher Power. This dimension consists of items like "My strongest relationship is with a Higher Power."

The second dimension is that of S*elf*. Self can best be described by those for whom spirituality is focused on an individual's belief that spirituality comes from within. The fact that the relationship with self is the most important in their life and peace is

obtained through the connection with the self. A sample item from the WSFQ states "My spirituality comes from within me."

The third dimension of the WSFQ called *Others* reflects the individual's emphasis on staying connected with others as the central point of their spirituality. This dimension seeks to measure the importance that these relationships with others have in providing peace, inner calmness or life purpose. A sample item for this dimension asks: "I find renewal of my spirit from family and friends."

The dimension of *Nature* refers to a connection with the natural world as the source of calmness, peace or inner tranquility. This fourth dimension seeks to measure the importance of this relationship as the source of spirituality. A sample item is "When in nature I feel thankfulness for my blessings."

The last dimension considered essential in the WSFQ is *Religion*. The facet of religion tries to determine the emphasis an individual places on their religion or religious affiliation. While this dimension was not noted as a component of individual spirituality in the nature of relationships, failing to consider religiosity in a spiritual measurement tool would leave out a critical component to many individual's spirituality. A sample question is "My religion helps me keep my life in perspective."

Scaling Format and Rationale

The WSFQ asked the participants to rate each item using a summative Likert-type scale. The ratings consisted of whether the individual strongly agreed, agreed, disagreed or strongly disagreed. Spirituality often evokes strong positive or negative feelings; therefore, it was important that these categories be neutral to minimize the chance of ambiguity or an individual choosing a neutral answer. Each dimension has 10 items with

scores ranging from score of 1 for strongly disagree, 2 for disagree, 3 for agree and 4 for strongly agree. The sum total for each dimension would be a score of 40. The lowest possible score on each dimension would be a 10. Each dimension is scored separately to achieve a score representing the spiritual focus of an individual. It is anticipated that an individual could score high on a number of dimensions representing multiple foci of emphasis. The areas with the highest score could be used to provide direction for nursing interventions because the higher the score on the dimension the greater the emphasis placed by an individual. After the establishment of a reliable and valid tool it would then be necessary to develop nursing interventions to support dimensions identified as important.

Instrument Evaluation

This section provides a brief theoretical review and discussion of actual methods used to test a new tool, such as, the Wikoff Spiritual Focus Questionnaire. The validity and reliability estimations are presented and a discussion of the pretest is included.

Validity estimation. The purpose of measuring validity is to ensure that the instrument is measuring what it is supposed to measure. Of the three types of validity: content, criterion-related validity and construct validity, content validity was used to validate the 50-item WSFQ (Polit & Hungler, 1999). Content validity determination occurs through the use of experts who evaluate the relevance of the tool items. Five members of the healthcare community examined the content validity by rating the relevance of the items. The participants included two doctoral students who have a personal interest in spirituality and who had completed modified literature reviews in the subject area, two local chaplains (one of whom is also a nurse), and a nurse practitioner

with a personal interest in spiritual care. Each participant rated a tool for the content validity and scored each item valid or not valid. The scores for the total participating group were calculated and resulted in a score for each item and the tool as a whole. This provided a Content Validity Index (CVI). The overall CVI was .88. There were six items that scored .60 or less, two items from the Self Scale and two items from the Others Scale were at .60. There were two even lower items on the Nature Scale, one scored at .20 and the other at .40. The low scores on these six items strongly suggested these items didn't reflect spirituality as viewed by the experts. Based on Nunnally and Bernstein's (1994) recommendations, individual items scoring less than .80 on the CVI were eliminated from the second version of the tool (See Appendix B).

Some evaluators reported that it was difficult to separate their personal beliefs from the relevancy of the tool items. In fact, two evaluators reported the need to read the tool twice to ensure their responses reflected the relevance of the items to the subject versus their personal belief regarding the importance of the items. The five experts were also asked to comment on the clarity of the items. The experts offered recommendations for improvement in the wording of items or better ways of achieving the same information. No recommendations were given to add additional dimensions for missing information or concepts. The questionnaire was modified to improve content and clarity based on expert recommendations.

Reliability Evaluation. Reliability measurement refers to the degree of consistency and repeatability of the new scale. A reliable tool shows scores that are stable and do not fluctuate and can be repeated with similar results. There are three methods of reliability to consider, stability, internal consistency and equivalence (Polit & Hungler,

1999). Internal consistency uses a Coefficient Alpha as the measurement of reliability. Most Social Science applications consider a Coefficient Alpha of .70 or above acceptable (Nunnally & Bernstein, 1994). However, due to the sample size in the pretest a Coefficient Alpha was not calculated.

Pretest

A pretest was done among a group of registered nurses participating in a documentation education program. No identifying information was gathered from the pretest. There were 54 usable surveys. The pretest information was used to run some baseline statistical analysis using the Statistical Package for the Social Sciences (SPSS) Version 10.0 (1999). A calculation of the correlation matrix identified items that might poorly reflect the dimension (Nunnally & Bernstein, 1994). Any items with a Pearson R = .90 correlation or above was considered redundant and the item with the highest value was eliminated. An item was deleted that scored of .20 or less. These deleted or changed items did not represent the dimension as perceived by the author or to be consistent with items identified by participants or experts as valid. As a result, two items were removed from four of the dimensions. The *Others* dimension had three items that were eliminated. The resulting 39-items (See Appendix B) would be used for a pilot study conducted with a larger group. A Coefficient Alpha as a measure of reliability will be obtained in the larger pilot study sample.

Exploratory Factor Analysis

Exploratory factor analysis was conducted as a pilot test on the 39-items (See Appendix B) among a selected, convenience sample of women. This sample was

obtained using three different locations and groups. The three locations were a women's seminar, a nursing continuing education course and a mandatory competency skills fair.

Ethical Considerations

Permission was granted by the organization presenting the seminar, after the researcher had received permission from Institutional Review Board of the same organization to collect data at the women's seminar. It was felt there was no potential harm from participating in the study. No personal identifying information was gathered in this pilot study. The nurses and nursing assistants were employees of the same organization and permission was obtained from the organization's leadership. Each questionnaire included an explanation of the questionnaire and notification of consent implicit in completing the tool.

Data Collection Instrument

In the pilot study, the WSFQ was used to measure spiritual focus with a 4-point Likert-type scale with the endpoints 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree. A total score was not calculated since it was the total on each subscale that reflected the spiritual focus and the tool was not meant to measure total spirituality. A short series of demographic questions were included on the questionnaire.

Data Collection

Women attending a seminar on women's health issues presented by a local hospital were the first group to complete the questionnaires. Seven hundred fifty surveys were placed on tables at the seminar where the individuals might sit. Approximately 200 surveys were collected because some of forms were discarded by housekeeping. Additional participants were gathered from two nursing educational programs, one

presented to registered nurses. The second group included all nursing personnel, including nursing assistants, which attended an annual competency skills program. There were 256 useable tools, 85 forms were discarded due to dimensions of the questionnaire left blank.

Data Analysis: Statistics

Data were analyzed using the SPSS Version 10.0 (1999). The Pearson Product-Moment Correlation was used for inter-item correlations and Cronbach's coefficient (Alpha) was used to test internal consistency (Nunnally & Bernstein, 1994). Participant scores on the WSFQ were examined using principle component analysis, followed by rotation to orthogonal transformation by the varimax method (Nunnally & Bernstein, 1994).

Results

The discussions of the results are in five different sections: scoring, sample characteristics, inter-item reliability, factor analysis and internal consistency. Included is a presentation of the statistical examination of the relationships between the subscales and demographic data and overall results.

Scoring. Scoring of each of the subscales of the tool, based on the original dimensions, occurred while exploratory analysis had yet to be completed. The subscale means ranged from 21.76 to 25.75. The subscale of *Focus on Others* had the lowest mean score and *Focus on God* scored the highest. The standard deviation ranged from 4.16-6.54. The subscale of *Focus on Others* had the lowest standard deviation and *Focus on Religion* had the highest standard deviation.

Sample Characteristics. The convenience sample consisted of women attending a woman's seminar or women working in health care (See Table 1). These women were between the ages of 20 and 70, with the age group of 30-49 accounting for nearly 63% of the sample. This was a well educated group with 71% college graduates or above with income levels high overall. They described themselves as 39.4% very spiritual with a combined total of 91.7% stating that they were somewhat or very spiritual

Table 1

Descriptive Statistics for the 39 Item WSFQ of the Variables: Gender, Education, Church Attendance, Spirituality, and Income Level (N = 256)

	N	(%)
Gender		
Female	245	(100%)
Age		
20-29	27	(10.9%)
30-39	66	(26.6%)
40-49	95	(38.3%)
50-59	44	(17.7%)
60-69	14	(5.6%)
70-79	2	(.8%)
80+	NA	
Education		
High School or Less	21	(8.6%)
Some College	49	(20.1%)
College Graduate	54.7	(13.5%)
Some Post Grad	24	(9.8%)
Completed Post Grad	4.1	(28.5)
Church Attendance		
Frequently	95	(40.1%)
Regularly	49	(20.1%)
Occasionally	50	(21.1%)
Rarely	28	(11.8%)
Never	2	(3.5%)
Other	43	(2.5%)

Table 1 (Continued)

Spirituality
Very Spiritual	95 (39.4%)
Somewhat Spiritual	126 (52.6%)
Slightly Spiritual	7.8 (8.3%)

Income Level
Less than 24,000	42 (17.8%)
24-40,000	67 (27.8%)
40-80,000	101 (41.9%)
Greater than 80,000	30 (12.4%)

Church attendance distribution was 40% attending church, synagogue or temple at least weekly and another nearly 20% attending once or twice a month.

It was found that income correlated positively at .231 with age and at .193 with education in this population (p = .01). Church attendance and spirituality were positively correlated at .342 (p = .01) and spirituality was somewhat negatively correlated at -.145 with income (p = .05).

Inter-item Correlation Reliability. The inter-item correlation coefficient ranged from .19 to .94. Item number 11 had the fewest inter-item correlations in the *Focus on Self* dimension. The highest correlation was from *Focus on God* dimension, item number 6.

Items number 11 (I use meditation for personal relaxation) and 15 (I use chanting to enhance my spirituality) were deleted based on the results of the reliability analysis inter-item correlation coefficients ≤ .35. Items 5 (I am inspired by communication with a Higher Power), 6 (The focus of my spirituality is on a Supreme Being) and 37 (Through my religion I can achieve inner calmness) were eliminated due to high inter-item coefficients of ≥ .89, which can suggest redundancy in the questions.

Factor Analysis. Principle component analysis (PCA) was used as a statistical tool to reduce the number of variables and detect structure in the relationships between variables with the above 5 items eliminated (Nunnally & Bernstein, 1994). PCA was used based on the assumption that all variability in an item should be used in the analysis and is a preferred method for data reduction.

The scree-test plot and eigenvalues of 1.0 in the exploratory analysis supported the six-factor solution with a cumulative variance of 75.89%. A rotation to orthogonal transformation by the varimax-normalized method was used, and the loading of items on the six factors is reported (See Figure 1). A salient loading of .3 is the minimum value

Figure 1

Principle Component Analysis for Spiritual Focus Questionnaire

Item	Component					
	1	2	3	4	5	6
1	.842					
2	.829					
3	.828					
4	.782					
7	.800					
8	.801					
9	.656					
10	.695					
12					.587	
13					.678	
14					.712	
16					.700	
17						.706

Item	Component					
	1	2	3	4	5	6
18						.704
19				.458		.483
20				.635		
21				.796		
22				.784		
23				.735		
24			.674			
25			.799			
26			.838			
27			.840			
28			.758			
29			.827			
30			.803			
31			.754			
32		.772				
33		.784				
34		.859				
35		.696				
36		.807				
38		.827				
39		.826				

and .5 criterions or higher is usually better (Nunnally & Bernstein, 1994). All items

achieved salient loadings at .587 or above except item number 19 (My relationships keep

me focused on my life purpose), which loaded at .458 on factor four and at .483 on factor

6.

Despite having an underlying theory of five dimensions, it was important to complete an exploratory factor analysis. The purpose was to examine the relationships between the items statistically both for item reduction and to validate structure. The three items, loaded on factor six, were 17 (I use my connection with family and friends to lift me up), 18 (I feel calm when surrounded by those who are important to me) and 19 (My relationships keep me focused on my life purpose). The cross loading of item 19 to both factor six and factor four was examined and left as an item on factor six.

For purposes related to the underlying definition of spirituality, the elimination of all items on factor 6 were necessitated on the final 20-item questionnaire. However, the questions raised by these items need further consideration in the future. Is this possibly an unexplored component of spirituality or were these items ambiguous? Initially these three items were components of *Focus on Others*. Nevertheless, a possible fit of these items maybe an emotional component of spirituality since these questions looked at feeling "lifted up" and "a feeling of calmness." Item 19 described the relationships keeping an individual focused on a life-purpose. It is possible that life purpose may have triggered an emotional response. The remaining items were consistent with the five factors identified from the literature. The first component, *Focus on God,* included items 1-10. Items 9 (I find spiritual renewal by spending time in quiet self reflection) and 10 (I spend time reading books that are spiritually focused) loaded to this component unexpectedly. The design of these two items was to measure the relationship with self. Component 2 consisted of items 31-39 and these items were consistent with original development, as were items 24-31, which made up the third component, *Focus on Nature. Focus on Others* questions related to others and had only four items, numbers 20-23. The fifth

component consisted of items 12, 13, 14 and 16 and these questions were part of the *Focus on Self*.

Internal Consistency Reliability. Given the multidimensionality of the scale a total Coefficient Alpha was not calculated. However, each dimension subscale had the Coefficient Alpha calculated. The Coefficient Alpha for subscales are: *Focus on God* .94 (N = 226), *Focus on Self* .79 (N = 225), *Focus on Others* .85 (N=229), *Focus on Nature* .92 (N = 224), and *Focus on Religion* .96 (N = 232).

Relationships between Subscales and Demographic Data. Correlations between the five subscales and the demographic data found a negative correlation of -.124 (*p* = .05) between age and *Focus on God,* but a positive correlation of .161 (*p* = .01) with *Focus on Nature.* Church attendance had a negatively correlation at -.395 (*p* = .01) with *Focus on God* and a -.130 (*p* = .05) with *Focus on Self.* Spirituality also had a negative correlation with *Focus on God* at -.507 (*p* =. 01) and -.152 (*p* = .01) with *Focus on Self* respectively. All of the components were strongly correlated with each other, except that there was no statistically significant relationship between *Focus on God* and *Focus on Nature.*

Discussion. The sample size in the pilot study posed several constraints. While a sample of 256 participants was adequate for the correlations, it needed to larger for other statistical analysis. In factor analysis, the statistical program included only questionnaires with all questions answered. This resulted in a sample size of 153 for factor analysis. A larger sample size, based on the concept of a minimum number of participants of 5-10 per item for a questionnaire (DeVellis, 1991), would have resulted in a lower risk of sampling error.

The finding of a sixth component raised questions concerning a potential new component of emotionality in spirituality. However, there was no discussion of emotionality in the literature regarding spirituality. As a result, this potential component received no further in this dissertation.

The WSFQ has yielded reasonable Coefficient Alphas and the factor analysis showed promise. However, it was impossible to rule out sampling error and unstable factorial analysis based on the sample size.

<div align="center">Confirmatory Factor Analysis</div>

The purpose of the confirmatory factor analysis was to further describe the psychometric properties of the Wikoff Spiritual Focus Questionnaire when used among inpatients of an acute care hospital. Up until now the WSFQ was used only among women in the general population and while interesting, offered little benefit for nursing. The ultimate goal of this study is to provide nursing with a new tool to ensure the holistic assessment of patients including spirituality.

Aims of the Study

The aims of this research were to test the reliability and validity of the WSFQ in an adult acute care population by measuring the Coefficient Alpha and completing confirmatory factor analysis. In addition, this research examined the relationships between the demographic variables and the patient's spiritual focus. According to the Joint Commission on Accreditation of Healthcare Organizations (2001), at a minimum nursing should determine a patient's denomination, beliefs, and what spiritual practices are important to the patient.

To fulfill the above purpose and specific aims of the study, the following questions were proposed: (a) Is the WSFQ a reliable and valid instrument for measuring spiritual focus in a general patient population; (b) What are the relationships between the WFSQ subscales and demographic variables; and (c) Are the five postulated dimensions supported by the confirmatory factor analysis? This research tests the psychometric properties of the WSFQ and uses a correlational design for the exploration of the relationships between the demographic variables. To answer the first question internal consistency (Coefficient Alpha) was used to assess the reliability of the instrument. Correlational analysis tested the second question tested answering how the subscales correlate with the demographics: gender, age, ethnicity, religion, and diagnosis. The last question used LISREL for confirmatory factor analysis thus answering the question. The first model of three hypothesized model was a five-factor solution with the factors correlating based on the literature review and initial tool development. The second model was a four-factor solution with the factors of God and Religion combined, and the remaining subscales considered separate. While the third was a three-factor solution with Higher Power and Religion together, Self and Nature together and Others as single subscale. The postulated four factor solution was based on the assumption that when you follow a formal religion you believe in a defined Higher Power, that is, God, Allah, Buddha, etc. The three-factor solution was based on keeping God and Religion together, an existentialist view of Self and Nature together and leaving Others as a separate component.

Setting

      This study was conducted in a 250-bed acute care hospital with a diverse patient population in Southern California. The tool was added to the patient database and nursing staff received in-service training on its use. The organization expressed a willingness to add the tool to the inpatient database to fulfill several internal goals: (a) the hospital sought to increase the patient satisfaction scores regarding meeting the patient's spiritual needs when hospitalized and (b) to have a measure that more closely meets the standards established by the national accrediting body. The database was used in all acute care units including the intensive care, intermediate care and the medical/surgical units. Patients, with the assistance of staff or family as needed, were asked to answer the questions on the patient database. Patients were encouraged to complete the questionnaire but completion was optional. The data was collected retrospectively from patient's charts.

Ethical Considerations

      The researcher obtained permission to conduct this study before its initiation. Both the Institutional Review Boards of both University of San Diego (See Appendix D) and Sharp Healthcare granted permission for the study. (See Appendix E).

      This proposed study was secondary analysis of medical records with no direct patient contact or interaction. The collection of demographic data and questionnaire answers were compiled from the patient's record post discharge. To prevent reuse of the same patient record, medical record numbers were matched with data collection tool numbers. However, to ensure confidentiality and to maintain anonymity separate forms with the medical record number and the data collection number were maintained during the course of the study. During the study the medical record list was kept in a secured and

locked location. At the study's completion the forms were destroyed providing no identifying information in the study data.

Sample

The sample of convenience consisted of patients admitted at a local community hospital who completed the Wikoff Spiritual Focus Questionnaire as part of their admission database. Inclusion criteria consisted of adult patients: 18 years of age and older, alert and oriented, and able to speak, write and understand English.

The size of the sample was determined using several different resources. The first was the recommendation that the appropriate sample size should be determined based on a recommended number participants per item for factor analysis (Nunnally & Bernstein, 1994). Using a minimum of five subjects per item, the number of participants for factor analysis of the 20-item WSFQ would need at least 100 subjects (DeVellis, 1991). Secondly, for the confirmatory factor analysis (CFA) with a power of .80 a sample size of 197 would be required. However, more recently Muthen and Muthen (2002) stated:

> Over the years, several rules of thumb have been proposed, such as 5 to 10 observations per parameter, 50 observations per variable, no less than 100, and so, in reality, there is no rule of thumb that applies to all situations. The sample size needed for a study depends on many factors, including the size of the model, distribution of the variables, amount of missing data, reliability of the variables, and strength of relations among the variables (p. 178).

Taking the above recommendations into consideration a sample size of 200 was determined adequate for this study. Therefore, 200 completed questionnaires were obtained and used for the data analysis.

Instrumentation

A demographic data set and the Wikoff Spiritual Focus Questionnaire were used for the collection of data. The demographic data set consisted of items related to age, sex, admitting diagnosis and religious preference as it occurred on the face sheet and in the patient database.

Reduction of the size of The Wikoff Spiritual Focus Questionnaire occurred using the data from the inter-item correlations and exploratory factor analysis. Redundancy and low inter-item coefficients resulted in the deletion of five of the original 39 items. The reduction to a 20-item tool occurred after using the factor loading. The researcher utilized the highest factor loadings for each dimension to achieve the goal of four items per dimension. In the case of the Focus on Self the item 12 (I use introspection frequently as part of my spiritual life) was deleted and replaced with "I can count on me as my spiritual center." In item 16 the word calmness was changed to peace. The final questions were given to two of the original content validity experts for review and analysis. The reviewers concurred that the intent and substance remained unchanged. One reviewer suggested several other questions that could be eliminated due to redundancy, however, since the organization was willing to accept 20-items, all 20 items remained. The questionnaire was shared with the leadership in the hospital and the permission to allow the use of the tool for both the study and hospital benefit was obtained.

Scaling. The scaling of the WSFQ component utilized a 5-point Likert-type scale with the endpoints of Very Important, Somewhat Important, Somewhat Unimportant, Very Unimportant and Neutral (neither important nor unimportant). This change to scale took place due to the change in the test group and ease of understanding by patients. A

decision that a neutral point be included to allow individuals to express a wider range of

spiritual importance occurred after a discussion with nursing staff and other

professionals.

Scoring. Scoring was not used for purposes of this study, however, nursing staff

were given information to score the individual and use the information in combination

with a standardized care plan developed by the author. It is anticipated future research

will examine and analyze the respective interventions for applicability and usefulness

among an inpatient population based on the outcomes of this study.

Procedure

After from both Institutional Review Boards approved the study the

organization's Medical Records Department provide charts for data collection for the

study. The Medical Records staff randomly selected the audited charts for data collection.

These charts were selected from the total admissions during each month once the study

has begun. All charts pulled were considered for the study, if the inclusion criteria were

met. Additional charts were audited until a sample size of 200 was obtained. The

researcher collected all of the data.

Data Analysis

The data analysis took place using the SPSS version 10.0 (1999). This program

analyzed all data analysis except for the confirmatory factor analysis completed with

LISREL 8.3. The level of significance for the correlational data analysis study is $\alpha = .05$.

The list-wise deletion method was used to handle any missing data, however, only 100%

completed tools were used in the final data analysis.

Summary

 The Wikoff Spiritual Focus Questionnaire was developed and tested among several groups. Each testing resulted in the refinement of the items and the tool as a whole. Chapter 4 will present the results of the confirmatory factor analysis.

CHAPTER 4

FINDINGS OF THE STUDY

A discussion of the outcomes of the three research questions appears in this

portion of the dissertation. The research questions were: (a) Is the WSFQ a reliable and

valid instrument for measuring spiritual focus in a general patient population; (b) What

are the relationships between the WFSQ subscales and demographic variables; and (c)

Are the five previously identified dimensions supported by confirmatory factor analysis?

The Questions Answered

The employment of content validity and reliability estimate procedures answered

the first question regarding the reliability and validity of the WSFQ, its psychometric

properties and its ability to measure the spiritual focus in a general patient population.

Having the questionnaire re-evaluated by the participants in the early development of the

tool assessed content validity. Utilization of internal consistency measures tested the

reliability estimates of the WSFQ.

The use of correlation procedures examined the relationships between the WFSQ

subscales and demographic variables. The correlational studies supported the belief that

there was a relationship between the demographic variables and the components of the

WSFQ. The third question asked if confirmatory factor analysis procedures supported the

five dimensions of the WSFQ. The SPSS program provided the data analysis for the first

and second questions. LISREL, a linear structural relations computer program provided

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the confirmatory factor analysis. This program allowed for the assessment of fit to the hypothesized model.

A review of 611 charts provided the convenience sample. Two hundred completed questionnaires made up the sample population. The remaining 411 charts had questionnaires that were blank or only partially completed. In reviewing those 411 charts, left blank or only partially completed there was no apparent differences among the groups. Some of the blank questionnaires had hand written comments such as too hard, refused, unable to complete, or a comment about their spirituality. One individual wrote, "I am Diablo" and another "I believe in God, not a Higher Power." Overall, most of the eliminated questionnaires were blank. Multiple areas of missing including the medical history and pain assessment also occurred in the databases where the questionnaires were blank.

Descriptive Statistics

The collection of demographic data on the sample population consisted of gender, age, ethnicity, religion and diagnoses. (See Table 2) The primarily source of data was from four nursing units however some patients may have completed the questionnaire in outpatient surgery or in the Intensive Care Unit. The four units that used for data collection included two telemetry units with primarily cardiac patients, a medical/oncology unit and a surgical/orthopedic unit. The chart review identified respiratory and renal patients that could have been patients on any of the units.

Ten percent more women than men completed the WSFQ. The age of the participants must be considered since a large percentage of the patient population were in

the 70-79 year old age range and over 60% of the sample were over 60 years old. The distribution of ethnicity was similar to the distribution of the in-patient population of the participating hospital.

Two different sources provided the client's religion or religious preference. The first source was the face sheet on the patient's chart and the second source was from the line above the WSFQ on the patient database. There were substantial differences in the amount of missing information in the databases. About 21% of the data were unavailable from the face sheet and approximately 47% of the information was missing on the patient database. The location for the placement of the patient's religious preference was on the top line of the patient database and thus missed by a large percentage of the patients. Furthermore, some patients having already answered that question on admission may have decided to leave it blank. The combination of the patient's religious preference no matter where ensued by using SPSS.

Table 2

Descriptive Statistics of the Variables (N=200) for the 20 Item WSFQ

	N (%)
Gender	
Male	90 (45%)
Female	110 (55%)
Age	
18-29	12 (6%)
30-39	18 (9%)
40-49	24 (12%)
50-59	25 (12.5%)
60-69	30 (15%)
70-79	60 (30%)
80+	31 (15.5%)

Ethnicity

Caucasian	67 (33.5%)		
Hispanic	42 (21%)		
Asian/Pacific Islander	27 (13.5%)		
African American	7 (3.5)		
Other	57 (28.5)\		

Religion (Face sheet versus Database)	Facesheet	Database	Combined
Catholic	95 (60%)	63 (59.4%)	103 (59.2%)
Jewish	1 (0.6%)	2 (1.9%)	2 (1.1%)
Protestant	55 (35%)	39 (36.8%)	63 (36.2%)
Mormon	4 (2.5%)	1 (.9%)	4 (2.3%)
Eastern	2 (1.3%)	1 (.9%)	2 (1.1%)
Missing	43	94	26

Diagnosis

Cardiac	58 (29%)		
Respiratory	34 (17%)		
Renal	15 (7.5%)		
Cancer	31 (15.5%)		
Surgery	8 (4%)		
Orthopedics	20 (10%)		
Diabetes	3 (1.5%)		
Other	31 (15.5%)		

This resulted in only 26 individuals without a religion identified for a total of 13% unaccounted for regarding religious preference.

Religious preference was strongly either Catholicism or Protestantism with 95% of the patient group having a Christian religious belief system. The lack of representation of other religions of belief systems might have skewed the results towards Christian religions. However, this again reflected the community hospital's population.

Psychometric Evaluation in an Acute Care Population

The answer to the research question: (a) Is the WSFQ a reliable and valid instrument for measuring spiritual focus in a general patient population? evaluation of

psychometric properties of the WSFQ occurred. Experts re-evaluating the tool

established content validity while the Coefficient Alpha measured reliability.

Reliability

In keeping with the pilot study, analysis of the Coefficient Alpha on each of the

subscales provided the internal consistency of reliability. The Coefficient Alpha as

discussed earlier should be above a .70 for a new measure (Nunnally & Bernstein, 1994).

Each of the subscales was tested and found to be above the .70 levels with a range of .89-

.96. The subscale of *Higher Power* had an Alpha Coefficient of .92; the *Self* subscale was

.92; the *Others* subscale was .89; the *Nature* subscale was .93 and lastly the *Religion*

subscale had an Alpha of .96.

Each of the subscales had calculations of inter-item correlation preformed. These

inter-item correlations were strong with a mean range from .6646 to .8522. There was no

recommendation to eliminate items from the WSFQ based on the inter-item correlations.

Items would have to be ≤ .35 or greater than ≥ .89 to be removed based on the earlier

discussion in Chapter 3.

Validity

Experts in field of nursing and people who were chaplains conducted content

validity. Two of the original evaluators examined the questionnaire for ease of readability

and for content. A finding of validity occurred if two reviewers described it as being

consistent with the original intent of the questionnaire and with dimensions consistent

with spirituality.

Correlations between Dimensions and the Demographic Data

The second research question asked what were the relationships between the WFSQ subscales and demographic variables. This question was asked to consider any differences between spiritual focus and age, gender or demographics in comparison with the pilot study which found, such things as, nature positively correlated with age. These relationships were analyzed using correlation methods with the five subscales. Age was weakly correlated with each of the subscales (.06 to .14). Gender was also weakly correlated with each of the subscales (-.05 to .15). There were no statistically significant correlations between ethnicity, religion, diagnoses and the subscales.

Each subscale correlated strongly with the others. (See Table 3) These

Table 3

Correlations between WSFQ Subscales (N=200)

Subscale	High Power	Self	Others	Nature	Religion
High Power					
Self	.549*				
Others	.440*	.649*			
Nature	.399*	.685*	.581*		
Religion	.816*	.617*	.551*	.473*	

*p=.000

strong positive correlations suggest the subscales were reflective of each other. This suggested a relationship between the dimensions and assumedly spirituality.

Confirmatory Factor Analysis

The third research question asked if confirmatory factor analysis supported the five dimensions. The postulated model should illustrate the five dimensions closely aligned with each of the four items identified used to measure that component of spirituality. Four-factor and three-factor solution tested two other models. The four-factor solution assumed items related to Focus on God and Focus on Religion would load to the same factor with Self, Nature and Others as separate factors. This solution gave rise to the question of the reduction of the items on the Focus on God and the Focus on Religion. The three-factor model would have Focus on God with Religion, Focus on Self with Nature and Others by itself. The five-factor solution presented in this section provided the closest fit of the three models.

The purpose of this confirmatory factor analysis was to evaluate the structure of the WSFQ. A definition of structural equation modeling (SEM) involved "the development of a hypothesized causal explanation of a phenomenon of interest on the basis of other phenomena, and the application of statistical procedures for testing the model" (Polit, 1996, p. 28). In SEM the researcher is evaluating relationships among the items. While SEM is not a method of discovering causes, it is a method for testing a hypothesized series of relationships based on a priori knowledge. LISREL, a computer program, was used for analyzing covariance structures and for performing structural equations modeling and can accommodate various types of errors including measurement and correlated errors. LISREL can analyze data for latent variables, where a latent variable is an unmeasured variable that corresponds to an abstract construct. The

postulation of this study was that there were five latent dimensions that were computable by the measured variables.

Structural Equation Model

Figure 2 presents the structural model created by LISREL. The square boxes represent the observed variables, that is, the items from the questionnaire. The ellipses represent the unobserved or latent factors. On the right of the observed variables is the error of measurement. There are no arrows between the observed variables showing no correlation between measurement error for each item. The arrows going from the latent variable to the observed variable represent the path coefficient. On the right, the two-way arrows represent the correlations between pairs of latent variables.
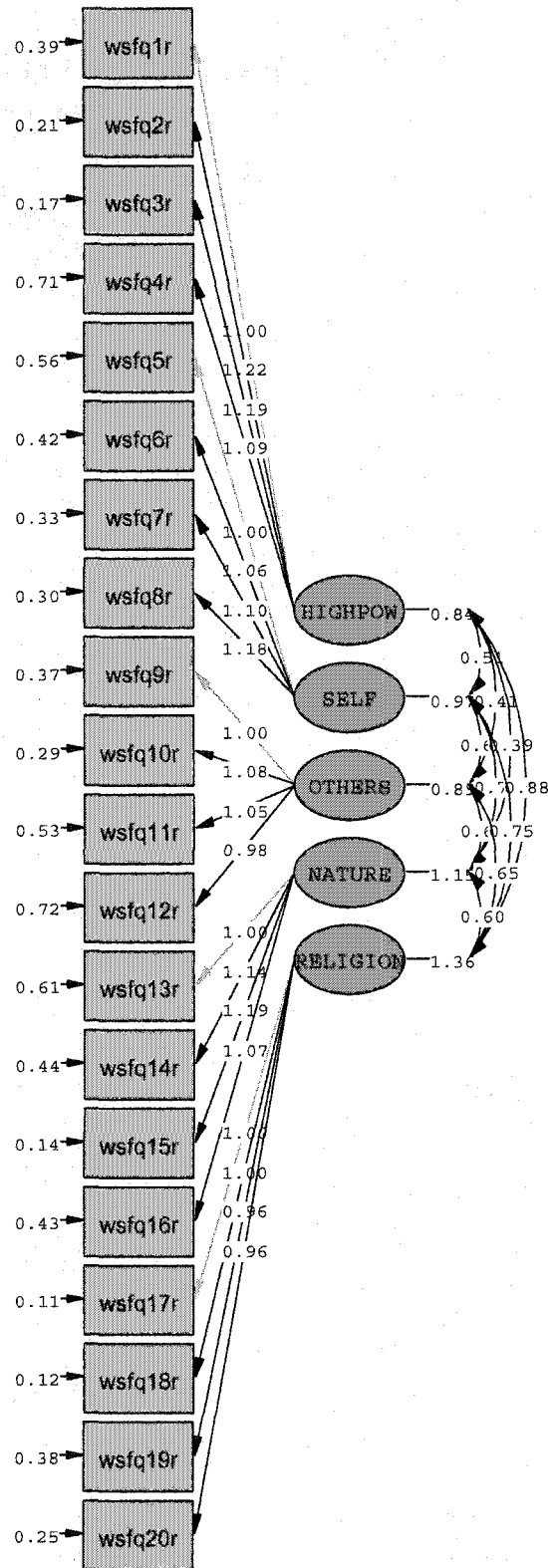
Goodness of Fit

The Goodness-of-Fit Statistics provided the analysis of the postulated structural equation model. Chi square, Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index, Normed Fit Index and Non-normed Fit Index are discussed (See Table 4).

The Chi square has been a traditional measure used to test the closeness of fit between the unrestricted and the restricted sample covariance matrix. A Chi square of 486.15 ($p = 0.0$) that was statistically significant denoted a model that failed to reproduce the observed data accurately (Grim & Yarnold, 2000). When evaluating CFA one seeks a model that produces a non-significant p value which suggests the data fits the model well, whereas, models with significant p values fits the data poorly.

Figure 2

Structural Equation Model for the Wikoff Spiritual Focus Questionnaire

Chi-Square=468.54, df=160, P-value=0.00000, RMSEA=0.098

Table 4

Goodness of Fit Statistics for Hypothesized for Selected Five-Factor Model Using
Inpatients

Group	X^2	df	X^2/df	RMSEA	GFI	AGFI	NFI	CFI
Inpatients	486.15*	160	3.04	.098	.81	.75	.89	.91

X^2 = chi square; df = degrees of freedom; X^2/df = ratio reflects goodness of fit to the data;
RMSEA = Root Mean Square Error of Approximation; GFI = Goodness of Fit Index;
NFI = Normed Fit Index; NNFI = Non-Normed Fit Index; CFI=Comparative NFI
*p=.0000

The ratio of Chi square to degrees of freedom is another assessment of fit. As the

ratio decreases and approaches zero the fit of a given model improves, in this research the

ratio was 3.04. This result does not support a well fitting model.

One of the most informative criteria in covariance structure modeling is the Root

Mean Square Error of Approximation (RMSEA) (Byrne, 1998). By asking how well the

model would fit, RMSEA accounts for the error of approximation in the population for a

known covariance matrix. The RMSEA for WSFQ was .098. In the RMSEA measure

values less than .05 indicate good fit, whereas values ranging from .08 to .10 indicate a

mediocre fit (Byrne, 1998).

The sample data evaluated by the Goodness-of-Fit Index (GFI) jointly explained

the relative amount between variance and covariance. The adjusted GFI (AGFI) differs

from the GFI by adjusting for the degrees of freedom in the specified model. A well-

fitting model would have values close to 1.00 indicative of a good fit (Byrne, 1998). Polit

(1996) stated that the GFI and AGFI should have a value of .90 or greater to indicate a

good fit of the model to the data. In this data, the GFI was .809 and the AGFI was .75.

These results did not qualify as a good fit.

The Normed Fit Index (NFI) is considered a practical criterion of choice and comparative NFI (CFI) is one that is adjusted for sample size. These numbers represent a comparison of a hypothesized model with an independence model. A value of > .95 indicates an acceptable fit to the data. The result of the NFI was 0.89 and the CFI was .91 both somewhat below the desired outcome.

Summary

It is apparent from the confirmatory factor analysis statistics that the five-factor model failed to achieve a good fit. While the goodness-of-fit statistic generally supported only a mediocre fit, Byrne (1998) recommends that

> ...exclusive reliance on goodness-of-fit indices is unacceptable. Indeed, fit indices provide no guarantee whatsoever that a model is useful. In fact, it is entirely possible for a model to fit well and yet still be incorrectly specified...Fit indices yield information bearing only on the model's *lack of fit*. More importantly, they can in no way reflect the extent to which the model is plausible; this judgment rests squarely on the shoulders of the researcher (p. 119).

Nevertheless, an assessment of model adequacy must be based not just the statistical but also on the theoretical and practical considerations.

CHAPTER 5

DISCUSSION

The purpose of this study was to develop a reliable and valid instrument to measure the spiritual importance an individual places on each of five dimensions and to evaluate the tool's psychometric properties. The exploration of WSFQ usefulness in an acute care setting also became apparent in the testing of the tool. This chapter discusses the instrument development and evaluation in an acute care setting, includes the implications for the WSFQ use in nursing practice, education and research, study limitations and conclusions.

Instrument Development and Testing

The WSFQ was developed using nursing experts and both theoretical and research based nursing literature. From the literature four dimensions of spirituality were identified, these were relationship with a Higher Power, self, others and nature. A fifth dimension, religion, was included since it is difficult to separate religion from any discussion on spirituality. The tool was originally developed as 50 items with the plan to modify the tool based on the content validity and the results of construct validity. The overall goal was to create a tool useful by nurses at the bedside, with just enough questions to adequately assess the concept.

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employment of various methods reduced the number of item from the original 50-item WSFQ. Experts were asked to analyze content and a Content Validity Index (CVI) was completed with a resulting .88 for the tool overall. The deletion or rewording of items occurred based on the expert's comments. Elimination criteria included items scoring below .80 on the CVI. Another method used for item reduction was inter-item correlation reliability. Also eliminated from the original WSFQ were items with inter-item correlations of less than .35 or greater than .89.

Exploratory factor analysis, as another method of item reduction, was completed and found six components. The sixth factor suggested that there might be an undiscovered component of emotionality in spirituality. Elimination of items related to the sixth factor occurred. Of the items remaining, further analysis of the results led to reducing the questionnaire to 20-items. Only the top four factor loadings on each of the subscales remained in the final tool. Furthermore, two items underwent significant rewrite.

In the final phase of the testing and evaluation of the 20-item tool, internal consistency reliability was .89-.96 for the subscales. This suggests the final questionnaire has sufficient homogeneity. Analysis for goodness-of-fit using confirmatory analysis resulted in mediocre results. Furthermore, two other models, a three and four-factor solution, were hypothesized and tested. However, neither of these solutions offered adequate goodness-of-fit statistics.

Of the five subscales, the Focus on Self had the lowest internal consistency reliability. This most probably occurred for two reasons: first, the difficulty in writing

items that reflected the self as the center of one's spirituality; and second the difficulty individuals may have stating that the self is the center of spirituality.

Evaluation in an Acute Care Setting

The actual testing of the tool in an acute care population has also given insight into the design of the tool for that population. Certainly, those responsible for the administration of any new questionnaire must accept it and value the results. As a discipline, nursing is rightly skeptical of any new assessment method until it has a proven record of accomplishment. Yet, without testing in a real setting, ensuring a proven record of performance becomes unobtainable.

Staff Concerns

In the case of the WSFQ, the nursing staff provided some opposition to using the tool or encouraging the patient to complete the questions. In fact, while some staff encouraged the patient to complete the WSFQ, others did not. Some staff was almost hostile regarding the questionnaire. In discussions with these staff, the researcher found those most hostile nurses were opposed to the tool's use based on their own feelings regarding religion and religious affiliation.

Of the total tools completed more were completed on patients with a cardiac related diagnosis. This may be related to higher percentage of cardiac patients seen at the facility where the data was collected. It may also be related to a greater friendliness on the part of the cardiac staff to the questionnaire. Lastly, it may be related to the actual diagnosis, often cardiac patients are admitted to rule out a problem and therefore, the patient may be less acutely ill at admission and may have found answering the items less

taxing physically. Another question raised is whether cardiac patients may have more of a spiritual concern on admission due to the severity or potential severity of the diagnosis? These are interesting issues to ponder and ones that should be considered in further research.

Language and Readability

Other concerns shared were that the WSFQ was too long or the language was too sophisticated. While the language assessment was at a sixth grade reading and comprehension level, the 47% of the sample population were Hispanic and many reported English as a second language. Furthermore, 60% of the sample was over 60 years of age. It was impossible to assess education level reading; therefore, it is entirely possible that the language was too sophisticated. A post hoc discussion with several patients also found that clarity of ideas was an issue. For example, what was inner calmness or spiritual peace? Based of these concerns there is a need to re-examine the items. Because of the large number of Hispanic participants in the study, re-examination of the items for cultural specificity and sensitivity needs consideration.

A translation of the tool into Spanish was available to the nursing staff, yet its use required extra effort by staff to make the Spanish version available to the patient. In those cases the nurses reported they were likely to have written on the database that the patient refused to participate whether or not the patient actually knew about the tool.

Age

Sixty percent of the study population were 60 years old and over and this was representative of the general in-patient population. The general age of the in-patient population produced a sample that represented previous generations and there may be

very different responses given a more youthful population. Nevertheless, in the study population there were no statistical differences between age, the other demographics and the subscales.

Implications for Nursing

This section will discuss how the WSFQ is applicable to nursing practice, nursing education, and further nursing research. This tool has the potential to improve nursing interventions and ultimately patient outcomes using the tool for assessment and planning appropriate care.

Nursing Practice

Nursing philosophically has incorporated spirituality and its related concepts into a global meaning of healthcare as holistic. While nursing has been prescriptive in stating spiritual assessments are important, it has lack the emphasis and authenticity to the implement this practice (McSherry & Ross, 2002).

McSherry and Ross (2002) further stated that nursing should not assume all patients have spiritual needs that require attention. This supports the idea of a questionnaire that is included in the nursing assessment but whose completion is not required. By not making completion of a spiritual assessment mandatory, the patient would complete the questionnaire based on their perceived interest or need. In further testing however this could result in selection bias. The WSFQ's introductory comment gave the patient permission to choose not to complete the questions. Patients were able to choose whether or not to complete the questionnaire resulting in a high percentage of

incomplete questionnaires. However, with accrediting agencies evaluating how the spiritual needs of patients are met, something like the WSFQ might become mandatory.

There has not been a systematic way to analyze what was spiritually important to a patient before the development of the WSFQ. Although, understanding what is important spiritually can provide the nurse with direction, it remains a nursing responsibility to take the information and make it practical and useable in patient care. Given the current nursing shortage and nurse's workload, abbreviated assessment methods are certainly warranted, however, in current practice spirituality is ignored, therefore adding something new is perceived as increasing workload. Nursing cooperation with the implementation of a new tool, such as the WSFQ, through networking and discussion would be required for implementation in future organizations.

Nursing Education

Understanding a patient's religion may or may not give the nurse insight into what the patient perceives as important. In fact, understanding a person's religion may offer the nurse little direction unless the nurse is extremely familiar with that religion. This brings us to the whole discussion regarding the teaching of spiritual concepts in nursing schools. While it is important for nurses to have an understanding of various religious philosophies to ensure compassionate and culturally sensitive care, this may not be the only approach to education. From the literature review and from the study, the implications regarding education on spirituality were not limited to a nurse's initial education. Rather, an intermittent plan for educating nursing staff regarding spirituality and meeting spiritual needs is necessary. This intermittent plan should occur every

several years, keeping spiritual care as a critical component of nursing. Providing seminars, classes, and in-service would accomplish this goal.

Discussion with educators in generic nursing programs found that spirituality remained a difficult area to both teach and assess. Modern nursing students are less likely to have a religious affiliation; therefore, the global concept of spirituality may be more stimulating than discussion surrounding religiosity. An emphasis on spirituality is essential in the nursing curriculum to ensure that nurses address potential patient needs Nevertheless, unless students are well grounded and encouraged to address spirituality the outcomes of their education may not differ from the practices of bedside nurse of today.

Nursing Research

Since nursing has spent most of the last two decades looking at spirituality with a growing body of work, there was an expectation that a large amount of research in the area would be available. However, the literature identified only a limited amount of research related to meeting the patient's spiritual needs. Rather nursing has spent much of its time in theoretical discussions focusing primarily on what spirituality is and seeking a definition of spirituality. A more recent concept analysis reiterated the fact that nursing needs to finalize a definition of spirituality and then begin testing that definition (Tanyi, 2002). A recommendation for nursing research includes the need for further testing of the WSFQ in a larger population base of acute care patients. Looking at cultural considerations would be important and testing among a more diverse population would provide greater understanding of spiritual importance.

The WSFQ is well rooted in the nursing literature, nevertheless, it would be important to re-evaluate the five dimensions in a qualitative study with the intentions of validating each dimension if possible. Since, much of the qualitative work is more global, specific questions regarding the five dimensions might provide a substantive validation to support the five dimensions as definitive components of individual spirituality. This, could thereby, ease the debate regarding spirituality definitions and allow the profession to move in developing and testing models and interventions. For example, what interventions are most beneficial to in-patients with chronic pain?

Another consideration is the quandary faced by nurse researchers doing clinically-based research. How can a tool be created with sufficient statistical power and yet remain useful in the "real world?" If 20 items is too many for an inpatient population then how many items would be sufficient? These questions need further work to answer fully, yet nevertheless, remain critical for the future of nursing research in spirituality.

Study Limitations

There were several limitations associated with the psychometric evaluation of the WSFQ. The first limitation was the sample size. While there were enough tools completed to meet the study requirements, the statistical analysis suggested a need for a larger sample to solidly confirm the relationships in the tool. However, there was no proof that given a larger sample there would be an adequate goodness-of-fit approximation for the WSFQ.

A second limitation was trying to convince the nursing staff of the importance of obtaining answers to questions they were not interested in anyway. This would take a lot of supportive intervention and ongoing training in spiritual concepts.

Lastly, a potential limitation was the language level. Phrases used in the questionnaire like inner calmness or spiritual focus may have required explanation to ensure adequate understanding.

Conclusion

In an era of increasing interest in individual spirituality, it behooves nursing to end the rhetoric regarding a singular definition and begin a discourse on the development of new tools and methods to analyze spiritual importance. By identifying spiritual importance and then planning nursing interventions to ensure the patient's needs are met during episodes of care, nursing fulfils both its obligation to the recipients of care, but also to its standing as a profession. Certainly, the future of nursing relies heavily on the growth of new methods and approaches to all aspects of spiritual care.

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APPENDIC A

50-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

APPENDIX A

50-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

Question
Higher Power/Supreme Being
1) My relationship with a higher power is the strongest relationship in my life
2) The time I spend in connection with a Higher Power is essential
3) The time I spend in prayer to God on a daily basis is very important
4) Without a belief in Higher Power my life wouldn't have much meaning
5) In my personal life I feel close to a Higher Power/Supreme Being
6) I give a great amount of respect a to a Supreme Being/Higher Power
7) I am inspired by my communication with a Higher Power
8) The focus of my spirituality is on a Supreme Being
9) My bond with a Supreme Being is at the center of my life
10) I spend time daily talking to a Higher Power/Supreme Being
Self
1) I find spiritual renewal by spending time in quiet self reflection
2) I spend time reading books that are calming and restful for my spirit
3) I use meditation for personal relaxation
4) I use introspection frequently as part of my spiritual life
5) I feel an internal calmness when I am at peace with myself
6) The source of my spirituality is from within me
7) I find peace with myself to be a source of spirituality
8) I use singing, praying, or chanting to enhance my spirituality
9) To find spiritual calmness I look inside myself
10) The power of a Supreme Being lies within me
Others
1) I find my relationships with others is most important to me
2) I use my connection with family and friends to lift me up
3) I need others around to relax me and feel at peace
4) I feel calm when surrounded by those who are important to me
5) My relationships keep me focused on my life purpose
6) I find renewal of my spirit from my family/friends
7) Special people within my life are my spiritual focus
8) When spiritually discouraged I seek help from my family/friends
9) Others around me quiet my spirit
10) My connection with others helps me find inner calmness
Nature
1) I find personal renewal when surrounded by nature
2) When in a natural setting-in the mountains, by the ocean, etc. I feel most at peace
3) I find time to spend in the quiet solitude of nature
4) I believe in a Higher Power I call Nature
5) When in nature I reflect on its magnitude and think of its importance to me
6) Nature is the source of my spiritual renewal
7) My connection with natural things helps me find inner calmness
8) Nature is the focus of my spirituality
9) When in nature I fee thankfulness for my blessings
10) When spiritually discouraged I seek out nature
Religion
1) My religion is the source of my spirituality
2) My commitment to my religion is measured by my time spent in church activities
3) My participation in religious activities, ie, church helps me find inner calmness

Question
4) My church/religion inspires me to reach my full potential as a human being
5) My religion gives my life spiritual focus
6) Through my religion I can achieve inner calmness
7) The time I spend church activities renews my spirit
8) My religion helps me keep my life in perspective
9) From my church/religion I find blessing
10) I find spiritual renewal from my religion/church

APPENDIX B

39-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONAIRE

APPENDIX B

39-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

Question
1. My strongest relationship is with a Higher Power
2. The time I spend in connection with a Higher Power is essential
3. In my personal life I feel close to a Higher Power/Supreme Being
4. I give a great amount of respect a to a Supreme Being
5. I am inspired by my communication with a Higher Power
6. The focus of my spirituality is on a Supreme Being
7. My bond with a Supreme Being is at the center of my life
8. I spend time daily talking to a Higher Power
9. I find spiritual renewal by spending time in quiet self reflection
10. I spend time reading books that are spiritually focused
11. I use meditation for personal relaxation
12. I use introspection frequently as part of my spiritual life
13. I feel an internal calmness when I am at peace with myself
14. My spirituality comes from within me
15. I use chanting to enhance my spirituality
16. To find spiritual calmness I look inside myself
17. I use my connection with family and friends to lift me up
18. I feel calm when surrounded by those who are important to me
19. My relationships keep me focused on my life purpose
20. I find renewal of my spirit from my family/friends
21. Special people within my life are my spiritual focus
22. When spiritually discouraged I seek help from my family/friends
23. Others around me quiet my spirit
24. I find spiritual renewal when surrounded by nature
25. When in a natural setting-in the mountains or by the ocean I find peace
26. I make an effort to spend time in the quiet solitude of nature
27. In nature I reflect on its magnitude and think of its importance to me
28. Nature is the source of my spiritual renewal
29. My connection with natural things helps me find inner peace
30. When in nature I feel thankfulness for my blessings
31. When spiritually discouraged I seek out nature
32. My religion is the source of my spirituality
33. My commitment to my church is evident in participation in church activities
34. Through my church I find inner calmness
35. My faith inspires me to reach my full potential as a human being
36. My religion gives my life spiritual focus
37. Through my religion I can achieve inner calmness
38. The time I spend church activities renews my spirit
39. My religion helps me keep my life in perspective

APPENDIX C

20-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

APPENDIX C

20-ITEM WIKOFF SPIRITUAL FOCUS QUESTIONNAIRE

Question
Higher Power
1. My strongest relationship is with a Higher Power
2. The time I spend in connection with a Higher Power is essential
3. In my personal life I feel close to a Higher Power/Supreme Being
4. I spend time daily talking to a Higher Power
Self
5. I can count on me as my spiritual center
6. I feel an internal calmness when I am at peace with myself
7. My spirituality comes from within me
8. To find spiritual peace I look inside myself
Others
9. I find renewal of my spirit from my family/friends
10. Special people within my life are my spiritual focus
11. When spiritually discouraged I seek help from my family/friends
12. Others around me quiet my spirit
Nature
13. I make an effort to spend time in the quiet solitude of nature
14. In nature I reflect on its magnitude and importance to me
15. My connection with natural things helps me find inner peace
16. When in nature I feel thankfulness for my blessings
Religion
17. Through my religion I find inner calmness
18 My religion gives my life spiritual focus
19. The time I spend in religious activities renews my spirit
20. My religion helps me keep my life in perspective

APPENDIX E

INSTITUTIONAL REVIEW BOARD APPROVAL SHARP CHULA VISTA

MEDICAL CENTER

APPENDIX E

INSTITUTIONAL REVIEW BOARD APPROVAL SHARP CHULA VISTA MEDICAL CENTER

SHARP

February 7, 2003

RE: **Development and Psychometric Evaluation of the Wikoff Spiritual Focus Questionaire, IRB# 030281**

Karen Wikoff
570 Los Altos Drive
Chula Vista, 91914

Dear Ms. Wikoff:

This is notification that you have been granted expedited approval by the Sharp HealthCare Institutional Review Board (IRB) of your application, for the above-referenced research study. This action will be reported to all committee members at the February 19, 2003 meeting.

The following site and investigators are approved:

Site:
Chula Vista

Principal Investigator:
Karen Wikoff

Your IRB approval reference number is 030281. Please include this reference number in all of your future correspondence and reporting to the IRB Office. As a reminder, it is the responsibility of the principal investigator to submit status reports to the Institutional Review Board. Your IRB approval expires February 8, 2004. You must submit a status report by Friday, January 30, 2004, in order to ensure the continuation of your study. If you have any amendments, revisions, or changes to the protocol, please submit them to the Institutional Review Board for approval. In addition, all patient recruitment materials must be submitted to the Board for approval prior to their use.

It is the policy of Sharp HealthCare Institutional Review Board that the Principal Investigator(s) submit a copy of their reports, findings, or manuscripts to the Board prior to publication. Sharp HealthCare would expect that if the results of the research project came to publication, their role would be properly recognized in the research.

Please contact the IRB Office if you should have any questions at (858) 499-4836.

Sincerely,

David Bodkin, M.D.
Chair, Institutional Review Board
Sharp HealthCare