LIFE: International Journal of Health and Life-Sciences
ISSN 2454-5872

Maniago, JD

Volume 3 Issue 2, pp. 139-160

Date of Publication: 16th October 2017

DOI-https://dx.doi.org/10.20319/lijhls.2017.32.130160

This paper can be cited as: Maniago, JD., (2017). Spirituality Dimensions and the Caring Nurse-Patient Interaction Skills among Asian Students. LIFE: International Journal of Health and Life-Sciences, 3(2), 139-160.

SPIRITUALITY DIMENSIONS AND THE CARING NURSE-PATIENT INTERACTION SKILLS AMONG ASIAN STUDENTS

Maniago, JD
Majmaah University, Al Majmaah, Kingdom of Saudi Arabia
Ramon Magsaysay Technological University, Iba, Zambales, Philippines
maniagojestoni@gmail.com

Abstract

This study aimed to determine how the dimensions of spirituality intelligence affect the caring nurse-patient interaction skills of student nurses from three Asian countries. A descriptive correlation type of research was utilized with questionnaire in Google forms as the main instrument of this study. A total of 184 Asian student-nurses from Indonesia, Philippines and Singapore served as participants. Partial least square structural equation modeling was used to statistically analyze the data. Results of the structural model revealed that spiritual intelligence on the aspect of critical existential thinking is significantly related to the caring nurse-patient interaction skills in terms of humanism (β=0.164), helping relationship (β=-0.178), problem solving (β=0.131), and environment (β=.-0.538). Moreover, spiritual intelligence on the aspect of personal meaning production is significantly related to the caring nurse-patient interaction skills in terms of helping relationship (β=-0.154), problem solving (β=0.126) and needs (β=-0.174). It was also found out that the spiritual intelligence on the aspect of conscious state expansion is significantly related to the caring nurse-patient interaction skills in terms of

humanism (β=-0.128), hope (β=0.197) and helping relationship (β=-0.149). Further analysis of the structural model revealed that the spiritual intelligence on the aspect of transcendental awareness is significantly related to the caring nurse-patient interaction skills in terms of problem solving (β=0.012) and spirituality (β=-0.246). It is recommended to mainstream spirituality in nursing education courses to foster a humanistic outlook in establishing a caring interaction between student nurses and the recipients of nursing care.

Keywords

Nursing, Spirituality, Interaction, Descriptive Correlational, Asia

1. Introduction

The idea of spirituality is increasing in prominence among recent publications in educational psychology and theory (Dent, Higgins, & Wharff, 2005; Edwards, 2003; Emmons, 1999, 2000a, 2000b; Fry, 2003; Fry & Cohen, 2009; Fry & Slocum, 2008; Gardner, 2000; Hyde, 2004; Mayer, 2000; Neiman, 2000; Rogers, 2003; Vaughan, 2002; Yang, 2006; Zohar, 2005). This reflects a shift toward the exploration of spiritual concerns previously submerged by the advent of scientific positivisms and the effort to reduce, if not eradicate, the role of spirituality in education (Bertrand, 2003; Sacks, 1999).

Spiritual intelligence does not refer to a specific religious orientation. It is an interconnected configuration of affective orientations intimately linked to create meaning through connecting ideas, events, and persons (Dent, Higgins, & Wharff, 2005; Fry, 2003). These connections result in both personal and organizational transformations. Spiritual intelligence is further defined as the ability to construct meaning through intuitively seeing interconnectedness between life-world experience and the inner spheres of the individual psyche (Rogers, 2003; Yang, 2006). Tisdell (2003) contends that spirituality is an important part of the human experience, which is fundamental to understanding how individuals construct meaningful knowledge. Tisdell asserts that spirituality has a deep cultural dimension that informs intellectual development. The process of meaning making is manifested in and mediated by cultural context. For leaders to facilitate meaning making as a spiritual experience, they must make an empathetic linkage to organizational members' cultural grounding. In other words, the leader must be able to recognize as well as honor the cultural diversity of the organization in order to create an organizational culture of shared vision (Owens & Valesky, 2007). Tisdell challenges us to

construct an educational milieu that celebrates both the cultural differences and the commonalities of the human experience as a spiritual endeavor linked to the constructs of ethics and moral judgment. The challenge today is for the profession to recover its spiritual heritage (Parsons, Fenwick, Parson, English, & Wells, 2002). The driving hypothesis of spiritual intelligence is that it is not dependent upon an organized religious orientation, but rather on the values and ethics of individuals as they contribute to organizational health and wellbeing.

According to the literature, currently there is no assessment for spiritual development of nurses, physicians, ministers or patients. They could be at any stage in their faith development. Spiritual development has seldom been a criterion for nursing entry, graduation, or practice. Nor is religious affiliation usually a criterion for education or practices. Spiritual competence is the basis for fostering hope, purpose and meaning. Therefore, the nursing profession needs to develop nurses who are capable of responding to patients' spiritual needs in a competent and sensitive way. Providing education to nursing students may increase students' awareness of importance of patients' spiritual needs. Gaining comfort with one's own spirituality is the initial step in developing awareness and sensitivity to patients' spiritual needs.

Human relationships are inherent in professional nursing practice, and are influenced by one's spirituality. Caring nurse-patient interaction which is the core of mutual development between nurses and patients should always be practiced in order for both to feel the humanness in nursing. Several factors influencing nursing relationships have been identified and majority of these considers extrinsic reasons which include the stressful environment encircling the nurse and patient.

This study is an attempt to consider the spiritual intelligence in the conduct of caring nurse-patient interaction. Being able to derive conclusions and recommendations based on the results of this study is deemed an opportunity for coming up with necessary interventions in the review of nursing curriculum in the Philippines. Hence, improvements in the nursing curriculum program may be developed to further advance the caring nurse-patient interaction skills of Filipino nurses.

2. Objectives of the study

The main focus of the study is to determine how spiritual intelligence affects the caring nurse-patient interaction skills of student nurses in selected Colleges of Nursing in Asia.

3. Framework

3.1 Spirituality Intelligence

Emmons (2000) provided support to spiritual intelligence according to Gardner's (1983) eight criteria. He first offered five core components of spiritual intelligence: (a) the capacity for transcendence; (b) the ability to enter into heightened spiritual states of consciousness; (c) the ability to invest everyday activities, events, and relationships with a sense of the sacred; (d) the ability to utilize spiritual resources to solve problems in living; and (e) the capacity to engage in virtuous behaviour or to be virtuous (to show forgiveness, to express gratitude, to be humble, to display compassion). (p. 10)

According to Emmons (2000), these capacities have been valued in the majority of cultures around the world. The first two core abilities are discussed in similar terms, both essentially describing the capacity to "engage in heightened or extraordinary forms of consciousness" (p. 10). In this model, transcendence represents the ability to surpass physical matter and develop a deeper awareness of a divine being and/or one's self, often resulting in the ability to sense synchronicity. Heightened spiritual states include a sense of oneness or unity as well as contemplative prayer. Emmons (2000a) contends that individuals possessing a high degree of spiritual intelligence are skilled at entering these heightened states of consciousness. Gardner (2000), on the other hand, argues that this ability simply reflects heightened control over one's physical body, and is therefore more reflective of his bodily-kinesthetic intelligence. Emmons (2000a) reframes his third core ability of spiritual intelligence as *sanctification*, which he describes as the ability "to set apart for a special purpose – for a holy or a godly purpose" or "a recognition of the presence of the divine in ordinary activities" (p. 11). According to Emmons (2000), sanctification and its consequential sense of meaningfulness and fulfilment can facilitate problem-solving, planning, and personal goal attainment. Gardner (2000) indicated significant concern over this particular component, questioning the grounds on which one would decide what is considered sacred as opposed to profane. The fourth component of Emmons' (2000) model is further described as "religious and spiritual coping" (p. 12). Emmons (2000) cites literature which has suggested the usefulness of spiritual and religious resources in the coping process as well as in problem-solving. While this is a criterion for intelligence which has been suggested by a number of theorists (e.g., Gardner, 1983; Horn & Cattell, 1966; Sternberg, 1997),

it hardly denotes a core ability or component of spiritual intelligence. In response to Emmons' (2000a) model, Gardner (2000) himself highlighted this problem, stressing the importance of differentiating between descriptive and prescriptive abilities. While the first three components of Emmons' (2000) model are descriptive, coping and problem-solving are prescriptive components of all intelligences. A similar problem arises with the fifth and final component of this model. The capacity to consistently engage in virtuous behaviors seems to stray from mental ability entirely, as Emmons (2000) has described behaviors rather than abilities of the mind. It has been strongly suggested by intelligence theorists (e.g., Gardner, 1983; Mayer et al., 2000; Sternberg, 1997) that an intelligence must be clearly distinguishable from preferred ways of behaving. Gardner (2000) adds that Emmons' (2000) inclusion of behaviors which he considers to be admirable, rather than capacities which exist in all people to some extent, undermines the structure of intelligence. Mayer (2000) concurred, stating that many of these qualities may simply result from life experience or inherent temperaments rather than intellectual potential. In reaction to the abovementioned criticisms, Emmons (2000b) later modified his model to exclude this fifth component. Emmons (2000) supports the evolutionary plausibility of spiritual intelligence, citing anthropologists, psychologists, biologists, and theologians who have argued for the role of religion in the evolution of both human culture and individual behaviors and processes. He cites recent research which has suggested a potential genetic heritability of religious attitudes, similar to that seen for personality traits. Although emphasizing the lack of research, Emmons (2000) also draws attention to distinct neural systems in the limbic system which have been related to religious and mystical experiences (e.g., oneness, unity). In terms of support from psychometrics, Emmons (2000) points out the number of self-report measures of spirituality and religiosity that have found various spiritual attitudes and states to be independent of other mental processes. Beyond this, however, little evidence is offered. When examining the development of spiritual intelligence across the lifespan, Emmons (2000) highlights stage theories of faith and spiritual development as well as the varying levels of sophistication involved in spiritual abilities. In support of exceptional individuals, Emmons (2000) mentions the Catholic mystics St. Theresa of Avila and St. John of the Cross as examples. There is little mention, however, of spiritual intelligence in the daily lives of average people. Finally, Emmons (2000) argues that religious symbols clearly provide support for susceptibility of spiritual intelligence to encoding in a symbol system. One general and noteworthy problem with

Emmons' (2000) model of spiritual intelligence is its foundation in religion rather than spirituality. His frequent references to "the sacred" and "sanctification" exemplify this preoccupation. In fact, Emmons (2000) appears to equate spirituality with religiosity, providing a great deal of support for spiritual intelligence based on research with religious experiences and behaviors. Emmons (2000) was not the first to make this error. Bowling (1999) defined spiritual intelligence as knowledge of the sacred based on select early Jewish and Christian writings. This is yet another important conceptual distinction that must be made when discussing spiritual intelligence or spirituality in general, and will be more closely inspected later. Gardner (2000) contends that religion is best described as a domain in which spiritual intelligence is expressed. He also suggests that intelligence should allow one to carry out specific computations, an aspect unsupported by Emmons (2000). Mayer (2000) further criticized Emmons' (2000) model of spiritual intelligence for its lack of focus on actual mental performance. He stated that a person with any intelligence must be able to solve a specific set of problems that cannot be solved without a high level of the particular intelligence. Mayer (2000) added that although some cognition is present in Emmons' (2000) model, such cognition must be primary. Furthermore, within the realm of cognition, he suggested that it is abstract reasoning that must be primary in any definition of intelligence. According to Mayer (2000), only two of Emmons' (2000) core operations likely involve some degree of abstract reasoning: sanctification and spiritual coping. Above all else, Mayer (2000) maintained that what Emmons (2000) is describing has less to do with heightened intelligence or ability than it does with heightened consciousness or awareness.

While a specific set of mental abilities is not defined, Zohar and Marshall (2000) stress the utility of spiritual intelligence in solving problems of meaning, value, and those of an existential nature, concurring with Vaughan (2002) and Wolman (2001). Spiritual intelligence also facilitates decision-making and the recognition of choices which will be more meaningful, suggesting a potential means of adaptation and problem-solving. Zohar and Marshall (2000) relate spiritual intelligence to moral reasoning, suggesting that it allows us to "play with the boundaries" (p. 5), "gives us our moral sense" (p. 5), and is used "to wrestle with questions of good and evil" (p. 5) It further allows us "to be creative, to change the rules and to alter situations" (p. 5). While spiritual intelligence may assist one in dealing with issues of a moral or existential nature, to say that spiritual intelligence gives us our moral sense is premature. As noted by Gardner (1999), morality is more an issue of personality than one of intelligence.

According to Zohar and Marshall (2000), indications of a highly developed spiritual intelligence include: the capacity to be flexible (actively & spontaneously adaptive); a high degree of self-awareness; a capacity to face and use suffering; a capacity to face and transcend pain; the quality of being inspired by vision and values; a reluctance to cause unnecessary harm; a tendency to see the connections between diverse things (being 'holistic'); a marked tendency to ask 'Why?' or 'What if?' questions and to seek 'fundamental' answers; [and] …possessing a facility for working against convention. (p. 15)

Many problems can be found in this list of indicators. The capacity to be flexible seems more closely related to personality than cognitive ability. Self-awareness appears more characteristic of emotional intelligence or Gardner's (1983) intrapersonal intelligence. These and the remaining indicators are more likely outcome variables of a high degree of spiritual intelligence. Zohar and Marshall (2000) have avoided a critical task: the establishment of a core set of mental abilities. Nasel (2004) has offered his own definition of spiritual intelligence, describing it as "the application of spiritual abilities and resources to practical contexts. People use spiritual intelligence when they draw on their spiritual abilities and resources to make meaningful decisions, deliberate over existential issues, or attempt problem solving in daily life" (p. 4). Nasel's (2004) perspective reflects that of Emmons (2000a), Wolman (2001), and Zohar and Marshall (2000), but also attempts to incorporate traditional Christian values and New Age spirituality. His model of spiritual intelligence comprises two separate factors: *existential questioning* and *awareness of divine presence*, essentially combining the "conceptualization and expression of spiritual intelligence from the perspective of individuals who have committed themselves to traditional Christianity, and of those who are adherents of New Age or popular individualistic spirituality" (p. 5).

Although this results in a more limited view of spiritual intelligence, Nasel (2004) tends to focus on the application of spiritual intelligence for meaning, purpose, and existential understanding. He also suggests that "spiritual intelligence is more closely related with intuition, insight, and wisdom than with secular education and factual knowledge" (p. 45). This may be true, yet Nasel (2004) goes on to suggest that spiritual intelligence involves not only cognitive components, but also components related to experience and personality, exceeding intelligence criteria like many before him (e.g., Wolman, 2001). More recently, a grounded theory approach was undertaken by Amram (2007) in order to investigate a spiritual intelligence. Amram's

(2007) underlying assumptions reflected that of traditional intelligence theorists: that spiritual intelligence "can be differentiated from spiritual experience (e.g., a unitary state) or spiritual belief (e.g., a belief in God)" (p. 1). His preliminary research involved 71 interviews of individuals who were described as adaptively embodying spirituality in daily life. Participants, many of whom were spiritual teachers, encompassed 10 major spiritual traditions, ranging from Christianity and Buddhism to Taoism and "Eclectic Personal Integration." All were asked to describe their spirituality in terms of daily practices, particularly as they draw on their spirituality for daily functioning. Open coding was then employed to identify themes within the interviews (Amram, 2007). Seven major themes were identified as meaning (experiencing meaning and purpose in daily activities), consciousness (trans-rational knowing, mindfulness, and practice), grace (trust, love, and reverence for the sacred), transcendence (holism, nurturing relationships and connections), truth (acceptance, forgiveness, and openness to all truth), peaceful surrender to Self (egolessness, accepting one's true nature) and inner-directed freedom (liberation from attachments and fears, discernment, integrity). Although this grounded theory of spiritual intelligence provides immense insight, Amram (2007) does not proceed to apply any criteria to his seven major themes so as to justify their manifestation as intelligence. As a result, these seven major themes can be more accurately and broadly defined as the manifestation of a *lived* spirituality (i.e., a spirituality that is put into daily practice). Many aspects do not, however, constitute cognitive ability. An additional debate emerges in light of Gardner's (1993) preference for an existential intelligence over a spiritual intelligence: which one more accurately reflects a discrete set of mental abilities? Generally speaking, the above-mentioned authors (e.g., Nasel, 2004; Vaughan, 2002; Zohar & Marshall, 2000) tend to include existential thinking in their models of spiritual intelligence. This issue was examined in greater detail by Halama and Strizenec (2004), who considered whether we are dealing with a spiritual intelligence, an existential intelligence, or both. Based on previous literature in the field of spirituality and existential psychology, Halama and Strizenec (2004) concluded that the existential and spiritual intelligences are "related and overlapping constructs with some common as well as unrelated aspects" (Halama & Strizenec, 2004, p. 15). It is argued in the current paper that existential abilities are actually part of the broader, overlying construct of spiritual intelligence, a relationship not considered by Halama and Strizenec (2004). As will be seen from the following

definitions, the broader construct of spirituality is typically described as comprising some existential component(s).

3.2 Caring Nurse-Patient Interaction

Jean Watson's Theory of Transpersonal Caring was developed in 1979.In Watson's (1979) original Nursing: The Philosophy and Science of Caring, she referred to caring as a "moral ideal rather than a task-oriented behavior and includes such characteristics as the actual caring occasion and the transpersonal caring moment, phenomena that occur when an authentic caring relationship exists between the nurse and patient" (Tomey & Alligood, 2006, p.94). Watson believes nursing is concerned with "health promotion, restoration, and illness prevention" (Tomey & Alligood, 2006, p.99). Watson defines caring as a term that nurses use to represent the factors to deliver health care to patients. Using the ten carative factors developed by Watson enables nurses to provide care to various patients (Tomey & Alligood, 2006). In addition, Watson (1979) states "curative factors aim at curing the person of disease, carative factors aim at the caring process that helps the person attain (or maintain) health or die a peaceful death" (p. 7). Watson defines the "person as a being-in-the-world who holds three spheres of being—mind, body, and spirit—that are influenced by the concept of self and who is unique and free to make choices" (Watson, 1999, p.54).

Watson's Theory of Transpersonal Caring bases 10 carative factors that play a role in nursing practice. These concepts are unique in that each carative factor has a dynamic element that is comparative to the person involved in the relationship encompassed by nursing (Tomey & Alligood,2006). Tomey & Alligood (2006) state that "using the 10 carative factors, the nurse provides care to various patients. Each carative factor describes the caring process of how a patient attains, or maintains health or dies a peaceful death" (p.99). On the other hand, Watson describes curing as a medical term, such as the removal of disease. This definition of curing being different from caring explains nursing being distinctive from medicine and classifies nursing as an individual science (Tomey & Alligood, 2006). These carative factors embrace formation of humanistic-altruistic system of values, instillation of faith-hope, cultivation of sensitivity to self and to others, development of a helping-trust relationship, promotion and acceptance of the expression of positive and negative feelings, systematic use of the scientific problem-solving method for decision making, promotion of interpersonal teaching-learning, provision for supportive, protective, and corrective, mental, physical, sociocultural, and spiritual

environment, assistance with gratification of human needs and allowance for existential phenomenological forces (Watson, 1979, p.9-10).

Watson's ideas have progressed; she translated the 10 carative factors into caritas processes. These processes have a more spiritual dimension and an explicit suggestion of love and caring (Tomey & Alligood, 2006). The following interpretations of these processes are practice of loving kindness and equanimity within context of caring consciousness, being authentically present, and enabling and sustaining the deep belief system and subjective life world of self and the one-being-cared-for, cultivation of one's own spiritual practices and transpersonal self, going beyond ego self, opening to others with sensitivity and compassion, developing and sustaining a helping-trusting, authentic caring relationship, being present to, and supportive of, the expression of positive and negative feelings as a connection with deeper spirit of self and the one-being-cared-for, creative use of self and all ways of knowing as part of the caring process; to engage in artistry of caring-healing practices, engaging in genuine teaching-learning experience that attends to unity of being and meaning, attempting to stay within others' frames of reference, creating healing environment at all levels (physical as well as non-physical), subtle environment of energy and consciousness, whereby wholeness, beauty, comfort, dignity, and peace are potentiated, assisting with basic needs, with spirit, wholeness, and unity of being in all aspects of care; tending to both the embodied spirit and evolving spiritual emergence, opening and attending to spiritual-mysterious and existential dimensions of one's own life-death and soul care for self and the one-being-cared-for (Parker, 2006, p. 298)

Watson's theory is being incorporated in the clinical setting. Many hospitals and institutions are seeking a more holistic approach to nursing care. They are integrating Watson's theory and commitment to caring (Tomey & Alligood, 2006). Many hospitals with magnet status have acquired interest of Watson's theory to make a framework for transforming nursing practice. Her theory is being used in a variety of nursing settings and by various people and populations. This model can be demonstrated in clinical settings such as critical care units, neonatal intensive units, pediatric units, and gerontological units (Tomey & Alligood, 2006).

Relational theory takes as one of its assumptions the inherently social nature of human beings. Based on the belief that individuals are socially constituted by relationships, RCT seeks to understand the complexity behind relationship formation. The theory proposes that our relational nature drives us to "grow through and toward connection". Jean Baker Miller coined

the term 'growth-fostering relationships' to represent relationships in which active participation by all parties leads to mutual development. These types of relationships contribute to healthy functioning and flourishing. Miller proposed that 'growth-fostering relationships' encompass five essential attributes, or the 'Five Good Things' - sense of zest or energy, increased sense of worth, clarity, productivity and desire for more connection.

The significance of this concept of mutuality lies in the conviction that its absence results in the development of psychological problems and contributes to the rise of violent conflict. RCT asserts that experiences of disconnection which disrupt or deny our inherently relational nature greatly contribute to a state of human suffering. Alternatively, experiences that support our drive toward connection lead to increased pro-social behavior. This idea of mutuality has many implications for conflict transformation, such as the vital need for healthy reconnection.

4. Method

4.1 Research Design

This study used the descriptive correlational design with the questionnaire as the main instrument in gathering data. According to Calmorin (1998), the descriptive survey approach is appropriate wherever the object varies among them and one wants to know to what extent in the different condition obtaining among these objects. It signifies the gathering of data regarding present conditions. A survey is useful in providing the value of facts, focusing attention of the most important thing to be reported.

Van Dalen and Meyer (1993) stated that researchers use descriptive method of research when they depict current status and sometimes identify relationships that exist among phenomena or trends that appear to be developing occasionally, when they attempt to make predictors about the future events. Hence, the descriptive method of research was deemed the best appropriate method in gathering information for this study. Correlation analysis will be performed to measure the degree of relationship between spiritual intelligence and caring nurse-patient interaction skills of student nurses in selected Colleges of Nursing in Asia.

4.2 Population and Locale of the Study

This study involved 184 student-participants from 340 target student-participants. The participants were student nurses from the selected Colleges of Nursing that offers spirituality and/or religiosity as a separate subject in their nursing program. Due to the very limited time

allotted to this research undertaking, the researcher was not able to gather the responses from the total population. It was also assumed that the other target participants were not willing to give their consent of participation to this research. The names of the schools will not be mentioned in this paper due to confidentiality reasons as stipulated in the informed consent.

Philippines had 104 (56.52%) participants. It is followed by Singapore with 41 (22.29%) and Indonesia with 39 (21.20%) student-participants. The data from the responses of the 184 student nurses from three countries were used in the analysis of this study.

4.3 Instruments

A structured survey questionnaire was the main instrument in gathering data. The survey tool has four parts- profile of the participants, assessment of spiritual intelligence and designed to gather data to describe the participants' caring nurse-patient interaction skills.

Permission from the authors of the instruments adopted in the survey questionnaire will also be requested.

The first part focuses on the participants' profile such as age, sex, civil status, religious affiliation, nationality and number of years in the College of Nursing.

The second part highlighted the assessment of participants' spiritual intelligence which is composed of the following: critical existential thinking; personal meaning production; transcendental awareness and conscious state expansion. King's (2008) Spiritual Intelligence Self-Report Inventory will be used in this part.

The third part aims to describe the level of competency among student nurses as they render caring nurse-patient interaction skills. In order to describe the caring nurse-patient relationship, the Caring Nurse-Patient Interaction Scale will be used. Watson (1979, 1988) describes caring as a way of being rather than a way of doing. Caring is therefore at the heart of Nursing. Based on deductive and inductive processes, Caring Nurse-Patient Interactions scale was developed which consists of 70 items (CNPI-70) (Cossette, Cara, Ricard, & Pepin, 2005) that describes caring attitudes and behaviors corresponding to the ten carative factors proposed by Watson.

The CNPI-70 (Cossette et al., 2005) includes 70 items that are grouped under the ten carative factors- humanism, hope, sensibility, helping relationship, expression of emotions, problem-solving, teaching, environment, needs and spirituality.

The CNPI's items describe attitudes and behaviors that can be seen in clinical practice

and that can be measured according to the following aspects: importance, frequency, satisfaction, competency and feasibility. It is possible to evaluate these aspects according to the perception of the patient, a member of their family (or any other significant person), a nurse and a student in nursing. However, the formulation of the items can vary according to the target clientele (patient, family or nurse version), which explains the need for three different versions.

4.4 Data Collection

The researcher secured from the Graduate School Committee ethical clearance and permission to conduct this research. It was taken into consideration that the protocol was observed in the entire process of data gathering.

The researcher requested the assistance of Filipino colleagues working in the identified Colleges of Nursing in Asia to serve as Country Coordinator. Upon approval and acceptance of the agreement, the Country Coordinator was requested by the researcher to disseminate and collect survey-questionnaires among students through Google forms. Online access can be found at bit.ly/NursingSI.

Raw data was electronically stored in the Google drive. The entire duration of data gathering was 4 weeks.

4.5 Data Analysis

The data was tabulated and analyzed using the WarpPLS software. The partial least squares-structural equation modeling (PLS-SEM) approach was used because of sample size issue (too small for the covariance based SEM). The present study employed the partial least squares- structural equation modeling (PLS-SEM) to investigate the relationship among the variables under consideration, specifically in testing the relationship hypothesis.

PLS-SEM is component based. In comparison to covariance-based SEM, PLS-SEM requires less stringent assumptions related to measurement levels of the manifest variables, multivariate normality, and sample size (Hulland, 1999; Chin et al., 2003). The two-stage approach suggested by Hulland (1999) was adopted in testing the SEM. This approach includes the evaluation of the measurement model in the first stage, and evaluation of the structural models in the last stage. The former assesses the reliability and validity of the study measurements, while the latter illustrates the statistical support provided for the hypothetical relationships among constructs.

5. Results and discussion

To address the adequacy of the measurement model, this study evaluates the reliability, convergent validity and discriminant validity of the constructs (Hulland, 1999).

Table 1: *Convergent validity and reliability statistics of the spiritual intelligence dimensions*

	Indicator Loading	AVE	CR	CA
A. Critical existential thinking		.799	.888	.749
15. When I experience a failure, I am still able to find meaning in it	0.894			
19. I am able to make decision according to my purpose in life	0.894			
B. Personal meaning production		.699	.823	.569
17. I have often contemplated the relationship between human beings and the rest of the universe	0.836			
11. I am able to define a purpose or reason for my life	0.836			
C. Transcendental awareness		.596	.747	.322
16. I often see issues and choice more clearly while in higher states of consciousness/awareness	0.772			
10. I am aware of a deeper connection between myself and other people	0.772			
D. Conscious state expansion		.693	.819	.558
14. I define myself by my deeper, non-physical self	0.833			
18. I am highly aware of the nonmaterial aspects of life	0.833			

Notes: All indicator/item loadings are statistically significant ($p < .001$). Items with nonsignificant indicator loading and less than .500 were excluded/removed.

Table 2: *Convergent validity and reliability statistics of the caring nurse-patient interaction skills dimensions*

	Indicator Loading	AVE	CR	CA
A. Humanism		.627	.832	.693
2. Try to see things from their point of view.	0.633			
3. Accept them as they are without prejudice.	0.893			
5. Do not have a scandalized attitude.	0.827			
B. Hope		.688	.815	.546
8. Encourage them to have confidence in themselves.	0.829			
9. Draw their attention to positive aspects concerning them and their state of health.	0.829			
C. Sensibility		.863	.926	.841
14. Ask them how they would like things to be done.	0.929			
17. Know how to express in an appropriate fashion my feelings toward their situation.	0.929			

D. Helping relationship		.720	.837	.612
22. Answer as soon as it is convenient when they call me.	0.849			
26. Do not confront too harshly their ideas and behavior.	0.849			
E. Expression of emotions		.628	.702	.628
27. Encourage them to speak their thoughts and feelings freely.	0.778			
29. Help them to understand the emotions they feel in their situation.	0.757			
31. Help them to channel their difficult situations.	0.840			
F. Problem solving		.511	.805	.677
33. Help them to set realistic objectives that take their health condition into account.	0.816			
36. Help them to recognize the means to efficiently resolve their problems.	0.652			
37. Try to identify with them the consequences of their behavior.	0.658			
38. Inform them and those closest to them about the resources adapted to their needs (e.g., community health centers, etc.)	0.719			
G. Teaching		.548	.777	.567
42. Explain to them the care of treatments beforehand.	0.796			
46. Teach them how to schedule and prepare their medications	0.511			
47. Give them indications and means to treat or prevent certain side-effects of their medications or treatments.	0.865			
H. Environment		.507	.748	.497
50. Put room back in order after having taken care of them.	0.514			
53. Before leaving, check if they had everything they needed.	0.843			
54. help them to clarify which things they would like significant persons to bring them.	0.740			
I. Needs		.583	.804	.631
59. Encourage those closest to them to support them (with their agreement.	0.586			
61. Help them to feel that they had a certain control over the situation.	0.806			
63. Show ability and skill in my way of intervening with them.	0.870			
J. Spirituality		.733	.846	.635
65. Help them to feel well in their condition.	0.856			
67. Help them to explore what is important in their life.	0.856			

Notes: All indicator/item loadings are statistically significant ($p < .001$). Items with nonsignificant indicator loading and less than .500 were excluded/removed.

As shown in Table 1 and 2, the item loadings are statistically significant and greater than the 0.5 threshold (Hair et al., 1987 & 2009 cited in Kock, 2015); the average variance extracted (AVE) for each construct is greater than the .5 cut-off (Fornell and Larker, 1981) and the composite reliability and Cronbach's alpha are greater than the 0.7 cut-off (Fornell & Larcker,

1981; Nunnaly, 1978; Nunnally & Bernstein, 1994), indicating that the measures have convergent validity. Moreover, the square roots of the AVE (diagonal elements in Table 8) are larger than the correlations of the constructs (off-diagonal elements), indicating that the measures as a whole have discriminant validity based on the Fornell & Larker (1981) criterion.

Overall, the reliability, convergent validity and discriminant validity statistics reveal that the construct measurements are sufficiently strong to enable subsequent structural model estimation.

Table 3: *Discriminant validity statistics of the variables*

	Hum	Hope	Sen	HR	EE	PS	Tea	Env	Nee	SP	CET	PMP	CSE	TA
Hum	0.79													
Hope	0.39	0.83												
Sen	-0.01	0.16	0.93											
HR	0.06	0.30	0.07	0.85										
EE	0.00	0.19	-0.20	0.32	0.79									
PS	0.08	-0.29	-0.04	-0.32	-0.12	0.72								
Tea	0.06	0.12	-0.04	0.03	0.31	0.04	0.74							
Env	0.02	0.28	-0.14	0.13	0.26	-0.23	0.10	0.71						
Nee	0.07	-0.02	-0.11	0.14	0.39	-0.10	0.24	0.09	0.76					
SP	0.03	0.07	-0.18	0.14	0.50	-0.09	0.31	0.08	0.66	0.86				
CET	0.17	-0.18	0.02	-0.34	-0.05	0.32	0.06	-0.21	0.01	0.06	0.89			
PMP	0.06	-0.16	-0.02	-0.32	-0.15	0.33	0.08	-0.29	-0.07	-0.03	0.47	0.84		
CSE	0.03	-0.10	0.01	-0.34	-0.01	0.28	0.10	-0.19	0.01	-0.01	0.63	0.52	0.83	
TA	0.10	-0.04	-0.02	-0.21	-0.11	0.28	0.09	-0.17	-0.04	-0.13	0.40	0.47	0.46	0.77

Note: Diagonal elements are the square root of AVE between constructs. Off-diagonal elements are correlations among the variables. For discriminant validity, the diagonal elements should be larger than the off-diagonal elements.

Model fit and quality indices

Average path coefficient (APC)=0.099, P=0.043

Average R-squared (ARS)=0.073, P=0.048

Average adjusted R-squared (AARS)=0.052, P=0.049

Average block VIF (AVIF)=1.961, acceptable if <= 5, ideally <= 3.3

Average full collinearity VIF (AFVIF)=1.625, acceptable if <= 5, ideally <= 3.3

Tenenhaus GoF (GoF)=0.218, small >= 0.1, medium >= 0.25, large >= 0.36

Table 4: *Effects of spiritual intelligence dimensions on the caring nurse-patient interaction skills dimensions*

	Path coefficients	SE	p-value	Effect size (f^2)
CET → Hum	0.164	0.071	**0.011**	0.029
CET → Hope	-0.077	0.073	0.146	0.014
CET → Sen	0.063	0.073	0.195	0.005
CET → HR	-0.178	0.071	**0.007**	0.063
CET → EE	0.045	0.073	0.271	0.006
CET → PS	0.131	0.072	**0.034**	0.044
CET → Tea	0.027	0.073	0.357	0.003
CET → Env	-0.538	0.066	**0.000**	0.241
CET → Nee	0.076	0.073	0.148	0.016
CET → SP	0.082	0.073	0.129	0.007
PMP→Hum	0.007	0.074	0.463	0.001
PMP→Hope	-0.085	0.072	0.120	0.014
PMP→Sen	0.015	0.074	0.421	0.001
PMP→HR	-0.154	0.071	**0.016**	0.051
PMP→EE	-0.112	0.072	0.061	0.018
PMP→PS	0.126	0.072	**0.041**	0.044
PMP→Tea	0.113	0.072	0.060	0.018
PMP→Env	0.038	0.073	0.301	0.012
PMP→Nee	-0.174	0.071	**0.008**	0.047
PMP→SP	0.101	0.072	0.082	0.011
CSE→Hum	-0.128	0.072	**0.038**	0.020
CSE→Hope	0.197	0.071	**0.003**	0.047
CSE→Sen	0.026	0.073	0.360	0.001
CSE→HR	-0.149	0.072	**0.020**	0.052
CSE→EE	0.102	0.072	0.080	0.017
CSE→PS	0.097	0.072	0.090	0.034
CSE→Tea	0.029	0.073	0.347	0.004
CSE→Env	0.061	0.073	0.202	0.017
CSE→Nee	0.029	0.073	0.345	0.007
CSE→SP	-0.079	0.073	0.138	0.013
TA→ Hum	0.072	0.073	0.162	0.012
TA→ Hope	0.076	0.073	0.149	0.006
TA→ Sen	-0.015	0.073	0.418	0.001
TA→ HR	0.007	0.074	0.462	0.002
TA→ EE	-0.035	0.073	0.315	0.004
TA→ PS	0.12	0.072	**0.049**	0.039
TA→ Tea	0.098	0.072	0.089	0.015
TA→ Env	0.035	0.073	0.315	0.006
TA→ Nee	-0.067	0.073	0.178	0.013

TA→ SP	-0.246	0.07	**0.000**	0.059

Note: f^2 is the Cohen's (1988) effect size coefficient: .02=small, .15=medium, .35=large.

In addition, the goodness of fit and quality indices of the structural equation model as a whole showed strong statistical evidences that the estimates of the structural equation model are acceptable. Based on the criteria discussed on Kock (2015), the following goodness of fit and quality indices of the model are within the acceptable range: Average path coefficient (APC)=0.099, P=0.043, Average R-squared (ARS)=0.073, P=0.048, Average adjusted R-squared (AARS)=0.052, P=0.049, Average block VIF (AVIF)=1.961, acceptable if <= 5, ideally <= 3.3, Average full collinearity VIF (AFVIF)=1.625, acceptable if <= 5, ideally <= 3.3, Tenenhaus GoF (GoF)=0.218, small >= 0.1, medium >= 0.25, large >= 0.36.

Results of the structural model reveals that spiritual intelligence on the aspect of critical existential thinking is significantly related to the caring nurse-patient interaction skills in terms of humanism (β=0.164), helping relationship (β=-0.178), problem solving (β=0.131), and environment (β=.-0.538). Moreover, spiritual intelligence on the aspect of personal meaning production is significantly related to the caring nurse-patient interaction skills in terms of helping relationship (β=-0.154), problem solving (β=0.126) and needs (β=-0.174). It was also found out that the spiritual intelligence on the aspect of conscious state expansion is significantly related to the caring nurse-patient interaction skills in terms of humanism (β=-0.128), hope (β=0.197) and helping relationship (β=-0.149).

Further analysis of the structural model reveals that the spiritual intelligence on the aspect of transcendental awareness in significantly related to the caring nurse-patient interaction skills in terms of problem solving (β=0.012) and spirituality (β=-0.246).

Since no available literature yet that talks about effects of spiritual intelligence on the caring nurse-patient interaction skills of students, the results of this study contributes to the so called 'blind spot gap in literature'. It was presented in this study that no significant relationship exists between spiritual intelligence and caring nurse-patient interaction skills. However, it is also important to understand that spiritual intelligence is related to some aspects of the caring nurse-patient interaction skills (hope, problem solving, teaching and environment). This means to say that behavior of student nurses as they perform interaction skills is somehow affected by one's own spiritual intelligence.

6. Conclusion

The high level of competency in the caring nurse-patient interaction skills of student nurses is not related to the high level of spiritual intelligence. However, it is interesting to note that spiritual intelligence affects the caring nurse-patient interaction skills on the aspects of hope, problem solving, teaching and environment. It was concluded that on some aspects of interaction process, spiritual intelligence plays a significant role. Colleges of Nursing in Asia with special enhancement subject on spirituality proved that developing the spiritual intelligence of their students may somehow beneficial to the caring behavior of the students as they perform interaction skills with their patients.

7. Recommendations

As borne-out by this study, the student nurses believe that spiritual intelligence can affect caring nurse-patient interaction skills. On the basis of the results, it is recommended to develop a culturally-congruent nursing curriculum that will improve the caring nurse-patient interaction skills of students. Furthermore, it is also recommended to mainstream spirituality on each nursing subject and to conduct a similar study with a large sample size to address covariance based structural equation model.

References

Amram, Y. (2007, February). *The seven dimensions of spiritual intelligence: An ecumenical, grounded theory.* Paper presented at the 115th Annual Conference of the American Psychological Association, San Francisco, CA.

Amram, Y., & Dryer, C. (2007). *The development and preliminary validation of the Integrated Spiritual Intelligence Scale (ISIS).* Unpublished manuscript.

Bertrand, M. (2003). Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics*, *118*(4), 1169-1208. https://doi.org/10.1162/003355303322552775

Calmorin, L. P., & Calmorin, M. A. (1998). Methods of Research and Thesis Writing. Mandaluyong City: Rex Book Store.

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo

simulation study and an electronic-mail emotion/adoption study. *Information systems research, 14*(2), 189-217. https://doi.org/10.1287/isre.14.2.189.16018

Cossette, S., Cara, C., Ricard, N., & Pepin, J. (2005). Development and psychometric evaluation of a scale to assess patient-nurse interactions with a caring worldview. *Int J Nurs Stud, 42*, 673-686. https://doi.org/10.1016/j.ijnurstu.2004.10.004

Dent, Higgins, & Wharff (2005). Spiritual transcendence as a predictor of psychosocial outcome from an outpatient substance abuse program. *Psychology of Addictive Behaviors, 18*, 213-222.

Edwards, A. C. (2003). Response to the spiritual intelligence debate: Are some conceptual distinctions needed here? *The International Journal for the Psychology of Religion, 13*, 49-52. https://doi.org/10.1207/S15327582IJPR1301_05

Emmons, R. A. (2000a). Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion, 10*, 3-26. https://doi.org/10.1207/S15327582IJPR1001_2

Emmons, R. A. (2000b). Spirituality and intelligence: Problems and prospects. *The International Journal for the Psychology of Religion, 10*, 57-64. https://doi.org/10.1207/S15327582IJPR1001_6

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50. https://doi.org/10.2307/3151312

Fry, P. S. (1998). The development of personal meaning and wisdom in adolescence. In P. T. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of the psychological research and clinical applications* (pp. 91-110). Mahwah, NJ: Erlbaum.

Fry, P. S. (2000). Religious involvement, spirituality and personal meaning for life: Existential predictors of psychological wellbeing in community-residing and institutional care elders. *Aging and Mental Health, 4*, 375-387. https://doi.org/10.1080/713649965

Gardner, H. (1993). *Multiple intelligences: The theory in practice.* New York: Basic Books.

Gardner, H. (1997). *Extraordinary minds: Portraits of exceptional individuals and an examination of our extraordinariness.* New York: Basic Books.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.

Gardner, H. (2000). A case against spiritual intelligence. *The International Journal for the Psychology of Religion*, *10*, 27-34. https://doi.org/10.1207/S15327582IJPR1001_3

Hair Jr, J. F., & Anderson, R. E. TATHAM, RL (1987), Multivariate Data Analysis.

Hair, J. F., & Jnr, B. (2009). BJ, & Anderson, RE (2010). Multivariate data analysis: A global perspective.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal*, 195-204. https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7

Hyde, B. (2004). *Children and spirituality: Searching for meaning and connectedness*. Jessica Kingsley Publishers

King, M., Speck, P., & Thomas, A. (2001). The royal free interview for spiritual and religious beliefs: Development and validation of a self-report version. *Psychological Medicine*, *31*, 1015-1023. https://doi.org/10.1017/S0033291701004160

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration (IJeC)*, *11*(4), 1-10. https://doi.org/10.4018/ijec.2015100101https://doi.org/10.4018/ijec.2015010101 https://doi.org/10.4018/ijec.2015040101 https://doi.org/10.4018/ijec.2015070101

Mayer, J. D. (2000). Spiritual intelligence or spiritual consciousness? *The International Journal for the Psychology of Religion*, *10*, 47-56. https://doi.org/10.1207/S15327582IJPR1001_5

Nasel, D. D. (2004). *Spiritual orientation in relation to spiritual intelligence: A consideration of traditional Christianity and New Age/individualistic spirituality.* Unpublished doctoral dissertation, University of South Australia.

Neiman, A. M. (2000). Self-examination, philosophical education and spirituality. *Journal of Philosophy of Education*, *34*(4), 571-590. https://doi.org/10.1111/1467-9752.00195

Nunnally, J. (1978). C.(1978). *Psychometric theory*, *2*.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory. *New York: McGraw-Hill. Oliva, TA, Oliver, RL, & MacMillan, IC (1992). A catastrophe model for developing service satisfaction strategies. Journal of Marketing*, *56*, 83-95.

Owens, E. (2011). Pedagogy and spirituality in higher education: Perspectives, practices, and possibilities. *Spirituality in higher education: Autoethnographies*, 147-162.

Parsons, J. English, L. M. & Fenwick, T. J., (2005). Interrogating Our Practices of Integrating Spirituality into Workplace Education. *Australian journal of adult learning, 45*(1), 7-28.

Rogers, J. (2003). Teaching spirituality in public higher education. *Religion and Education, 30*(1), 24-39. https://doi.org/10.1080/15507394.2003.10012316

Sternberg, R. J. (1997). The concept of intelligence and its role in lifelong learning and success. *American Psychologist, 52*, 1030-1037. https://doi.org/10.1037/0003-066X.52.10.1030

Strizenec, M. (2005). Shall we assess the spiritual intelligence? *Ceskoslovenská Psychologie, 49*, 367-373.

Tisdell, E. J. (2003). *Exploring spirituality and culture in adult and higher education*. John Wiley & Sons.

Tomey, A., & Alligood, M. R. (2006). Nursing theorists and their work . St. Louis, MO: Mosby. *Elsevier. Call Number: REF. RT84, 5*, N92006.

Vaughan, F. (2002). What is spiritual intelligence? *Journal of Humanistic Psychology, 42*, 16-33. https://doi.org/10.1177/0022167802422003

Watson, J. (1999). Watson's theory of transpersonal caring. *Blueprint for use of nursing models: Education, research, practice, and administration*, 141-184.

Wolman, R. N. (2001). *Thinking with your soul: Spiritual intelligence and why it matters*. New York: Harmony Books.

Yang, K. P. (2006). The spiritual intelligence of nurses in Taiwan. *Journal of Nursing Research, 14*(1), 24-35. https://doi.org/10.1097/01.JNR.0000387559.26694.0b

Zohar, D., & Marshall, I. (2000). *SQ: Connecting with our spiritual intelligence*. New York: Bloomsbury Publishing.

Zohar, D., & Marshall, I. (2000). *SQ: Connecting with our spiritual intelligence*. New York: Bloomsbury Publishing.