

ORIGINAL ARTICLE**Nurses' Work Environment and Spirituality: A Descriptive Study****Koren, Mary Elaine, RN, PhD,**

Assistant Professor of Nursing, Northern Illinois University School of Nursing and Health Studies

Czurylo, Kathryn, RN, MS, APRN, BC,

Surgical Clinical Nurse Specialist Alexian Brothers Medical Center

Epsom, Rita, RN, MS,

Surgical Clinical Nurse Specialist Alexian Brothers Medical Center

Gattuso, Michele, RN, MS,

Surgical Clinical Nurse Specialist Alexian Brothers Medical Center

Stark, Barbara, RN, MS,

Surgical Clinical Nurse Specialist Alexian Brothers Medical Center

Zastrow, Patricia, RN, MS, APRN, BC, FNP, CNS, CNA

Surgical Clinical Nurse Specialist Alexian Brothers Medical Center

Basu, Sanjib, PhD,

Professor, College of Liberal Arts and Sciences, Division of Statistics

Abstract : Quality of care is a major health concern in the hospital setting. A work environment that supports professional nursing as well as the spirituality of nurses, or the meaning/purpose nurses find in their work may contribute to quality of patient care. Yet, little is known about the nursing work environment and even less about the spirituality of nurses. Thus, the aims of this study were to measure medical-surgical nurses' perceived professional work environment score and perceived spiritual well-being score and determine if the two instruments are related. This cross-sectional survey consisted of a convenience sample of 68 nurses who completed the Professional Practice Environment Scale (PPE) and Spiritual Well-Being Scale (SWB) on the hospital website during working hours. Several PPE subscale scores differed significantly among the various clinical units. As the nurse's age, and years of clinical experience increased, specific PPE subscale scores also increased. The nurses' mean SWB scores were all within the moderate range and did not differ significantly among the clinical units. The overall PPE and SWB scores were not significantly correlated. Nursing administrators can use the PPE scores from this study to address the specific needs of individual clinical units. Older and more experienced nurses may serve as resources for younger, less experienced nurses. Both instruments can be administered repeatedly over time to monitor trends. Based on the SWB data, nurses in this study reported average levels of spiritual well-being. However, there is a need to learn more about the specific spiritual needs of nurses. Spirituality of nurses as well as the nurse's work environment are separate concepts that each merit further investigation and may add to the knowledge base for increased quality patient care.

Keywords: professional practice environment, spirituality, spirituality of nurses, nursing work environment, nursing, quality nursing care, quality patient care.

Introduction

Patient safety and the quality of patient care are a primary concern for health care providers and patients. Authorities in health care likewise acknowledge the importance of quality patient care (Center for Nursing Advocacy, 2009; The Joint Commission, 2009). Nurses are essential to providing quality patient care in a hospital setting. Yet, little is known about the working conditions or the spiritual well-being of the nurses who provide patient care. Thus, the purpose of this study was to describe factors in the nurses' work environment and the nurses' spiritual well-being that may contribute to the quality of patient care.

Background

Work Environment

It is essential to identify factors in the professional work environment that effect quality patient care. The following factors comprise the daily encounters of staff nurses. When these variables are in place, quality nursing care will more likely occur.

1) Resolution of conflict: When nurses are involved in situations where there are two differing opinions and no consensus, conflict can arise producing tension. Unresolved conflict can negatively impact the work environment (Kelly, 2006).

2) Autonomy: Nurses who exert more control over their practice and execute more autonomous decision-making exhibit better health (Budge, 2003), increased job satisfaction (Garon & Ringl, 2004; Kovner, Brewer, Wu, Chang & Suzuki, 2006), lower patient mortality (Kazanjian, Green, Wong, & Reid, 2005) and higher quality nursing care (Aiken, Havens, & Sloane, 2000).

3) Effective nursing leadership: Quality nursing care (Aiken et al. 2000; Upenieks, 2003), increased job satisfaction, and decreased emotional stress (Friese, 2005) are associated with nurses who work in an environment with effective nursing leadership.

4) Positive relationships with physicians: Nurses who have positive relationships with physicians and other health care providers report better health (Budge, 2003), greater job satisfaction (Garon & Ringl, 2004), lower patient mortality (Eastbrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005; Kazanjian et al. 2005), and higher quality nursing care (Aiken et al. 2000; Friese, 2005).

5) Teamwork: Teamwork and a sense of belonging are associated with increased job satisfaction among nurses (Garon & Ringl, 2004).

6) Adequate support for nursing care: Nurses who have adequate time and support to discuss patient issues with other nurses and health care providers report higher quality nursing care (Aiken et al. 2000; Best & Thurston, 2004).

7) Cultural competency: As the United States population becomes increasingly diverse, it is necessary for nurses to provide quality care to patients from a wide variety of cultures, religions, races, and ethnicity (Andresen, 2001). Thus, there is a need for nurses to deliver culturally sensitive patient care.

Spirituality

Magnet hospitals are reputed to have more favorable work environments and better patient outcomes (Aiken et al. 2000). However, the nursing environment continues to be stressful. It can be argued, that the stress among nurses is more than just inadequate staffing, low salary, missing supplies, but also a spirituality crisis (Wright & Sayre-Adams, 2000).

Wright (2002) describes spirituality as "our beliefs about our place in the world, how we define ourselves as individuals and seek meaning and purpose in and for our lives. It includes how we relate not only to ourselves, but also to others and perhaps our 'god'" (p.709). Burkhardt and Hogan (2008) state that spirituality is "finding meaning and purpose in life, transcendence beyond the physical body, and or experiencing a sense of connectedness with self, others, nature, literature, arts, and/or power greater than oneself" (p. 928).

Spirituality and Nursing

Nursing care, by its very nature, is spiritual (Yang & Mao, 2007). Nurses care for the mind, body and spirit of patients and provide holistic care (Dossey, Keggan, & Guzzetta, 2005). Spirituality affects all aspects of nursing care, not only when nurses provide spiritual care to patients (Wright, 2002; Carroll, 2001). Nurses care for patients affected by suffering and hardship. Nurses provide patient care while simultaneously confronting their own spirituality, or meaning in life. Not only is nursing care spiritual in nature, but nurses who have a better understanding of their own spirituality, may be more effective in providing quality patient care (Greasley, 2001; MacLaren, 2004; Miner-Williams, 2006).

There is a dearth of research on the spirituality of the nurse (Yang & Mao, 2007). The majority of research addresses the spirituality of patients, not nurses.

In summary, there is a need to systematically examine the nursing work environment and identify key components of quality care. Likewise, there are few studies that address the spirituality of nurses. The purpose of this cross-sectional descriptive survey was to describe the professional work environment and spiritual well-being of medical-surgical nurses practicing at a suburban community hospital.

Method

Watson's (1985) theory of human caring served as the study's framework and is based on ten carative factors that guide nursing practice. The tenth factor is the existential-phenomenological-spiritual force where nurses care for spiritual needs of both patients and self. Watson more aptly stated.

In a Caring Science practice of caring and healing, it invites a new and deeper meaning to the concept of professional discipline in that self-discipline for one's own spiritual growth and evolution of consciousness is a necessary requirement to sustain. (p115).

This study's specific research questions were:

1. What are the Professional Practice Evaluation (PPE) scores of staff nurses at this participating hospital and do the scores differ by specific medical/surgical unit?
2. What are the Spiritual Well-Being (SWB) scores of staff nurses at this participating hospital and do the scores differ by specific medical/surgical unit?
3. Is there a relationship between the nurse's age, years of clinical experience, and level of education and PPE and SWB scores?
4. Is there a relationship between the PPE and SWB scores?

Sample and Setting

This survey was conducted in a suburban community hospital with 473 licensed beds. The hospital is a private faith-based hospital that employs approximately 960 RNs. Since the majority of the nurses are employed on medical-surgical units, and to eliminate any bias from mixing speciality units, only the medical-surgical nurses were surveyed. The medical-surgical units included in this study were: a telemetry unit, two general medical units, telemetry/medical unit, general surgery, orthopedics, oncology, and neurology. Sixty-nine out of a total of 231 staff

nurses from these medical-surgical units participated in this study with an overall response rate of 31%.

Measures

Professional Practice Environment Scale (PPE). The PPE is a 38 item instrument with eight subscales designed to measure the effectiveness of the nursing practice environment in supporting the delivery of patient care. The eight subscales are: leadership and autonomy over practice (5 items), nurse-physician relationships (2 items), control over practice (7 items), communication about patients (2 items), teamwork

(4 items), conflict management (8 items), internal work motivation (7 items) and cultural sensitivity (3 items) (Erickson, Duffy, Biggins, Firzmaurice et. al, 2004). Questions are based on a four point Likert scale where one equals strongly disagree and four equals strongly agree. The higher the score, the greater the amount of the construct measured. Content and construct validity were supported through expert review and principal component analysis. Cronbach alpha for the overall instrument is published as 0.93 and each subscale handling disagreements/conflicts 0.88, internal work motivation 0.86, control over practice 0.82, leadership and autonomy in practice 0.83, staff relationship with physicians 0.79, teamwork 0.78, cultural sensitivity 0.78 and communication about patients 0.80 (Erickson, et. al, 2004). In this study the overall Cronbach alpha was 0.92 and each subscale handling disagreements/conflicts 0.74, internal work motivation 0.88, control over practice 0.72, leadership and autonomy in practice 0.73, staff relationship with physicians 0.65, teamwork 0.61, cultural sensitivity 0.79 and communication about patients 0.73.

Spiritual Well-Being Scale (SWB).

The SWB scale is a 20-item scale which measures the overall quality of one's spiritual life and consists of two separate subscales that measure: 1) existential or one's purpose and meaning in life and 2) religious or one's relationship with God (Ellison & Jonker-Bakker, 1983). The instrument is based on a six point Likert scale from one, "strongly agree" to six, "strongly disagree." The higher the score the greater the spiritual well-being. Total scores of spiritual well-being can be ranked as low, moderate or high by adding all the scores of each question. Validity was assessed using factor analysis and published cronbach alpha is 0.89 and test-retest reliability of 0.93 (Ellison & Jonker-Bakker). The Cronbach

alpha for this study was 0.93 and for the religious subscale 0.93 and spirituality subscale 0.87.

Additionally demographic variables of age, highest level of education, years of nursing experience in general and years employed at the hospital and hospital unit were collected.

Procedure

After obtaining Institutional Review Board approval from both the university and the hospital, the nurse investigators attended staff meetings on eight medical-surgical units, explained the purpose of the study and invited all staff nurses to voluntarily participate. Reminder flyers were placed in each nurse's mailbox asking for volunteers. Participants signed a consent form and completed survey questions on the hospital's internal website during working hours, anytime during a two month period. In order to protect the anonymity of participants, all nurses on the medical-surgical units received a small gift as a token of appreciation.

Statistical Analysis

The statistical analysis was conducted in SPSS v.15.0. Descriptive statistics and plots were obtained for each of the overall PPE and SWB scores and subscales. The differences among the clinical units and the PPE and SWB scores and subscales were assessed using the nonparametric Kruskal-Wallis (K-W) test. The association between the PPE and SWB scales and the association among the nurse's age, years of clinical experience, and level of education and the PPE and SWB subscales were assessed using the nonparametric Spearman correlation.

Results

Sample Characteristics

Sixty-nine participants completed the survey. The average age of the respondents was 38 years (SD= 11.3) which is lower than the national mean age 46.8 years for practicing nurses (HRSA, 2004). The majority of these nurses had 11 years of experience and spent well over half of their nursing careers at this hospital and on the present unit (Table 1). Of the 64 who responded to the question regarding education, 21(33%) earned an associate degree, 43(67%) earned a bachelor degree or higher degree.

PPE

The overall mean PPE scores and subscales, standard deviation and range are reported in Table 2. The difference in the overall mean score among the clinical units was

statistically insignificant Kruskal-Willis test (7, N = 69) = 12.98, p = 0.07. However, there were significant differences among the clinical units in relationship to several PPE subscales and as reported below.

Table 1: Sample Characteristics

Characteristic	M(SD)	Range
Age (n=65)		
Years as RN (n=70)	38(11.3)	23-59
Years at hospital (n=71)	11(10)	1-39
Years on unit (n=70)	8.7(8.4)	0-32
	6.5(7.2)	0-29

Leadership and Autonomy in Clinical Practice is the ability to self-govern and to utilize professional decision-making (Aiken et al. 2000). The nurse's perceived leadership and autonomy in practice was significantly different among the clinical units Kruskal-Willis test (7, N = 69) = 15.95, p = 0.03). The telemetry unit had significantly lower leadership and autonomy scores than the orthopedic unit, medical telemetry unit and medical unit.

Table 2 : Mean, standard deviation and range for overall PPE & SWB Scales and Subscales

Scale	N	M(SD)	Range
<i>PPE</i>	69	23(2.7)	14.5-30.0
Disagree	69	2.7(0.5)	1.4-4.0
Motivation	69	3.2(0.5)	2.1-4.0
Control	69	2.6(0.4)	1.6-3.7
Leadership	69	3.0(0.5)	1.4-4.0
Staff	69	2.7(0.5)	1.0-4.0
Teamwork	69	2.8(0.5)	1.3-4.0
Cultural	69	3.1(0.5)	2.0-4.0
Communication	69	2.9(0.4)	1.5-4.0
<i>SWB</i>	65	68.2(4.7)	52.0-78.0
Existentialism	65	3.5(0.3)	2.7-4.3
Religiosity	67	3.3(0.3)	2.5-4.1

Staff relationships with physicians are the interactions between nurses and physicians concerning patient care. The nurse's perceived staff relationships with physicians was significantly different among the clinical units Kruskal-Willis test (7, N = 69) = 16.64, $p = 0.02$. The telemetry unit had significantly lower scores dealing with staff relationship with physicians than the surgical orthopedic unit and the general surgical unit.

PPE and Demographics

Using Spearman correlation the nurse's age ($r = 0.36$, $p = .007$) was significantly related to overall PPE scores and nurse's years of clinical experience ($r = 0.27$, $p = 0.03$) was found to be significantly related to the overall PPE score and the nurse's level of education ($r = -0.27$, $p = 0.02$) was significantly negatively related to the overall PPE score. Spearman correlation was used to explore the relationship between the various PPE subscales and the nurse's age, years of clinical experience, and level of education and are reported below.

Ability to handle disagreements is the ability of the nurse to mediate differences of opinion regarding patient care. The nurse's age ($r = 0.29$, $p = 0.02$) and years of clinical experience ($r = 0.29$, $p = 0.02$) were significantly related to the nurse's perceived ability to handle disagreements.

Internal motivation measures the satisfaction and reward from working on a particular clinical unit. The nurse's age was significantly related to the nurse's perceived level of internal motivation ($r = 0.33$, $p = 0.01$), however, there was a significant negative relationship between the nurse's internal motivation and level of education ($r = -0.40$, $p = 0.001$).

Staff relationships with physicians are the interactions between nurses and physicians concerning patient care. The nurse's age ($r = 0.33$, $p = 0.01$) was significantly related to the nurse's perceived interactions with physicians and the nurse's years of clinical experience ($r = 0.28$, $p = 0.03$) was significantly related to nurse's perceived relationship with physicians.

Mean Teamwork Subscale is the nurse's perception of the amount of teamwork among health care workers in providing patient care. The nurse's perceived teamwork score was significantly negatively correlated ($r = -0.25$, $p = 0.05$) with the nurse's level of education.

Cultural diversity is the ability of the nurse to effectively administer care to patients of diverse cultural backgrounds. The nurse's age ($r = 0.32$, $p = 0.02$) was significantly related to the nurse's

perceived ability to handle culturally diverse patients.

SWB

The overall mean score for SWB and the two subscales are reported in Table 2. All the nurses scored within the moderate range (scores between 41 - 99) of spiritual well-being.

There were no significant differences in SWB scores among the clinical units or the religiosity subscale and existential subscale among the clinical units. The nurse's age, years of clinical experience and level of education were not significantly related to the overall SWB score or the religiosity or existential subscales.

The overall PPE and SWB scales were not significantly correlated ($r = -0.40$, $p = 0.75$). As a matter of fact there was a negative relationship between the two instruments suggesting that the instruments are measuring two different concepts.

Discussion

Research Limitations

This small, convenience sample of medical-surgical nurses is from one suburban community hospital which limits generalizability of findings. The instruments used in this study may not have captured the full range of differences in scores among participants. There is a possibility of a non-response bias since only 31% of the nurses responded to the survey. Therefore results should be interpreted cautiously. This study merits replication.

Participants from this study were experienced nurses (M=11 years of experience) who have spent the majority of their careers at this hospital (M=8.7 years at this hospital). This suggests that the sample is committed to this institution. Sixty-seven percent of the RNs reported a bachelor or higher degree, which is higher than the national average of 52% (HRSA, 2004).

The overall mean scores for the PPE instrument were above the mean score suggesting that the nurses perceived the work environment at this hospital as positive. There were differences in PPE subscale scores regarding leadership and autonomy and staff relationships with physicians. The two units that scored the highest in these two subscales have consistent and strong nursing leadership. The unit with the lowest scores has not had a consistent nursing leader and the nurses on this unit oftentimes deal with very demanding surgeons which may account for the lower scores.

As the nurse's age and years of experience increased selective PPE scores also increased.

In this study, as the nurses' age and years of work experience increased, there was a reported increased ability to handle conflicts, and collaborate with physicians. Past research indicated that as the nurses' years of clinical experience increased, patient mortality decreased (Tourangeau, Biovannetti, Tu, & Wood, 2002) and mortality rates increased with a declining relationship between nurses and physicians (Eastbrooks et al. 2005). Thus older, more experienced nurses may be able to deal with conflict and collaborate with physicians better than younger nurses. This is a critical finding since the ability to communicate and collaborate with physicians and other health care providers has been associated with quality patient care and decreased patient mortality.

In this study, as the nurse's age increased, the internal work motivation or satisfaction in working on a particular unit also increased. Results from two recent surveys indicate that nurses employed in Magnet hospitals report greater job satisfaction and contentment with their present unit than nurses employed in non-Magnet hospitals (Tourangeau et al. 2007; Ulrich, Buerhaus, Donelan, Norman, & Dittus, 2007).

However, in this study, as the nurse's level of education increased, the internal work motivation or satisfaction in working on a particular unit and mean teamwork score or the nurse's perception of the amount of teamwork among health care workers in providing patient care, decreased. At the time of data collection, there was a difference in philosophy between upper level nursing leadership and those involved at the unit level. Autonomy and independent thinking were not strongly endorsed by top nursing management. Those nurses with a bachelor degree or higher were more likely aware of this dichotomy between unit based nursing and upper administration and were thus reflected in the internal work motivation and mean teamwork scores.

Additionally, as the nurse's age in this study increased, so did skills in caring for a culturally diverse patient population. Hence, as the age of the nurses in this study increased perceived ability to care for those from diverse backgrounds also increased. The nurse's ability to care for patients from a diverse background may contribute to a better work environment for both patient and nurse.

The nurses in this study scored within the moderate range of SWB scores suggesting the nurses perceived that their overall quality of spiritual well-being was within average levels. There were no significant differences in the SWB scores among the eight clinical units, suggesting uniformity in spirituality among the nurses

participating in this study. These findings suggest that these nurses were spiritually intact and are similar to reports of other groups of nurses' spirituality (Clark et al. 2007; Dunn, Handley, & Dunkin, 2009).

The age of the nurses and the years of clinical experience of the nurses in this study were not related to their spirituality scores. These results are similar to other research that found no relationship between spirituality and age and clinical experience (Cavendish et al. 2004). The nurse's religious affiliation maybe a better predictor of their spirituality score than age or clinical experience and a variable to consider in future research (Cavendish).

Likewise, there was no significant relationship between SWB and level of education. Cavendish et al. (2004) found no relationship between spirituality scores and type of nursing degree. Similarly, the Glenmary 2000 survey conducted in North Carolina found no significant relationship between religious adherence and education (Wortham, 2006).

The PPE and SWB scores were not significantly related. As a matter of fact there was a negative relationship indicating these are two separate concepts. As such, they both merit in depth investigation in the future.

Nursing Implications

The PPE results can be used as benchmarks for assessing the work environment of this hospital. The PPE instrument can be used for repeated measures to determine how the work environment changes over time. Likewise the SWB instrument is a marker over time of the spiritual well-being of the nurses.

In this study as nurses' age increased and as they gained more clinical experience, they had a more positive impact on the work environment than younger less experienced nurses. Based on this study, the following recommendations are proposed in the clinical arena. Nursing administration can tap into one of its best resources, the older, more experienced nurses as mentors to younger nurses. Experienced nurses can share with younger nurses actual clinical occurrences that demonstrate critical thinking skills during periods of conflict, while collaborating with physicians, and when caring for culturally diverse patients. Seasoned nurses can also help with improved physician collaboration by modeling essential communication to less experienced staff nurse by asking physicians appropriate questions such as why a particular drug is ordered and/or the goal of the surgery.

The spiritual needs of patients is well researched, however, there is a dearth of information concerning the spiritual needs of nurses (Yang & Mao, 2007). The spiritual well-being scores of the nurses in this study were all within a moderate range. A more sensitive spirituality tool that can measure gradations of spirituality should be developed in the future or a spirituality tool specific for nurses. For example, how does the nurse's personal spirituality affect their day to day nursing practice? Or what meaning do nurses find in their nursing practice? How can administrators support the spiritual well-being of nurses, are just a few questions to pose in future research. Once more is known about the spiritual needs of the nurse, interventions can be developed to support the spiritual well-being of nurses. In turn, if the spiritual well-being of nurses is intact, they will be able to provide higher quality patient care. Future studies should also assess nurses' spirituality as well as methods of supporting the spiritual well-being of the nurse.

Acknowledgements:

The authors wish to acknowledge the thoughtful review of the manuscript by Dr. Ayhan Lash.

This research was supported by funding from Alexian Brothers Medical Center.

References

- Aiken, L.H., Havens, D.S., & Sloane, D.M. (2000). The magnet nursing service recognition program. *American Journal of Nursing*, 100(3), 26-35.
- Aiken, L.H., Clarke, S.P., Sloane, D.M., Sochalski, J., & Silber, J.H. (2002). Hospital Nursing staffing and patient mortality, nurse burnout, and job satisfaction. *Journal of the American Medical Association*, 288(16), 1987-1993.
- Andresen, J. (2001). Cultural competence and health care: Japanese, Korean, and Indian patients in the United States. *Journal of Cultural Sensitivity*, 8(4), 109-112.
- Best, M. & Thurston, N. (2004). Measuring nurse job satisfaction. *Journal of Nursing Administration* 34(6), 283-290.
- Burkhardt, L., & Hogan, N. (2008). An experiential theory of spiritual care in nursing practice. *Qualitative Health Research*, 18 (7), 928-938.
- Budge, C. & Carryer, J., & Wood, S. (2003). Health correlates of autonomy, control and professional relationships in the nursing work environment. *Journal of Advanced Nursing*, 42(3), 260-268.
- Carroll, B. (2001). A phenomenological exploration of the nature of spirituality and spiritual care. *Mortality*, 6(1), 81-98.
- Cavendish, R., Luise, B. K., Russo, D., Mitzeliotis, C., Bauer, M., Bajo, M. A. M., Calvino, C., Horne, K., & Medefindt, J. (2004). Spiritual perspectives of nurses in the United States relevant for education and practice. *Western Journal of Nursing Research*, 26, 196-212.
- Clark, L., Leedy, S., McDonald, L., Muller, B., Lamb, C., Mendez, T., Kim, S., & Schonwetter, R. (2007). Spirituality and job satisfaction among hospice Interdisciplinary team members. *Journal of Palliative Medicine*, 10(6), 1321-1328.
- Center for Nursing Advocacy. (March, 2009). *What is Magnet status and how's that whole thing going?* Retrieved March 18, 2009 from The Center for Nursing Advocacy Access: <http://www.nursingadvocacy.org/faq/magnet.html>.
- Dossey, B.M, Keegan, L. & Guzzetta, C. E. (2005). *Holistic nursing: A handbook for practice*. Sudbury, Massachusetts: Jones and Bartlett Publishers.
- Dunn, L. L., Handley, M. C., & Dunkin, J. W. (2009) The provision of spiritual care by Registered nurses on a maternal infant unit. *Journal of Holistic Nursing*, 27,19-28.
- Eastbrooks, C.A., Midodzi, W. K., Cummings, G. G., Ricker, K. L., & Giovannetti, P. (2005). The impact of hospital characteristics on 30-day mortality. *Nursing Research*, 54(2), 74-84.
- Ellison, C. W. & Jonker-Bakker, I. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*. 11(4), 330-340.
- Erickson, J.I, Duffy, M.E., Gibbons, M.P., Fitzmaurice, J. et al. (2004). Development and psychometric evaluation of the professional practice environment (PPE) scale. *Journal of Nursing Scholarship*. 36(3), 279-286.
- Friese, C.R. (2005). Nurse practice environments and outcomes: implications for oncology nursing. *Oncology Nursing Forum*, 32(4), 765-772.
- Garon, M. & Ringl, K.K. (2004). Job satisfaction of hospital-based registered nurses. *Online Journal of Clinical Innovations*. 7(2), 1-48.
- Greasley, P., Chiu, L., & Gartland, M. (2001). The concept of spiritual care in mental health nursing. *Journal of Advanced Nursing*, 33(5), 629-637.

- Joint Commission. (March, 2009). *National patient safety goals*. Retrieved March 21, 2009 from Joint Commission Access: <http://www.jointcommission.org/patientsafety/nationalpatientsafetygoals/>
- Kazanjian, A., Green, C., Wong, J. & Reid, R. (2005). Effect of the hospital environment on patient mortality: a systematic review. *Journal of Health Services Research & Policy, 10*(2), 111-117.
- Kelly, J. (2006) An overview of conflict. *Dimensions of Critical Care Nursing, 25*(1), 22-28.
- Kovner, C., Brewer, C., We, Y. W., Chang, Y. & Suzuki, M. (2006). Factors associated with work satisfaction of registered nurses. *Journal of Nursing Scholarship, 38* (1), 71- 79.
- MacLaren, J. (2004). A kaleidoscope of understandings: spiritual nursing in a multi-faith society. *Journal of Advanced Nursing, 45*(5), 457- 464.
- Marsh, V., Beard, M. T., & Adams, B.N. (1999). Job stress and burn out: The mediation effect of spiritual well-being and hardiness among nurses. *Journal of Theory Construction & Testing, 3*(1), 13-20.
- Miner-Williams, D. (2006). Putting a puzzle together: making spirituality meaningful for nursing using an evolving theoretical framework. *Journal of Clinical Nursing, 15* 811-821.
- Tourangeau, A., Biovannetti, P, Tu, J., Wood, M. (2002). Nursing-related determinants of 30-day mortality for hospitalized patients. *Canadian Journal of Nursing Research, 33*(4), 71-88.
- Tourangeau, D., McGillis Hall, L, O'Brien Pallas, L, Pringle, D, Tu, J, Cranley, L. (2007) Impact of hospital nursing care on 30-day mortality for acute medical patients. *Journal of Advanced Nursing, 57*(1), 32-44.
- Ulrich, B.T., Buerhaus, P.I., Donelan, K., Norman, L., & Dittus, R. (2007). Magnet status registered nurse views of the work environment and nursing as a career. *Journal of Nursing Administration, 37*(5), 212-220.
- United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professionals (2004). *Preliminary findings: 2004 National sample survey of registered nurses*. Retrieved from www.bhpr.hrsa.gov/healthforce/reports/repopulation/preliminary on February 13, 2007.
- Upenieks, V. V. (2003). The interrelationship of organizational characteristics of magnet Hospitals, nursing leadership, and nursing job satisfaction. *The Health Care Manager, 22*(2), 83-99.
- Watson, J. (1985). *Nursing: Human science and human care- A theory of nursing*. Norwalk, CT: Appleton-Century-Crofts.
- Worthan, R. A. (2006). The 2000 North Carolina adherence rated: A demographic explanation. *Sociological Spectrum, 26*(5), 453-469.
- Wright, S. G., & Sayre-Adams, J. (2000). *Sacred Space: Right Relationship and Spirituality in Healthcare*. Edinburgh: Churchill Livingstone.
- Wright, S.G. (2002). Examining the impact of spirituality on nurses and health-care Provision. *Professional Nurse, 17*(12), 709- 711.
- Yang, K., & Mao, X. (2007). A study of nurses' spiritual intelligence: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 44*, 999- 1010.