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# Psychometric Testing of the Presence of Nursing Scale: Measurability of Patient Perceptions of Nursing Presence Capability of Nurses in an Academic Medical Center

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Psychometric Testing of the Presence of Nursing Scale: Measurability of Patient Perceptions of  
Nursing Presence Capability of Nurses in an Academic Medical Center

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A dissertation  
presented to  
the faculty of the Department of Nursing  
East Tennessee State University

In partial fulfillment  
of the requirements for the degree  
Doctor of Philosophy in Nursing

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by  
Rebecca Little Turpin  
August 2016

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Keywords: Nursing presence, presencing, research, instrument development, patient satisfaction

## ABSTRACT

### Psychometric Testing of the Presence of Nursing Scale: Measurability of Patient Perceptions of Nursing Presence Capability of Nurses in an Academic Medical Center

by

Rebecca Little Turpin

Nursing presence occurs when nurses expend themselves on the behalf of a unique patient. This phenomenon requires further research to develop instruments. The Presence of Nursing Scale (PONS) measures the patient's perspective (Kostovich, 2012). Psychometric testing of PONS-Revised using exploratory factor analysis is warranted to further develop a reliable and valid measure of nursing presence. Contextual workplace variables need exploration in inpatient settings for correlation with nursing presence.

A convenience sample of 122 adult inpatients from ten acute-care nursing units in a Southeastern Magnet hospital were surveyed to conduct the first psychometric testing of this revised instrument using exploratory factor analyses. Seven research questions evaluated potential correlations between the PONS-R, patient satisfaction using nurse-sensitive measures of HCAHPS, nursing unit-specific workforce factors and patient demographic factors.

PONS-R demonstrated high internal consistency reliability ( $r = .974$ ), test-retest reliability (statistically significant at the .01 level) and divergent validity ( $p = .002$ ). PONS-R compared to nurse HCAHPS measures was statistically significant at the .01 level, ( $r = .736$ ). EFA revealed one factor (eigenvalues over 1), with a weak secondary factor centered on intimacy factors suggesting addition of items and repeated study with a larger sample size to further

psychometrically develop the instrument. Unexpected negative correlations were found with unit-workforce factors including average RN experience level ( $r = -.185$ , significant at the .05 level), and average RN age ( $r = -.218$ ). An unexpected positive correlation was found - percentage of Associate degree nurses ( $r = .269$ , statistically significant at the .05 level). The Triangle region was correlated with a higher PONS-R score ( $p = .038$ ;  $n=4$ ), otherwise no statistically significant correlations were found for PONS-R and patient demographics nor patient-specific variables such as estimated number of RN providing care, nor length of stay on the unit.

Further psychometric testing is indicated with larger samples and perhaps with the inclusion of intimacy factor items. Additional correlational studies focused on other patient quality outcomes measures with expansion of nurse demographics is indicated to explore for confounding variables.

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## DEDICATION

I would like to dedicate this work to the memory of my parents, Eva Jane Garrison Little and Thomas Cecil Little whose educational role modeling through extremely difficult circumstances constantly reminded me of how minor my obstacles were. Pondering those challenges and successes truly gave me the strength to persevere. Throughout their lives, their educational presence in my life was ever present. The memory of their “presence” in my life lingers on and it is my hope that this research will guide my profession to understanding our professional presence in a matter that will have lasting results for future generations of nurses.

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I have been privileged to practice educationally, professionally, and personally with nurses and others who have helped me with this research project. Educationally, I will be forever indebted to the mentoring provided to me by Dr. Patricia Hayes, and Dr. Florence Weierbach. Dr Hayes was instrumental as initial chair and for serving as my academic advisor throughout doctoral study. Through her keen sense of understanding people, always allowed me the independence to explore during learning and supported me with my own ideas while coaching and guiding. Dr. Florence Weierbach keen sense of motivation encouraged and inspired me to make steady progress and keenly important decisions in the direction of my work. I would also like to thank additional committee members: Dr. Lee Glenn, and Dr. Carol Kostovich for their many hours of review, guidance, and support throughout the dissertation process.

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My personal colleagues at Tennessee Technological University's School of Nursing have also served to support me through deadlines with continual and positive encouragement. Lastly, I want to thank all my former nurse colleagues who have worked in the trenches with me. You served as the inspiration behind this whole project. It is through the many interpersonal miracles

I have witnessed within the hospital care environment, which spurred my determination to better, understand the art of our profession.



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## CHAPTER 1

### INTRODUCTION

The concept of nursing presence has been explored and analyzed using several methods over many years. Presence is not seen as mere physical attendance of the nurse's body beside the patient. Instead nurse presence has generally been understood as an actual "connection" within the nurse-patient relationship that is felt during interactions by both patient and nurse. The idea of this helping interpersonal connection is rooted in spiritualism. Spiritual presence is found in Judaism, Islamism, and Christianity. As nursing schools and hospitals have arisen through the charitable contributions of founding religious organizations, the profession of nursing has been perceived to have a spiritual quality. Several philosophers such as Marcel, Heidegger and Buber indicate origins of nursing presence in their writings with the latter two indicating a focus on the mystical, metaphysical and unique qualities of presencing (Buber, 1970; Heidegger, 1962; Marcel, 1951). These origins and alignments with spiritual presence have added to the notion that nursing presence can only be felt in the moment by both nurse and patient, favoring qualification over quantification or measurement.

This ability to enact nursing presence is considered the true "art" of nursing and meets the definition of a behavioral concept because nursing presence is the end result phenomenon of a cluster of joint nurse and patient behaviors (Morse, 2000). Several authors have indicated this behavioral ability may originate from a specific nurse's intuitive nature instead of a learned art or skill that can be fostered or mastered (Covington, 2005; Newman, 2008; Osterman, Schwartz-Barcott, & Asselin, 2010), while other nurse scholars advocate that nursing presence is learned and intentional (Hain, Logan, Cragg, & Van den Berg, 2007; Pettigrew, 1988; Reis, Rempel,



Scott, Brady-Fryer, & Aerde, 2010). Several factors within the current and future nursing professional environments have the potential to affect the way nurses and nursing students may acquire art or skill in nursing presence capability.

The ability of a nurse to become expert in enacting nursing presence is an essential skill for optimal nurse to patient interactions which are often the precursors to quality patient outcomes. Unfortunately, the context of historical changes (past, present, and future) within the nursing profession may be leading to a decline in nurse presencing capability. A few of these changes include: 1) increased use of technology; 2) nursing workforce modifications resulting from hospital economic declines; 3) retirement rate of the aging nurse population; and 4) generational characteristics of the millennials replacing them. Each of these factors and their potential impact on nurse to patient interactional quality will be discussed.

Technology is ever-increasing in the healthcare environment. Technology comes in a wide variety of forms including electronic health records, electronic hand-held diagnostic devices, bedside, wireless and off-site monitoring equipment, telehealth applications including bi-directional communication and download capability, along with many other technological items under development that alter the traditional nurse-patient interrelational environment. Several authors have warned that increased technology has the potential to interfere or significantly change the context of and perhaps quality of human interaction with patients (Benner, 2004; Finfgeld-Connett, 2006; Sandelowski, 2002). Other authors see these advances as ways to alleviate care burdens for nurses to spend more relational time with patients and/or extend care to those patients who otherwise would not have access to healthcare (AMN Healthcare, 2013; Melnyk, 2008; Savenstedt, Zingmark, & Sandman, 2010; Schlachta-Fairchild, Varghese, Deickman, & Castelli, 2010). Given these mixed beliefs within the profession about

the impact of technology on relational care, it is essential that care environments be specifically evaluated through sound research methods as implementation strategies of technologies are undertaken.

In addition to technological advances, the economic environment in the healthcare industry has the potential to affect the amount of nursing time available for relational care as well as the relational capability within the nursing workforce. The value of nursing care is described by Rutherford (2012) in the Nursing Value Structure Model. Nursing intuition, trust, care provided, and nursing knowledge are collectively antecedents of nursing presence as well concepts linked together to produce positive patient outcomes. Rutherford argues that nursing care provision in this way drives healthcare profitability. While these recognized linkages between nursing presence attributes and quality of care are now resulting in positive changes in healthcare reimbursement adding support to the value of nursing care, there are also deleterious actions taking place that will decrease healthcare reimbursement. The decreases in healthcare reimbursement, specifically within hospitals, will likely decrease the quality of nursing care by altering the experience level of the nursing workforce. Both positive and deleterious influences will be discussed.

Healthcare spending continues to rise dramatically and is predicted to increase to 20% of the gross domestic product by 2024 (Centers for Medicare & Medicaid Services, 2015). As of 2015, hospital care is projected to increase 5.4 percent followed by a projected average annual growth of 6.1 percent from 2016 to 2024. In an effort to control and decrease hospital expense, the Centers for Medicare and Medicaid Services (CMS), through provisions of the Affordable Care Act, mandated ongoing measurements of both patient care outcomes and patient satisfaction with nursing to determine reimbursement levels for hospital care under a new

program of value-based purchasing. Quality measures such as hospital readmissions within 30 days of discharge for many chronic diseases are no longer reimbursed. The patient education provided and the influence nurses have with their patients likely has a direct link to these quality measures. In addition, several key measures of patient perception of nursing courtesy, information sharing and teaching are included in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), a post-discharge survey of inpatient care (Department of Health and Human Services, 2012). Hospital reimbursements are decreased based on less than optimal results in HCAHPS scoring as part of value-based purchasing. Failure in nursing relational capability could lead to declines in these key measures, while economic practices of an organization may also lead to decreases in the expertise level of the very profession who is most able to effect positive values.

In an economy with decreased hospital reimbursement, there is often the trend to actively allow and/or foster attrition of seasoned nurses due to the higher pay rates and cost of benefits for older employees. National trends in the aging nurse workforce indicate that the median age for practicing nurse is now 46 and increasing (HRSA, 2013). It is anticipated that 269,100 registered nurses will retire or switch to part time employment “in the very near future” (AMN, 2013). Whether turnover in seasoned registered nurse positions is actively fostered or not, positions may be only partially filled allowing for higher nurse to patient ratios, leading to less interaction time per patient.

Historically, individuals interested in a nursing career sought the helping profession due to a strong desire toward altruism and caring. Due to the current and prolonged economic downturn, individuals are seeking career paths with both position availability and security. Registered nurse employment is growing faster than average for all occupations, and is projected

to rise 19% from 2012 to 2022 (U.S. Department of Labor, Bureau of Statistics, Occupational Outlook Handbook, 2014). It is estimated that the profession of nursing will need 1.13 million new registered nurses by 2022 to offset the need for new positions and to account for the retiring workforce replacement (McMenamin, 2014). Because of the supply and demand issue, many may be drawn to nursing as a profession for this reason without possessing prior caring attributes. From a cost-containment standpoint, hospitals will optimally fill positions with graduate nurses and newer nurses with less experience who are less expensive, however are less capable in nursing presence due to experience level (Turpin, 2014). Pending differences in the generational makeup of the nursing workforce may also have an influence on this capability.

Characteristics of the millennial generation may have specific bearing on nurse presence capability. Millennials (also labelled net generation, nexters, Y generation) are those born between 1980 and 2001 (Hutchinson, Brown, & Longworth, 2010; Skiba & Barton, 2006). This segment of the population is currently aged 13-34 and is the next generational group entering the nursing profession. Prensky (2001) differentiates this generation by coining the term, “digital natives”. This generation has been immersed in use of technology for communication throughout their lives. As such, they are very open to and unrestricted in communication in online environments (Skiba & Barton, 2006) and may prefer quantity over quality in terms of friends and relationships (Weston, 2006), which may indicate less capability in relational situations. Some authors describe this generation as having a higher trend towards narcissism (over-confident, self-centered, and lacking empathy for others) (Twenge, 2009), while having less exposure to individuals with serious illness or disability and thus less ability to cultivate empathy (Fater, 2010). Finally, millennials “often have difficulty communicating through traditional channels and have a propensity for multitasking” (Pardue & Morgan, 2008, p. 74)

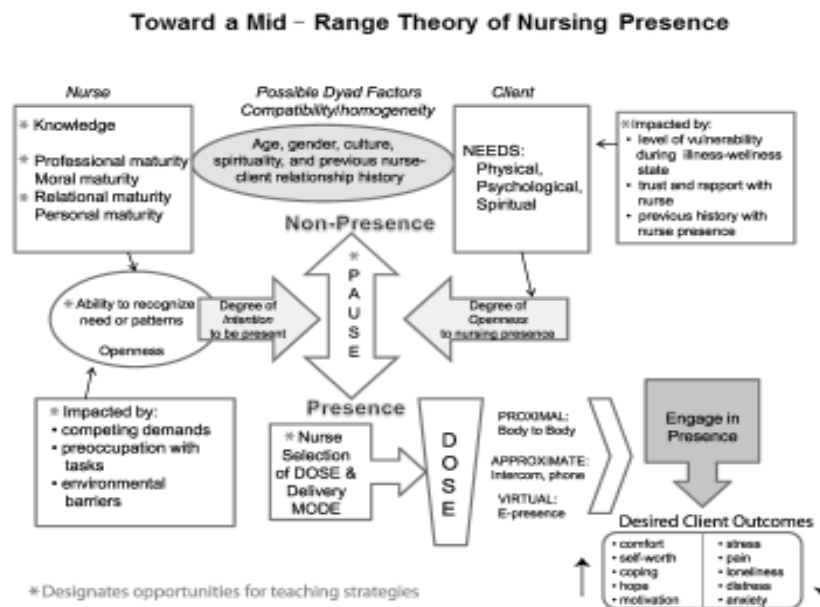
which could lead others to perceive them as less capable of deep and focused connections with others. It is therefore concerning that key attributes of the nurse required for nursing presence to occur or be effective may be limited in new nurses who are members of this generation.

Evaluation and research based on existing theoretical frameworks will be essential to refine the measurement of nursing presence. This future research will provide essential knowledge for nurse educators and leaders in teaching and mentoring development of expert nursing presence capability.

### **Theoretical Framework**

With the emergence of nursing as a truly, separate profession from medicine from the 1950's forward, nursing theorists advocated for the development of nursing theory. Theoretical frameworks establish professional boundaries which are essential for nursing knowledge development. Because nursing presence was seen as a unique connection with patients, nursing presence was a key concept in many early nursing theories (Benner, 1984; Ferlic, 1968; Leininger, 1991; Newman, 1986; Orlando, 1972; Parse, 1981; Paterson & Zderad, 1976; Peplau, 1952; Rogers, 1970; Swanson, 1991; Travelbee, 1966; Vaillot, 1962 & 1966; Watson, 1985). Although nursing presence has been written about extensively, only recently has a comprehensive mid-range theory been postulated (McMahon & Christopher, 2011). In a recent state of the science paper on nursing presence, Turpin (2014) explored all relevant theoretical models for clear implications for instrument development (containing clear, measurable attributes). These frameworks are outlined in Table 1, Appendix I and described within the literature review in Chapter 2. Additionally, literature was reviewed for relevant and existing instruments having components in part or whole which might be applicable for measurement of nursing presence or its attributes. The resultant tools are listed in Table 2, Appendix J. Based on

these reviews, it was determined that the Mid-Range Theory of Nursing Presence provides the optimal depiction of nursing presence operationalized. Of the instruments reviewed, the Presence of Nursing Scale (PONS) was selected for further comparison for its fit with the Mid-Range Theory of Nursing Presence (Figure 1). These were found to be congruent.



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**Figure 1: Model of Mid-range Theory of Nursing Presence (McMahon, & Christopher, 2011)**

### Mid-range theory of nursing presence

Within this theory, nursing presence is defined as a nursing intervention that takes the form of being with another, both physically and psychologically, during times of patient need and has three levels: physical, psychological, and therapeutic. The model represents nurse characteristics, client characteristics, and compatibility factors within the nurse-client dyad

(relationship). This framework offers a foundation by which further refinement and development of research instruments related to key components of nursing presence and variables can be conducted. In addition, the concept of “nurse dose” depicts the current reality of technologically enhanced care provision environments (being in-person or via telehealth). Finally, this framework was designed in the context of nursing education and therefore provides a visual method for nursing students to gain perspective on what takes place and what characteristics are key for deeper, relational interactions to take place between nurse and patient.

### **Problem Statement**

Capability for enacting nursing presence with patients in hospitalized settings may be declining due to increasing technology in the healthcare environment, economic pressures from declining hospital revenues, retirement of aging registered nurse workforce leading to less experienced nurses, and generational differences unique to the millennial generation. As the capability for deep, interrelationship building with hospitalized patients is closely aligned and causative for positive patient health outcomes (actual and perceptually), it is essential that the nursing profession have quantifiable research to measure the value of nursing care. Additionally, for the newer generation of nurses to be best educated in the skill of nursing presence, clear, identifiable models (preferably visual) which can be immediately explored need to be available due to their strong affinity for visual, experiential, engaged learning (Brown, 2000; Oblinger & Oblinger, 2005). Instruments that have evidence to support validity and reliability in measuring nursing presence must be further developed so they can be utilized to evaluate nursing student and newer nurse performance of relational skills and be utilized to further develop nursing curriculum.

Unfortunately, there are very few instruments and limited research that has measured the patient perspective of nursing presence. The purpose of this study was to further develop the Presence of Nursing Scale (Kostovich, 2012), by gaining a large enough sample in a large academic medical center in the Southeast to be able to conduct further psychometric testing inclusive of exploratory factor analysis. Other specific objectives of the study included evaluation of the PONS-R construct validity using test-retest procedures, comparison with nursing-specific HCAHPS survey items measuring patient satisfaction during the study period, and evaluation for divergent validity within the nursing unit with the lowest performance on HCAHPS.

### **Aims**

The aim of this study was to evaluate the Presence of Nursing Scale (PONS) (Kostovich, 2012) in a revised version using a robust sample size of hospitalized, adult patients in many nursing units (contexts) in order to conduct the first exploratory factor analysis of the instrument. Additionally, factors and any resultant subscales were compared to the key attributes noted in the Mid-Range Theory of Nursing Presence (McMahon & Christopher, 2011). Key nurse attributes include knowledge, professional maturity, moral maturity, relational maturity, and personal maturity. Hospital unit-specific patient satisfaction scores were utilized for comparison with unit-specific PONS-R data to evaluate for construct validity. Nursing workforce demographic data was compared against PONS-R results to evaluate any specific association with key nursing educational and/or experience factors.

### **Research Questions**

1. What is the internal consistency and construct validity of the Presence of Nursing Scale-Revised?



2. How does reliability and validity evidence of the 25 central questions of PONS-R in this sample compare to prior studies using the PONS instrument?
3. What factors will be identified by conducting exploratory factor analysis?
4. Were resultant subscales and factors congruent with the Mid-Range Theory of Nursing Presence?
5. How do unit-specific data from HCAHPS patient satisfaction compare to Presence of Nursing Scale-Revised data during the study period?
6. Do relationships exist between unit-specific nurse demographic data and patient perception of nursing presence capability?
7. Do relationships exist between patient-specific demographic data and patient perception of nursing presence capability?

## **Definitions**

### **Nursing Presence**

Nursing presence is not merely physical attendance of the patient by the nurse. As stated previously, the concept of nursing presence refers to the inter-relational experience of both patient and nurse during the helping encounter of care. Through the review of numerous concept analyses (Finfgeld-Connett, 2008a; Finfgeld-Connett, 2008b; Fredriksson, 1999; Fuller, 1991; Hessel, 2009; Hines, 1992; Melnechenko, 2003; Tavernier, 2006; Zybblock, 2010) and an extensive literature as outlined later in this report, many definitions of nursing presence were identified. For purposes of this research study, nursing presence was defined as:

“an intersubjective encounter between a nurse and a patient” (based on patient invitation)

“in which the nurse encounters the patient as a unique human being in a unique situation

and chooses to spend him/herself on the patient's behalf" (Doona, Haggert, & Chase, 1997).

### **Nursing Presence Capability**

Capability is defined as "potential for an indicated use or deployment" (Merriam-Webster, 2014). Therefore capability can be considered as action potential. Benner (2010) describes the importance of nursing presence capability stating that nurses who do not acquire skill in interpersonal relationships with patients and families will not progress to the level of expert nurse based on several studies (Benner et al., 1999; Benner, Tanner, & Chesla, 2009; Rubin, 2009). Other authors indicate that sustainability of learning and capability is dependent on integration of this knowledge into actual workflow within facilities (Dark and Perrett, 2007). Maguire (2013) supported this imperative by stating that the confidence, competence and capability of novice nurses is best facilitated and strengthened "using sound education theory within the context in which learning is applied so that learning is perpetuated" (p. 648). Therefore, evaluative research within the actual contextual work environment is needed along with leadership involvement in development of environments that will be best able to facilitate this knowledge integration. Based on these imperatives surrounding capability, nursing presence capability was defined as the readily available relational knowledge and action potential of a nurse or nursing student to recognize patient need and an invitation to enter into a nursing presencing activity that is successful in producing positive patient outcomes within a specific contextual care environment. Based on the Mid-Range theory of Nursing Presence, the nurse or nursing student is able to adequately assess and provide the appropriate depth and dose of nursing presence to meet the patient's needs.

The PONS, a relatively new instrument measuring patients' perceptions of nursing presence was considered a determinant of the capability of the nurses within a specific contextual environment (nursing unit).

### **Summary**

In summary, the capability or action potential for nurses to inter-relationally connect with hospital inpatients in a meaningful way that produces positive patient outcomes may be at risk. This comes at a time when this true nursing art (the value of our science) is even more desirable and required to elicit valuable patient health outcomes and patient perception of satisfaction. Several factors potentially have a negative impact on nursing presence capability including: 1) increased use of technology; 2) hospital economic declines; 3) retirement rate of the aging nurse population; and 4) generational characteristics of the millennial generation. Nursing presence has been analyzed and researched for approximately 30 years, however, only recently have mid-range theories and instruments been developed that guide and have the potential to measure the patient's perception of nursing presence capability. The PONS, the most developed instrument, used minimally in only three studies, in a revised version was evaluated using exploratory factor analysis. Adequate sample sizes of hospitalized, adult patients were needed to further refine and develop the instrument. Nurse mentors and educators will be better prepared to assist nurses and nursing students in integration of knowledge that can be applied in practice related to this behavioral concept with ongoing research.

## CHAPTER 2

### LITERATURE REVIEW

#### **History of Presence**

Nursing presence was likely introduced into the professional language as early as Florence Nightengale's description of a "rare healing presence" (Dossey, 2000). This emphasized that the presence of a nurse in attendance of a patient had not only healing properties for the patient but was a rare and unique situational interaction likely not always experienced within all care provided. This rarity has added to the belief that nursing presence was initially viewed as elusive to measurement as it did not happen with each interaction and therefore difficult to pinpoint pre-cursors and attributes conducive to its occurrence. This phenomenon of healing presence has roots in spiritual and religious writings of several religious sects including Judaism, Islamism, and Christianity (Smith, 2001). Existentialist writers in the 1950's to 1970's expanded our knowledge of this phenomenon through their philosophies on how human beings interact and inter-relate to one another. Presence was defined by them as intentionally making oneself available for another (Heidegger, 1962), possessing the capability for fully being with someone in need (Marcel, 1951), and as a relational encounter involving deep, elusive, and unique relationships (Buber, 1970). These writings coincide with a time in history when the discipline of nursing was striving to define professional identity by actively separating its connection from the medical profession. The unique relational encounters that nursing had with patients was viewed as a key defining difference and thus nursing presence became a key concept within early nursing theories.

## **Origins of Nursing Presence in Grand Theories**

Nursing presence is first outlined in theory by Hildegard Peplau. Peplau (1952) was one of the first to attempt description of the nurse-patient relationship for those patients struggling with emotional issues. Peplau's theory of interpersonal relationships consists of four phases: orientation, identification, exploitation, and resolution. During the orientation phase, the nurse and patient meet as strangers; the nurse is to create an environment conducive to sharing key needs during the identification phase. During the exploitation phase, the nurse expends herself on behalf of the patient serving as an advocate and being with the patient to ensure nursing care needs are met. In the resolution phase, nursing presence is dissolved as needs have been met. Peplau's theory was outlined at a time when a changing paradigm in psychiatry shifted from scientific, Freudian approach to an existential approach (Basavanthappa, 2007, p.306). This approach focused more on therapeutic interpersonal evaluation and interventions and likely influenced nursing theory development. In the 1960's, additional nursing theorists built upon Peplau's work (Ferlic, 1968; Orlando, 1961; Travelbee, 1966; & Vaillot, 1962 & 1966). Two of these theorists (Orlando, 1961; Travelbee, 1966) also had backgrounds in psychiatric nursing.

Orlando's nursing process discipline theory (1961) describes the dynamic relationship that exists between patient and nurse. The nursing professional behavior is to cure helplessness in the patient by using interpersonal and observational skills. During this unique interchange between patient and nurse, the nurse actively explores patient reactions to care. Nursing presence becomes apparent only through shared observations and validations between patient and nurse leading to development of shared meanings that are beneficial to meeting needs. Orlando espoused that the nurse must build a trusting relationship (actively) to encourage the

sharing of patient needs, perceptions, thoughts, and feelings. Only with this in-depth relational bonding can optimal care be planned and patient needs be met.

Sister Marie Vaillot (1962 & 1966) also furthered understanding of nursing presence. According to her writings fostered by connections to existentialism, Vaillot (1966) described the focus of nursing was to assist patients in becoming an authentic person by using their own selves and having commitment to immersion in the patient's situation. According to Vaillot, presence occurs when the nurse uses her whole self in "being with" and at the disposal of the patient. This contribution outlined that authenticity was a key precursor to nursing presence.

In 1966, Travelbee presented the human to human relationship model of nursing to explain the profession. The focus of this theory was on the patient's ability to find meaning through the use of self-therapy by the nurse. Self-therapy "is the ability to use one's own personality consciously and in full awareness in an attempt to establish relatedness and to structure nursing interventions" (p. xx). Nurse presence both physically and psychologically is required along with a targeted intellectual approach toward the patient's situation. Travelbee indicates the intentionality of nursing presence. Through this type of presencing, empathy, sympathy, mutual understanding, and rapport are established. In spite of some author's claims that nursing presence is elusive, Travelbee sets the precedence for nursing presence being a planned, intentional act that influences the patient's situation. This supports the idea that capability of nursing presence can be attained through planned development of self-therapy.

Ferlic (1968) building on Vaillot's writings, expanded the term presence from the outcome of a successful relational encountering. To Ferlic, an individual nurse (or presence) is one that is capable of holistically being with a patient in need. This likely establishes the first

reference to nurse capability at the skill of presencing and is congruent with Marcel's (1951) assertion of presence as capability.

Again with a foundation in existentialism, Paterson and Zderad's (1976) theory of humanistic nursing also focused on nursing presence. Nursing presence was described as "being there or with" and having attention to the patient. This attentiveness is an ability to focus on the immediate shared situation and presence includes togetherness as we not us. This supports the notion that ability for attentiveness while in the moment is a true attribute which the nurse must possess in order to foster nursing presence. Although Paterson and Zderad began description of potential nurse attributes, they also warned that presence is known more fully than able to be described, thus promoting the elusiveness of nursing presence to those external to the nurse-patient dyad. Presence is described as a "lived dialogue" involving readiness, and inclusive of both verbal and non-verbal communication" (Paterson & Zderad, 1976, pp. 23, 28). In this way, Paterson and Zderad established nurse intuition as a key attribute, and also formed the foundation for cue recognition as part of this ability.

Parse (1981) provided the nursing profession with the man-living-health model. This was later changed to and is currently referred to as the human becoming model (1992). Parse's view of nursing presence was one of relational ability and nursing presence is referred to as "true presence". Nurses must have this ability to see patients' perspectives which allows the nurse to "be with" patients and guide them toward desired health outcomes. Changing health patterns are co-created by the nurse-person relationship. This supports the notion that nurses may have ability or capability, but until the patient is an active participant, nursing presence cannot take place. Parse's theory is the first to tie nursing presence to transformed health outcomes and an

active partnership focusing on facilitation and collaboration versus prior models which emphasized the nurse's role in the relationship to be fulfilling patient needs or solving problems.

Watson's (1985) theory of human science and human care represented a newer grand theory which delineated nursing presence as a transpersonal interaction. This interaction is an intersubjective human to human relationship in which are both fully present in the moment feeling a union with each other that creates a shared life history. Presence in time with one another is more subjectively real (sensed). Both patient and nurse make decisions of how to participate in the relationship indicating the willing, collaborative nature of nursing presence. Transactions by nursing include those defined as professional, personal, scientific, esthetic and ethical thus outlining dimensions of within the patient – nurse interchange. These dimensions support potential categories for knowledge or proficiency attainment for the nurse in gaining nursing presence capability.

### **Nursing Presence in Middle-Range Theories**

In 1981, Leininger described how nursing presence in the room was a key expectation of many patients and valued differently. In her 1984 cultural care diversity and universality theory, transcultural nursing was born (Leininger, 1991). From this perspective, nursing presence must be inclusive of both an emic and etic view. The emic view included language expressions, perceptions, beliefs, and cultural practices of individuals/groups of a particular culture. The etic view included a universal language expression, beliefs, and practices pertaining to several cultures or groups. In this way, nursing presence (or relational quality) must include recognition, respect, and adoption of both emic and etic views to ensure culturally competent care and likely to ensure presencing capability with a patient from a diverse culture from that of the nurse.

Benner's (1984) model described the Dreyfus model of skill acquisition for nurses. Her work



emphasized the importance of excellence in caring practices through experiential learning and exploration of narrative accounts of nursing practice in action. Through review of these exemplars, nursing expertise develops along a five stage process from novice level to expert. Presencing (being with the patient in a quality way) is considered essential for the “helping role” to occur which is one of her identified seven domains of nursing practice. The mere “presence” of the nurse in attendance of the patient was described as more important than actual nurse task completion. Presencing is one of eight competencies that contribute to the helping role of the nurse.

Similar to Benner, Swanson’s (1991) caring theory sought to define how caring is achieved in nursing practice. Swanson identified five processes of caring including: 1) knowing; 2) being with; 3) doing for; 4) enabling; and 5) maintaining belief. The second process of “being with” is defined as being emotionally present with/for the patient. During this relational process there must be understanding and ability to recognize and interpret both verbal and non-verbal communication between patient and nurse. Swanson’s theory also supports the idea that contextual factors of the caring environment have the ability to influence the quality of the caring experience as outlined in this study. Swanson’s writings also suggest that inexperienced nurses may have more difficulty in performing activities leading to caring and should be guided to gain more competency.

In summary, several grand theories and middle-range theories of nursing have identified the concept of nursing presence or the ability to enact it (presencing) as an important component. It is suggested that this ability depends on cultural language norms and expression, ability to recognize cues (attentiveness capability), experience level, exposure to experiential learning opportunities, and willingness for interaction of both nurse and patient. Several theories

identified that the effectiveness of presence encounters is influenced heavily by factors inherent in the nurse and patient as individuals as well as the quality of the practice environment. Thus, further research and analysis of how these factors may influence nurses' ability to gain or exercise nursing presence capability is needed. In an effort to better explore and further define nursing presence to its fullest, concept analyses provided a more in-depth view of potential antecedents, attributes and potential outcomes of nursing presence.

### **Concept Analyses and Development of Nursing Presence**

To further develop nursing presence as a concept, many authors beginning in the 1990's began conducting concept analyses of the phenomena. Methods have varied amongst authors including no stated method (Melechenko, 2003), using the Walker and Avant (1983) method (Boeck, 2014; Hessel, 2009; Hines, 1992, Newman, 2008 & Tavernier, 2006), using blended methods (Easter, 2000), literature reviews (Doona et al., 1997; Pederson, 1993; Stanley, 2002; Zybblock, 2010), and case study (Pettigrew, 1990). Additionally significant analysis was done with the concept of presence using metasyntheses either solely (Minicucci, 1998; Fredriksson, 1999; and Finfgeld-Connett, 2006), or to compare presence with other related concepts (Curley, 1997; Fredriksson, 1999; Finfgeld-Connett, 2008a; and Finfgeld-Connett, 2008b), or in collaboration with a qualitative study (Fuller, 1991).

Beginning in 1990, Pettigrew described a case involving a young woman admitted to the intensive care unit with metastatic breast cancer experiencing frequent seizure activity. Through this case study Pettigrew provided antecedents, outcomes, and critical components of nursing presence. Presence was described as usually being preceded by a helpless situation that can involve increased patient vulnerability, isolation, and alienation. During this time the patient may have a strong desire or need to be heard and is seeking connectedness. As the nurse enters

into the relationship, some level of distress may be experienced due to exposure of own inner self. Due to distress, the nurse may choose options of avoidance, using professionalism as a shield, or to allow presencing and exposure of the true self. As a result, the interchange is both professional and interpersonal. Invitation by the patient was a critical component. Presence required nurse attributes of closeness, openness, receptivity, readiness and availability, a willingness to hear and involvement. Pettigrew additionally asserted that ethical principles of beneficence, nonmaleficence, fidelity and autonomy are essential in nursing presence. Pettigrew's analysis of nursing presence established the belief that the patient's need must be significant and overt, however, later writers indicated that nursing attentiveness may recognize need that is less overt.

Fuller's (1991) dissertation used nursing literary context to identify common descriptions and defining characteristics of nursing presence purely from a nurse's perspective. All relevant nursing literature and accounts from actively practicing nurses were utilized for data. Nurses in acute care settings described nursing presence and these accounts were thematically analyzed. From this work, five defining characteristics were identified: 1) engagement; 2) physical proximity; 3) confirmation; 4) availability for any contingency; and 5) therapeutic effect. Fuller concluded that the concept of nursing presence is dynamic in nature and likely to change.

In 1992, Hines completed a concept analysis of nursing presence using the Walker & Avant (1983) method. Using this method, the defining characteristics of nursing presence were determined by (a) examining uses of the concept, (b) constructing a model case, (c) reviewing antecedents and consequences, and (d) describing attributes. Building on descriptions of previous authors' writings (Buber, 1965 & 1970; Bugenthal, 1965; Gardner, 1985; Hines, 1987, 1988a, & 1988b; Nouwen, 1979; Paterson and Zderad, 1976; Pettigrew, 1988; and Steere, 1967) and

examination of a model case, Hines proposed provisional attributes of nursing presence. These included: 1) time with another, 2) unconditional positive regard, 3) transactional speaking with, being with, doing with, 4) encounter that is valued, 5) connectedness, and 6) sustaining memory. Hines was the first researcher who identified specific actions for a nurse to engage in therapeutic presence.

Pederson's (1993) review of the literature on nursing presence evaluated philosophic origins (Heidegger, 1962) and theoretical components from Paterson and Zderad (1976). Pederson described the relationship between a nurse's physical presence and the patient's perception of caring. According to Rieman (2012), patients felt devalued and angry when a nurse was hurried and distant. Pederson differentiated parental presence and nursing presence with children. Pederson encouraged nurses to seek out others (either professionally or personally) who have a natural gift for presence and observe these individuals. These observations are considered essential for growth in nurse presence capability of nurses in the care of children. Pederson indicated that physical closeness, nearness, touching, and tone of voice, use of body language and actual language can all convey nurse sole focus on the patient's welfare. These behaviors can be observed along with patient response. Pederson stated that the patient perspective of nursing presence can be measured based on the degree of connectedness felt and how open he felt the nurse was during the encounter. Nurse's perspective of nursing presence can be measured through how well the nurse "knows" the patient, gained understanding of respect of another and awareness of own self. Outcomes of presence included support, comfort, sustained assistance, encouragement, and motivation (as described by Gardner, 1985). Outcomes in children likely revolved around social participation, open questions, resuming normal daily living activities and evidence of relaxation.

Osterman and Schwartz-Barcott (1996) conducted a concept analysis in which they further described McKivergen and Daubenmire's (1994) conceptualization of levels of presence. In 1994 McKivergen and Daubenmire first described presence in terms of area of need. In their view, presence could be physical, psychological, and therapeutic. Therapeutic presence included using holistic strategies to meet spirituality and mind-centering needs. Building upon the idea that presence could be classified, Osterman and Schwartz-Barcott described four ways of presencing, outlining presence in terms of depth: 1) presence, 2) partial presence, 3) full presence, and 4) transcendent presence. These constructs provide a measurable quality in regards to how presence is perceived by both nurse and patient. This also provided the idea that full presence is not always needed and that the depth of interpersonal relationship may be inherently situational dependent on how receptive both parties are, the extent or urgency of patient need, as well as the time available for cultivation.

Doona, Haggerty and Chase (1997) explored the existential nature of nursing presence. They related that since the 1980's the precision of the concept's definition has deteriorated. An extensive review of literature from a nursing historical and current focus, an etymological focus, and a philosophical focus were provided. Through this review, nursing presence was defined as: "an intersubjective encounter between a nurse and a patient in which the nurse encounters the patient as a unique human being in a unique situation and chooses to spend herself on the patient's behalf, while at the same time the patient invites the nurse to care" (p.12). This is the first reference noted that implied active choice on the part of the nurse as a pre-cursor to nursing presence. While this seems to indicate that nurses must have active knowledge of nursing presence and choose when to employ it, the authors attested that nursing presence cannot be taught, only cultivated through focusing on being present. Narration of patient experiences

between nurses is cited as a way nurses may be cultivated into improved use of nursing presence. Antecedents included commitment by the nurse to employ presence, to be immersed in the patient situation, and not just a task-doer within the room. Additionally, the patient must be willing to let the nurse into his/her experience. Consequences of nursing presence included the nurse being professionally affirmed while the patient is personally affirmed.

Curley (1997) conducted a concept analysis of mutuality using the Walker and Avant (1983) method. Two attributes were identified that are similar to nursing presence: 1) a synchronous co-constituted relationship, and 2) evolution of both individuals toward personal becoming. Model, borderline, related, contrary, and illegitimate cases were presented. Drawing on Newman (1994) in several examples, Curley identified that the concept of mutuality is an outward expression of nursing presence, however the conceptual boundaries between the two concepts are not clearly established.

Minicucci (1998) conducted a review and synthesis of literature on presence across the disciplines of nursing, psychology, sociology, and social work. As with the finding of this dissertation work, Minicucci identified the challenges of decreasing healthcare environmental resources and the cost-conscious healthcare market as key factors that could diminish nursing presence. The author additionally concluded that research or discussion of presence in non-nursing literature as a therapeutic concept was very limited. Minicucci described nursing presence based on theoretical foundations (Benner, 1984; Leininger, 1981; Parse, Paterson & Zderad, 1976; Swanson, 1991), and based on concept analyses (Gardner, 1992; Gilje, 1992; and Osterman & Schwartz-Barcott (1996). Finally Minicucci (1998) identified four qualitative studies pertaining to presence (Fuller, 1991; Mohnkern, 1992; Pettigrew, 1988; and Wilson, 1986). While this author provided a summary of the scientific literature on nursing presence, the

focus of this review and synthesis was related to nursing care of families. Minicucci concluded that even though the literature and research is growing, nursing presence was not a well-defined concept. Nursing presence is thus initially defined as an internal resource of nurses (a capability) that demands further research.

Fredriksson (1999) performed a multi-concept qualitative research synthesis to explore presence, touch, and listening within a caring conversation. For the concept of nursing presence, ten examples of literature were located including five concept analyses (Curley, 1997; Doona et al., 1997; Gilje, 1992; Hines, 1992; Pettigrew, 1990), one concept analysis with observations (Osterman & Schwartz-Barcott, 1996), one review (Pederson, 1993), two phenomenological studies (n=48, n=8) (Cohen, Hausner, & Johnson, 1994 and Fareed, 1996), and one hermeneutical phenomenological study (n=23) (Gilje, 1997). To structurally analyze the nursing presence data, questions leading to operational definitions, pre-conditions, process items, and outcomes were initiated and compared across the literature accounts. Nursing presence was defined as an “intersubjective encounter between a nurse and patient”. During this encounter the patient is seen as “a unique human being in a unique situation” (both based on the work of Doona et al., 1997). Fredriksson’s work introduced the idea that nurses actively make a choice to expend themselves for another and that the relationship required patient invitation to occur (p. 1170). Nurse pre-conditions included self-awareness, self-acceptance, openness to and willingness for involvement and ability to remain present even under difficult situations. Fredriksson’s synthesis did very little to expand upon the actual process, but did describe several positive patient outcomes: alleviation of suffering, growth, decreased isolation, connectedness, decreased vulnerability, expression of thoughts, feelings, better interpersonal understanding leading to better decision-making.

In 2000, Easter performed a construct analysis of presence as used by nurses with patients. Easter stated that the analysis was based on a blend of 3 models including Wilsonian (Wilson, 1963), evolutionary view (Toulman, 1972), and the hybrid model (Schwartz-Barcott, & Kim, 1986) Easter built on the work of Osterman and Schwartz-Barcott using four modes of being present. Model cases along with separate figures are presented outlining nurse attributes, patient attributes, nurse consequences, and patient outcomes covering the four separate constructs of physical presence, therapeutic presence, holistic presence, and spiritual presence. Easter provided the first reference to specific techniques to be used for each construct, thus providing specific nursing interventions necessary to achieve a particular type of presence.

The topic of nursing presence was selected for the Mara Mogensen Flaherty Memorial Lecture done by Karen J. Stanley in 2002. The content of this lecture, published in the Oncology Nursing Forum provided a concise review of literature on nursing presence. Stanley described the financial and time constraints within healthcare systems that were responsible for decreasing available time for nurse presencing. She denoted that the very essence of oncological patients somehow is more likely to call nurses toward presencing, seeing the nurse's role as one of "existential activist". Stanley made the case for intentionality and assertiveness for nursing presence. Being with a patient is stated to be an experience of one's whole being and the patient sensing being with someone qualitatively different (Harper, 1991). Stanley stated that presence requires self-awareness, and deeply knowing the patient by seeing the less visible meanings of the person. Presence required authenticity in relating which creates connection and acknowledges vulnerability. Stanley described key attributes of the nurse including intuitive, empathetic, willingness to be vulnerable, ability to be in the moment and perform attentive silence.



Melnechenko (2003) evaluated the nursing literature regarding nursing presence and described nursing presence as being physically present, entering the world of another to see from their perspective. During this interaction, the nurse risks emotional vulnerability. The nurse must possess willingness to focus on being there and involved. Within the nursing presence experience, a sense of genuine engaging is experienced. While many nurses may believe the nursing presence takes more time, this is deemed not so by Melnechenko and this likely may be a defense reaction for not engaging in more deep connection with the patient. Presence is again shared by an invitation by the patient to the nurse to participate in the patient's unfolding health condition, i.e., journeying with them as a privilege in an effort to generate patient self-healing.

Finfgeld-Connett (2006, 2008) contributed significant work using metasyntheses to further develop the concept of nursing presence. An initial meta-synthesis on nursing presence alone was expanded upon in 2008 with further comparison of nursing presence with caring (2008a) and caring and art of nursing (2008b). The first study analyzed four linguistic concept analyses and 14 qualitative studies of presence. Presence was "characterized by sensitivity, holism, intimacy, vulnerability and adaptation to unique circumstances" (p. 708) and involves "engaged availability" and attendance to patient needs (p. 710). Antecedents identified included: 1) patient need indicated by physical and/or psychological distress, 2) openness to presence, 3) active invitation by patient, 4) nurse willingness to engage intentionally, 5) intent to spend time and share personal energy internalizing another's concerns. Nurse attributes included 1) personal and professional maturity, 2) self-acceptance, and 3) clinical competence in physical, psychosocial and cultural care. Patient consequences included improved mental and physical well-being, a sustained therapeutic effect lasting longer than the actual interchange, and when inevitable, better death experiences. Nurse consequences included improved satisfaction,

learning and maturation, revitalization and self-confidence. Finfgeld-Connett (2006) concluded that more analysis is indicated as nursing presence as a concept was immature and thus subsequently conducted two other meta-syntheses to attempt clarification between presence, caring and the art of nursing.

Finfgeld-Connett (2008c) performed a fourth analysis in which findings from prior metasyntheses (2008a & 2008b) and qualitative studies were combined. Findings formed the basis for a new theoretical framework which outlined the concepts of the art of nursing, presence and caring. The framework identified that the patient perceives a need for and is open to therapeutic relationship with the nurse. The capable nurse, using and adapting her own personal and professional knowledge forms a relationship-centered partnership with the patient that is intimate in nature. Within the patient/nurse dyad a partnership ensues in which the nurse provides interventions that are situation-specific, holistic and prove to empower the patient. The outcome of the dyadic patient/nurse partnership is enhanced physical and psychological well-being for the patient and enhanced psychological well-being for the nurse. The three concepts unfold within a cyclic interpersonal process containing authenticity and trust. Some of the elements appear innate, however Finfgeld-Connett supported the idea that learning enhances the capability of all three concepts in performance.

While the majority of concept analyses of nursing presence were conducted using primarily a qualitative lens or blended methods, three later authors conducted concept analyses using a positivist model (Hessel, 2009; Newman, 2008; Tavernier, 2006). As terms involving presence had evolved, Tavernier (2006) conducted electronic searches using multiple terms, “presence”, “presencing”, “nursing presence”, “healing presence”, and “therapeutic presence”. From her review, 13 qualitative, descriptive studies were used as data (12 from nursing, 1 from

psychology). Using Walker and Avant's steps of analysis (2005), antecedents, attributes, and consequence are outlined. Antecedents included environment, knowledge and skills, and self-awareness. Consequences included relationship, reward and healing. Attributes provided are patient-centeredness intentionality, mutuality, individuality, and attentiveness. Descriptors and/or actions needed to achieve each of the attributes are listed. This work provided one of the first specific lists of skills necessary to achieve capability in nursing presence. Finally Tavernier explored empirical referents to conclude that there were no published objective measurements of presence and that only a few instruments were available that may measure a few components of attributes within the model.

Hessel (2009) also using the Walker and Avant method evaluated presence in nursing practice and proposed defining attributes of spirituality, intentionality of relationship, listening, attentiveness, and intimacy. Antecedents focused on recognition of need (awareness of physical or psychological distress), patient invitation, cognitive and nurse decision to dedicate time for quality interaction. Hessel suggested that the nurse must develop the following skills: active listening, centering, attentiveness, clinical competence and expertise in physical and psychosocial domains of nursing practice. Hessel supported the idea that even though established empirical referents do not exist, that to develop these tools may somehow negatively change the interpretation or actual experience of nursing presence within the patient-nurse dyad.

In 2010, Zyblock conducted a review of theoretical, concept development, and research literature and provided a summary of many prior author works as listed above. Zyblock suggested that frequent visits with the patient assist in gaining trust and to optimize assessment and recognition of individual need and symptoms. Additionally, if nurse-related precursors to presence were absent, a different, more formal relationship may exist between patient and nurse

that is less likely to produce positive patient outcomes. Zyblook also supported that use of techniques may enhance quality of patient outcomes, thus promoting the thought that nurses may gain skill in nursing presence by gaining better understanding of specific techniques and when and how much to employ them.

Boeck (2014) utilized the Walker and Avant method to conduct the most recent concept analysis of nursing presence. A literature review was conducted spanning the fields of theology, literature, psychology, and nursing. The nursing presence model was produced from this review that was circular and contextual. Nursing attributes included a willingness to act, compassion, maturity, empathy, and authenticity. Upon the patient's demonstration of a physical, emotional or spiritual need, the patient and nurse opened themselves to the experience developing rapport, reciprocity, and a meaningful connection. A model case and consequences were presented. The author concluded that both nurse and patient experience satisfaction, hope, motivation and empowerment improving health outcomes for the patient and decreasing compassion fatigue and burnout for the nurse.

Finally, the concept of nursing presence has evolved to the standpoint in which its use has been formalized in terms of usage, effect and importance to nursing practice in two major texts (Koerner, 2007; Newman, 2008).

### **Theoretical Frameworks of Nursing Presence**

As a result of grand and middle-range theory development which sought to define the unique phenomena within the nurse-patient interaction and the ongoing concept development work of numerous nursing authors as noted above, ten more recent theories specific to nursing presence were located within the literature (outlined in Table 1). With careful review and

analysis of pertinent components of these theoretical models, four of these models were found to have a primary focus on nursing presence. These theories include: 1) Halldorsdottir's theory of caring (Bailey, 2011; Halldorsdottir, 1991; & Halldorsdottir & Karlsdottir, 1996); 2) Hierarchy of healing presence (Godkin, 2001; Godkin & Godkin, 2004); 3) Transformative nursing presence model (Iseminger et al., 2009) and 4) Mid-range theory of nursing presence (McMahon & Christopher, 2011). These models are expanded upon below.

Halldorsdottir's theory of caring and uncaring behaviors established a continuum of caring that is based on five basic modes of "being with" another. Through subsequent development by Halldorsdottir and Karlsdottir (1996) and Bailey (2011), these modes ranged from biogenic (live-giving), bioactive (life sustaining), biopassive (life-neutral), biostatic (life-restraining) and biocidic (life-destroying). This theory provided the full gamut of interactional presencing from a positive dimension to a negative dimension thus providing a potential measurement scale by which patients could rate their experiences. The drawback to this model is that it did not establish enough specific guidelines regarding the "how to" that would be so essential in measuring specific nurse characteristics and/or actions that create nursing presence. In an attempt to describe the requirements for nurses to be able to create the "bridge" in relationship building required for positive presencing activities, Halldorstdottir (2012) expanded upon theory defining nursing as compassionate competence. Compassionate competence (which would be essential to nurse presence capability) is outlined with six key components: 1) professional wisdom, 2) professional competence, 3) communication and connection capability, 4) attentiveness, 5) self-knowledge and self-development, and 6) caring. This more recent theoretical development provided many useful measures from the patient's perspective in better measurement of the interactional experience.

In 2001, Godkin synthesized four relevant theoretic models using Benner's novice to expert (Benner, 1984), Zaner's vivid-presence/copresence (Zaner, 1981), Hanneman's expert nurse/nonexpert nurse (Hanneman, 1996), and Doona, Chase, and Haggerty's nurse presence (Doona, Chase, & Haggerty, 1999) models to develop the hierarchy of healing presence model. This new resultant model presented healing presence in a pyramid shape consisting of stages of presence from bedside presence, to clinical presence to healing presence. At the bedside, the nurse connects with the patient's experience uniquely. This stage is depicted as lay interaction that is possible by novice nurses. At the clinical stage, nurses use professional interaction based on an increased level of task maturity and sensing capability which extends beyond scientific data. As the nurse's expertise level and task maturity increases, the nurse's professional interaction capability increases. This allows the nurse to have insight as to what actions will work and when best to initiate them leading to a heightened sense of collaborative presence in which healing takes place. The model being linear by stages supported the idea that a novice nurse would have to "graduate" to the next stage in order to have the most profound impact in presencing. In addition, the model lacked specific nurse attribute or specific actions to be able to move between stages. To address this, the early model was expanded upon (Godkin & Godkin, 2004).

Specific nurse caring behaviors that facilitate the development of nursing presence were outlined in this updated version (Godkin & Godkin, 2004). In all, 57 caring behaviors are listed along the dimension of nursing presence gradient. It is important to note that direct physical, in person bedside contact is denoted at every stage repeatedly with varying levels of communication skill, relational intensity, co-participation and cue recognition capability. For this list to be useful in research, it is suggested that more synthesis of the 57 behaviors be

undertaken with key behaviors needing to be expressed along a capability gradient.

The third theoretical model which had relevance for measurement of nurse presence capability is that of the transformative nursing presence model (Iseminger et al., 2009). This model was instrumental in describing why nursing presence environments are so important. The model provided an outline of what is needed to move away from actual and perceived barriers to nurse presence for nurses and nursing students using transcendent practices. These practices supported movement towards enhanced nursing presence leading to improved outcomes/benefits for patient/family, nurse, and community. Transcendent practices purportedly would be the ingredients required for enhanced presencing or presence capability. These included 13 practices: awareness, empathetic appreciation, appreciative abandonment, respectful listening, skilled communication, selective focusing, availability, awe, openness, flexibility, supportive milieu, ability to embrace another's situation, and alignment with organizational mission. While a few of these practices are operational such as respectful listening, skilled communication, and availability, many of these practices were not operationally pragmatic for measurement and/or teaching of nurses. For example, teaching or measuring a level of awe would likely not have benefit from an educational or research perspective. By contrast, this model did provide several reasonable measurements in terms of outcomes and/or benefits experienced as a result of enhanced nursing presence. Patient/family outcomes included increased satisfaction, inclusion in decisions, feelings of safety, decreased anxiety, and healing. Nurse outcomes included improved personal and professional satisfaction, increased efficiency, reciprocal healing. Organizational outcome measures included improved patient satisfaction, and reduced staff turnover. These particular outcome measures can prove instrumental in supporting findings of nurse characteristics of nursing presence capability.

Finally, the most recent and comprehensive theoretical framework for nursing presence was developed in 2011. McMahon and Christopher (2011) supported the idea that presence is a core relational skill and thus as educators sought to synthesize and present a mid-range theory of nursing presence which would be relevant and comprehensive for teaching. Nurse behaviors and characteristics are outlined in detail. The nurse uses these behaviors and individual knowledge to interact with the patient and must possess ability to recognize need within patients. The nurse's professional, moral, relational, and personal maturity levels are key factors in presencing capability. Presencing is also impacted by competing demands, task preoccupation and environmental barriers specific to the setting. Specific factors within the nurse-patient dyad which may influence the quality of the interaction included, age, gender, culture, spirituality, and previous relationship history. The concept of "dose" of presencing is introduced for the first time as part of this new model. The nurse actively selects the dose and delivery mode of presence. This theoretical model supported that nursing presence is an actual intervention to be employed based on a nurse's capability and ability to recognize need and then select the appropriate dose needed based on the situation. The mid-range theory of nursing presence additionally provided several measurable desired client outcomes including improved comfort, self-worth, hope, and motivation, along with decreased stress, pain, loneliness, distress, and anxiety. Based on this extensive review of theoretical models pertinent to nursing presence, the mid-range theory of nursing presence was felt to offer the most comprehensive model of nurse characteristics, influencing nurse, patient, and environmental factors, and patient outcome variables. For these reasons, this model was chosen for use within this study. Along with the analysis of pertinent theoretical models, literature review also comprised exploration of all pertinent nursing presence research.



## **Nursing Presence Research**

In 2001, Smith published an extensive state of the science paper describing existing scientific knowledge of nursing presence. Thirteen years, later, this author, Turpin (2014) published the second state of the science paper inclusive of all studies through June of 2014. During the twelve year interim between the two reports, 25 of the 32 existing research studies with findings relevant to nursing presence were conducted. For purposes of this dissertation, research studies were explored based on their fit with inpatient care environments. Findings from Turpin (2014) are provided and outlined in Table 3, Appendix K and Table 4, Appendix L. As would be expected with a moderately developed concept, a significant proportion (essentially two-thirds) of the research on nursing presence has been conducted using qualitative methodological approaches. Research studies were also analyzed for the existence of specific research tools or instruments that may have value for measurement of nursing presence.

### **Qualitative Research**

A wide variety of qualitative study designs have been utilized in researching this interactional phenomenon. Basic methods such as exploratory and descriptive comprised approximately one-fourth of the studies on nursing presence (Brown, 1986; Duis-Nittsche, 2002; Hanson, 2004; Jackson, 2004; Mohnkern, 1992; Osterman et al., 2010). Findings of the exploratory and descriptive studies are discussed in relation to congruency with the McMahon and Christopher (2011) model.

Brown (1986) used a convenience sample of fifty hospitalized medical-surgical unit patients. Patient accounts of caring nurse experiences were taped, transcribed and analyzed descriptively. Findings indicated that reassuring presence by the nurse was the most important quality in the patient's experience of care, thus supporting the priority for this capability. Duis-

Nittsche completed a dissertation study using semi-structured interviews with a sample of seven nurse-patient dyads. Themes of nursing presence described by nurses included knowing the patient, responsiveness, patient bonding, relationships and influencing. Themes identified by patients included being known, nurse accessibility, bonding, support, and encouragement. These themes were congruent with nurse attributes within the theoretical model of this study. Hanson (2004) conducted a descriptive qualitative study using a mailed survey to critical care nurses in the southwest United States (n=84). The theme of “being there” which was equivalent to nursing presencing included listening, adequate time for talk and doing the little things readily. These attributes can be viewed as essential components of a nurse’s professional and personal maturity. Jackson’s (2004) findings also supported the importance of listening and time spent with patients as integral functions of nursing presence. By conducting semi-structured interviews with eleven medical-surgical nurses, it was determined that this ability was a key component supporting patient healing. Mohnkern (1992) likewise focused on interviewing nurses (n=15) to evaluate their descriptions of presence. Before presencing can take place, the patient must possess a need, and trust the nurse. The pre-conditions of the nurse included instinct, insight, and maturity/self-confidence which are all key components of the different types of maturity identified in McMahan and Christopher’s theoretical model. Osterman et al. (2010) utilized participant observation and interviews with five nurses and 10 hospitalized patients. Osterman’s findings suggested that nursing presence was inherent within the nurse’s capability and cues from the patient determined levels of presence provided. Patient needs and behaviors and nurse openness guided the interplay observed within the dyad. Context of care environment and nurse’s past experience were key factors that had ability to influence the interchange. This study indicated that nursing presence is not deliberate act in the moment but more of a learned or instinctual

capability based on ability to recognize cues of patients. In general, these descriptive studies suggested that key components identified in the mid-range theory of nursing presence are sound. In addition to these descriptive studies, other qualitative methods including grounded theory, phenomenology, hermeneutics and interpretive have been used to attempt more knowledge acquisition of nursing presence.

Two studies used grounded theory (Edvardsson, Sandman, & Rasmussen, 2011; Hain et al., 2007). Hain, Logan, Cragg, and Van den Berg presented findings of their grounded theory study on nursing presence at the 2007 Canadian Association of Critical Care Nurses convention in Regina, Saskatchewan. Nine expert intensive care nurses from Canada served as participants in the study. These nurses were interviewed to obtain descriptions of how nurses practice nursing presence in technologically-charged work environments. Using grounded theory to work with the data, the practice of nursing presence emerged as a three-phased process in which commitment, presencing strategies, and connection were all evident. Presence was described in ways of being: being there, being with, empathetic and authentic. The actions of presence included advocacy, and providing reassurance and support. This report was limited in value as it was never published in a more extensive peer-reviewed journal. The second grounded theory study involved observations in a psycho-geriatric ward for dementia patients in a Sweden hospital. Edvardsson et al. (2011) analyzed data using a dialectical method. Results indicated that staff presence occurred in three modes: 1) sharing place and moment, 2) sharing place but not moment, and 3) sharing neither place nor moment. Sharing place and moment produced signs of well-being in dementia patients while sharing place but not moment created a climate of volatility. Sharing neither place nor moment contributed to patient ill-being and a climate of homelessness. The significance of this study identified that even inpatients with limited

participatory and perhaps varying cognitive capability were positively influenced for active presencing and are likewise negatively impacted by both lack of engaged presence and physical absence.

Studies using phenomenology, interpretive or hermeneutics comprised the remainder of qualitative studies (Cantrell & Matula, 2009; Cohen et al., 1994; Davis, 2005; Doona et al., 1999; MacKimmon, McIntyre, & Quance, 2005; Pettigrew, 1988; Reis et al., 2010; Turner & Stokes, 2006). As part of doctoral dissertation, Pettigrew (1985) utilized a phenomenological approach to explore the lived-experience of family members or friends of terminally-ill cancer patients. A purposive sample of six family members participated. Unstructured interviews were conducted after the patient's death. Presence was experienced as deliberate nursing action. Behaviors included good listening skills, unrestricted availability, non-verbal communications, clinical competency, spiritual care, compassion, value of the person and staying power. Presence was seen as responsible for increasing ability to cope, trust, self-esteem, relatedness, and perception of a healthy death experience. The study findings are congruent with the mid-range theory of nursing presence and provide the first documentation of family experience of presence. Again using phenomenology, Cohen et al. (1994) interviewed a convenience sample of nurses from an inpatient surgical unit who themselves identified an equal number of adult post-discharge patients for interview. The study was conducted in the United States. Open-ended interviews were conducted and participants were asked to describe what was meaningful and important to them during their care experience. Line by line analysis was utilized and thematic analysis between nurse and patient descriptions was completed. An "attentive attitude" by doing tasks and responsiveness made patients more comfortable and was termed presence by the researchers. Nurses and patients jointly valued interaction, however some nurses were hesitant

as they believed it may be against hospital policy to get too close to patients (environmental barriers). Knowledge in terms of professional knowledge, teaching capability and individualized patient knowledge were components of accountability, however, patients wanted their nurse to gain individualized knowledge about them, again suggesting a need for interactional attentiveness.

Doona et al. (1999) utilized a hermeneutic design (Van Manen, 1990) to analyze three prior studies (Chase, 1995; Doona, 1995; Haggerty, 1996). In this well-designed study, ten nursing judgment transcripts from each study comprised the final data set which added a high level of credibility to results. Six features of nursing presence were identified: 1) uniqueness, 2) connecting with the patient's experience, 3) sensing, 4) going beyond the scientific data, 5) knowing what will work and when to act, and 6) being with the patient. These features formed the pyramid portion of the later hierarchy of healing presence model (Godkin, 2001) and are consistent with the mid-range theory of nursing presence (McMahon & Christopher, 2011).

MacKimmon et al. (2005) sought to explore the meaning for a nurse to be present with a laboring mother during childbirth. Using a purposive sample of six post-partum urban women from Canada, audiotaped conversations were transcribed, analyzed, and interpreted. Hermeneutic inquiry was used for this exploration. Nursing presence was expressed as "being there for them". Patients expressed a need for the nurse to be available, emotionally involved, to help create special moments, to hear/respond to concerns, maintain safety, monitor progress, and serve as "go-between" for family and medical team. Presencing included getting to know and being known by nurses. Absence of nurses was seen as having a negative impact on care. It was concluded that nursing presence involves physical presence, emotional support, and advocacy during childbirth.

Davis (2005) reported on doctoral dissertation work completed in 2003, a phenomenological study of patient's care expectations. This research was based on Paterson and Zderad's theory of humanistic nursing (1988). Conducted in the south central U.S., 11 participants were interviewed with audiotaped and transcribed data compiled. The Giorgi (1970) method of repetitive reflection was used to analyze data. Nursing presence was the cornerstone of and key defining characteristic of "good" nursing care. Good care involved more than competence or efficiency, "it involved a calm, gentle demeanor and genuine concern for the patient's well-being" (p. 129). This description supports not only the knowledge characteristics as outlined by McMahon and Christopher (2011), but also the ability to maintain attentive and recognize appropriate approaches inherent within the model. Key to this study is that nursing presence was viewed as the most important measure of quality of care thus supporting its alignment. Although nursing presence was not a central focus of their study, Turner and Stokes' (2006) study on hope promoting strategies had findings related to nursing presence. Using a Gadamerian hermeneutic phenomenological study, Turner and Stokes used audiotaped interviews (free-flowing conversations) of 14 registered nurses who worked with both acute and long-term care, older patients in Australia. Verbatim transcriptions were analyzed using the Turner method. Findings indicated that hope facilitation included "connecting with their inner being" and "journeying with them and building trust over time" (p. 367). Connecting with the inner being involved actions including storytelling of an intimate nature, active listening, detail-oriented behavior and deeply knowing the person. These findings support that presencing facilitates hope. The theme of journeying together is symbolic of the term co-presence identified in the highest stage of the hierarchy of nursing presence model (Godkin, 2001). In like fashion, Cantrell and Matula (2009) studied the meaning of a potential outcome of presencing (comfort)

and caring behaviors in pediatric patients with cancer. Participants included 11 childhood cancer survivors treated in the northeastern United States. Method of data collection included one focus group of four and seven one-on-one telephone interviews by telephone. All were tape-recorded and transcribed. From hermeneutical analysis using seven-stages (Diekelmann, Allen, and Tanner (1989), five themes emerged. One of these, authenticity was seen as essential in being emotionally present for these children. Additionally, clinical competence alone was incomplete unless the patients felt a sense of being understood. Of key importance was that patients remembered most their specific experiences with specific nurses during treatment, and not the treatment experience. This again established the link that nurse presencing has a lasting impact on perception of care and patient satisfaction is an outcome of care. Finally Reis et al. (2010) conducted an interpretive description study to explore parents' experience and satisfaction with neonatal intensive care in Canada. The researchers specifically sought to identify the nurse's contribution to these experiences. Three key nurse actions took place within the nurse/parent relationship: 1) perceptive engagement, 2) cautious guidance, and 3) subtle presence. Presence is described as being available/accessible to parents, offering constructive correction, and provision of positive affirmation. This study expanded on the patient description of presence and provides more explanation regarding differences in presencing for parents versus patients.

### **Quantitative Research and Instrumentation**

The remaining six studies useful in evaluating the science of nursing presence for inpatient settings utilized quantitative methods: comparative (Busch et al., 2012; Papastavrou et al., 2011) and instrument development (Foust, 1998; Hansbrough, 2011; Hines, 1991; Kostovich, 2002 & 2011). While the main focus of the study was not singly nursing presence, Papastavrou et al. (2011) conducted a large descriptive and comparative survey that had implications for

understanding nursing presence. Conducted in six European Union countries including Cyprus, the Czech Republic, Finland, Greece, Hungary, and Italy, the study used a related instrument that measured caring behaviors. The Caring Behaviors Inventory-24 (CBI-24) was utilized to collect data in 88 wards of 34 hospitals with surgical patients (n=1659) and nurses (n=1195). The CBI-24 is a third generation instrument for the measurement of caring. The CBI-24 instrument contained one factor that measured “assurance of human presence”. This factor contained items including visiting the patient, communicating, encouraging calling, and responding to patient calls. This factor was rated lower ratings by patients as compared to nurses, thus indicating that patient’s and nurse’s perceptions of enacting effective presence differ. This supports the idea that studying nursing presence from the perception of nurses alone is not feasible. In addition, the findings of this study support the emphasis on knowledge as outlined in the mid-range theory of nursing presence as the study results indicated that both patients and nurses perceived knowledge and skill as the most important sub-scale of the CBI-24.

Busch et al. (2012) conducted an interventional study on burn patients in a non-academic nursing setting. The primary goal of this study was to evaluate therapeutic touch versus nursing presence with the patient population. Of the 43 subjects, four were excluded and of the 39 remaining, 22 were provided nursing presence and 17 were provided therapeutic touch. Anxiety, pain, and cortisol were measured at baseline, 1 and 2 days after admission, then again on days 5 and 10. Anxiety was measured with the Burn Specific Pain Anxiety Scale (Taal, Faber, van Loey, Reynders, & Hofland, 1999), while pain was measured with Visual Analog Thermometer (Choinière, & Amsel, 1996). Salivary cortisol was measured 7 times per day on measurement days. While the report is stated to be inconclusive, there were no significant differences in anxiety, pain nor cortisol between intervention groups. The researchers found that there needed



to be a very strong commitment to therapeutic touch to maintain the practice long-range in terms of time and trained personnel. Nursing presence was considered an intervention of being immersed in the patient's situation and at the patient's disposal. While the study indicates all nurses were instructed in nursing presence prior to the study, no specific measures of nursing presence are described. While the study indicates the duration of the therapeutic touch intervention, the actual details of the nursing presence intervention is not fully described. Their reported findings were however suggested that nursing presence was equally important to therapeutic touch in reducing anxiety and pain in both perception and physiologically.

As is noted within the evaluation of inpatient research on nursing presence, these studies both qualitative and quantitate have been conducted in a wide variety of international settings. This speaks to and supports the central idea that nursing presence is of vital importance in patient care regardless of national and perhaps cultural influences. As in the United States, these research studies demonstrate that many nations are concerned with the quality and cost of healthcare as well as the patients' satisfaction with overall care and quality of nursing interactions. It is then reasonable to infer that nursing presence is universal in its importance in inpatient nursing care likely because of the scientific data linking nursing presence to improved patient outcomes. Unfortunately, replication of research is very limited although a few rather large international studies have been jointly conducted. For this reason, it was vastly important to further the development of instruments that can reliably measure the patient's experience of nursing presence. As the increase in conceptual knowledge via concept development and theory development has improved our understanding of nursing presence, this information must be considered in relation to components of existing tools. Additionally, psychometric evaluation of existing instruments was needed to evaluate the instrument's design in relation to these new

theoretical models.

### **Psychometric Measurement of Nursing Presence**

Hines (1991) was the first researcher to study presence from a quantitative stance from the nurse's perspective. Like Pettigrew (1988), Hines doctoral dissertation work was conducted at Texas Woman's University, also a supporting university for Davis' (2005) later work. Hines research study, based on Paterson and Zderad's theory of humanistic caring, was an exploratory study using correlational methods to evaluate initial reliability and construct validity of the Measurement of Presence Scale (MOPS). This instrument was developed using systematic theory analysis, then content validity by review and revision by a panel of experts reducing the initial instrument from 135 items to 65 items. While the instrument was based on literature review of primarily nursing literature, Kostovich (2002) reported that the instrument was generic to presence, not nursing presence and therefore was not the first tool to measure nursing presence. The MOPS was a self-report, interval level, norm referenced scale and was administered to 324 registered nurses to explore nurses' perceptions of presence. Internal consistency reliability using Cronbach's alpha = .932. Nine mutually exclusive subscales were identified by factor analysis: 1) valuing/attending to self/others, 2) connecting, 3) transacting, 4) enduring memory from the past, 5) engaging for growth, 6) encountering, 7) availability, 8) person or event sustaining memory, and 9) disclosing and enclosing. There was a moderate to high correlation between the subscales and the total MOPS and this was significant at the 0.01 level. Findings indicate potential internal consistency and construct validity. Additional cumulative testing of the instrument was recommended.

In 1998, Foust (also completing a doctoral dissertation at Texas Woman's University) attempted to validate the MOPS further as construct validity was limited to only the previous

study. Registered nurses (n=210) practicing primarily in a psychiatric setting participated in the study. Demographic considerations of the nurses were also evaluated, along with self-esteem as measured by the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Additionally, the Measurement of Presence Visual Analog Scale (a unidimensional scale, 100mm in length to derive a score of 1-100) was developed and tested in relation to the original MOPS. Reliability estimates from both the MOPS and the Rosenberg Self-Esteem Scale (RSES) provided support at  $\alpha = .011$  and  $\alpha = .857$  respectively. The MOPS was refined to a 16-item instrument (Foust & Hines MOPS) and its internal consistency estimate was .851. Low correlations of MOPS and its visual scale of  $r = .263$  ( $p = .01$ ) and with the RSES of  $r = .329$  ( $p = .01$ ) indicated support for validity. Factor analysis of the refined FHMOPS revealed four subscales of which 75% of its 16 items were included in the nine factors identified by Hines (1991). Factor one in both studies remained the same: Value of Self and Others". The fourth factor retained two items from Hines (1991), however the second and third factors differed from Hines (1991). The FHMOPS four subscale correlation coefficient was greater than  $> .70$  as comparative to Hines initial findings of MOPS six subscales correlation coefficient of greater than  $> .60$ . The final nine subscale analysis in the Hines (1991) study reported no correlation coefficient so final comparison could not be completed. No additional reports can be located that report on further development of these presence instruments or others focused on the nurse's perception of nursing presence.

In the realm of instrumentation development focused on the patient's perception of nursing presence, only three studies were located. In 1994, Kostovich conducted an initial descriptive exploratory study. A convenience sample was utilized consisting of 34 inpatients to study their perceptions of nursing presence. This study thus provided the first report of an

instrument to measure patient's perspectives of nursing presence. A researcher-designed questionnaire was administered to the participants to identify how important they felt aspects of presence were to their recovery from illness. Participants rated their responses to 11 items using a 4- point Likert scale. As a result a majority (72%) rated nursing presence as very important to their recovery from illness. This study was limited due to the low sample size, yet it did serve as the first attempt at patient quantitative measurement of nursing presence.

Kostovich (2002) completed a doctoral dissertation on nursing presence instrument development at Loyola University Chicago and was later published in a peer-reviewed journal (Kostovich, 2012). Using concept analysis and field study Kostovich developed the first measurement instrument for nursing presence. The Presence of Nursing Scale (PONS) began with 16-items and was revised based on patient feedback. Content validity was established by expert review by four experts and revisions made based on their feedback. To determine the existence of nursing presence, one dichotomous question was added. The tool also included two patient satisfaction questions and two additional open-ended questions for description of patient experiences with nursing presence. The sample included 330 inpatients in four acute care medical-surgical units in a Mid-Western United States community hospital. Subjects with less than an 8<sup>th</sup> grade reading level were excluded from the study as the PONS was deemed to be comparable to a 7.5 grade level. To evaluate construct validity a point biserial correlation calculation was done between the total score of the PONS and the patient satisfaction item rating. Results = 0.801, thus indicating a very strong positive correlation between nursing presence and patient satisfaction. Internal consistency reliability using Cronbach's alpha reliability coefficient of alpha = 0.95 supported equality of individual items. Internal consistency reliability was also supported by scale statistics (mean score of 105.833 - possible minimum of 25 and maximum

125) and a variance of 257.85 and standard deviation of 16.05. Item mean = 4.23, mean item variance = 0.898 and an inter-item correlation = .473. Mean inter-item correlation = .47 (low of .20 and high of .81). Kostovich reported that 23 of the 625 inter-item correlations fell between .7-.81 and moderate discrimination of item-to-total correlations of at least .20 for all items (low = .21, high = .82). Test-retest reliability was attempted at 4 days after initial testing and proved reliable at correlation coefficient of .729, significant at the .05 level with both one and two-tailed tests, however, the sample size was only 8 patients due to short length of patient stay. Finally to evaluate demographic data in a secondary analysis, a one-way analysis of variance was performed using sum scores for the various groups and no significant differences were identified. Factor analysis was not conducted as the researcher viewed this type of analysis as incongruent with nursing presence as a holistic phenomenon and therefore should not be deconstructed. Recommendations include use of the instrument with different ethnic groups and in variety of settings and potential for factor analysis.

Hansbrough (2011) sought to further develop the PONS as part of her dissertation work at the University of San Diego. Aims of this study included testing reliability of the PONS and validity in relation to a single-item measure of patient care given by a particular nurse. A sample size of 75 hospitalized patients from the Western United States again supported the reliability of the PONS with a Cronbach's alpha of .937. Correlation of the PONS with the patient satisfaction item was large and statistically significant ( $p < 0.01$ ) using Spearman's rho. Nursing expertise level (NEL) was explored in relation to the PONS. Expertise was calculated using peer-reported perceptions of expertise level, specialty certification, practice length, and performance of leadership duties. As there were unequal numbers of repeated PONS measures per nurse, direct correlations were not feasible. Instead, the mean PONS score was compared the

NEL. Due to low sample size and inconclusive and non-significant findings, no conclusions could be drawn regarding PONS and NEL.

### **PONS Compared to Middle Range Theory of Nursing Presence**

As the PONS was first developed and tested from 2002 – 2011, and the middle range theory was published in 2011, there is no comparison described in current literature of the instrument's item content in relation to the theory pre-conditions, nurse attributes, patient attributes, etc. For purposes of this study to clarify the instrument's current design, this will be explored both by a brief overview here as well as during the study itself to gain further data on comparison. The PONS contains 26 questions, with the first determining whether the nurses' presence made a difference positive or negative to set the stage for whether presence in some type had occurred. Following this, 25 additional questions evaluate a wide variety of items that are compared to the mid-range theory of nursing presence.

The earliest questions evaluate items that are easily associated with nurse maturity in a variety of maturity types. Several PONS items relate specifically to the nurses ability to recognize need, a pre-condition of the nurse that is positively influenced by the degree of maturity and also easily negatively affected by competing demands, task preoccupation or environmental barriers. Finally, at least six PONS items indicate a positive patient outcome has resulted and are comparable to desired client outcomes within the theory. Table 5, Appendix M demonstrates a more detailed comparison of the PONS items with the components and concepts indicated within the theoretical model.

### **Summary**

In review of all research on nursing presence, several conclusions can be drawn. Most

notably, nursing presence and reassuring presence are supported as critical elements in defining the most important quality in the hospitalized patients' experience of care (Brown, 1986, Davis, 2005). In addition, the depth in mode of delivery of staff presence even with demented patients has been found to influence patient well-being (Edvardsson et al., 2011). This finding supports the assertions of Rutherford (2012) and Andrus (2013) regarding the importance patients place on nursing relational care. Several studies provide more qualification related to attributes of nursing presence from a patient perspective (Cantrell & Matula, 2009; MacKinnon et al., 2005), a nurse perspective (Doona et al., 1999; Hain et al., 2007; Hanson, 2004; Jackson, 2004; Mohnkern, 1992; Turner & Stokes, 2006), or both (Cohen et al., 1994; Duis-Nittsche, 2002; Osterman et al., 2010). Two studies evaluated family member perspectives on nursing presence (Pettigrew, 1988; Reis et al., 2010). Some findings support intentionality of nursing presence (Hain et al., 2007; Pettigrew, 1988; Reis et al., 2010) while another supports the intuitive nature of nursing presence (Osterman et al., 2010). Although small (n = 38) and inconclusive, one study (Busch et al., 2012), found no statistically significant differences between anxiety scores, pain and itching, or overall pain medication usage for burn patients when provided therapeutic touch versus nursing presence (without touch). This is opposite of traditional thought that touch was an important feature during presencing. Interestingly, one large European study (Papastavrou et al., 2011) with surgical inpatients (n = 1537), identified a significant difference between patient and nurse views on assurance of human presence, with nurses (n = 1148) rating their performance of nursing presence higher than that perceived by patients (p < 0.001). This clearly indicates a gap in what nurses believe they provide versus what patients expect to be provided and further supports the essential nature of instrumentation for measurement of nursing presence by patients. Even though the study was done internationally versus in the United States, it is a

significantly large study and its findings as such should be considered crucial findings that need to be explored through future replicated research within the United States. Inpatient research has focused evenly on nurse and patient perceptions of nursing presence. Often convenience or purposive samples have been utilized and most research with relevance to knowledge of nursing presence has been conducted in the United States and Canada. Finally, the state of the science report conducted by Turpin (2014) concluded that inpatient research on nursing presence has progressed very slowly with only 15 studies in the 12 years since the last state of the science report in 2001. Based on this trajectory of studies it can be concluded that quantitative research on nursing presence is in its infancy with only limited instrumentation. There is great need to refine and further development the primary instrument and attempt construct validity analysis using factor analysis with a large sample size and in an addition regional area of the United States.

### **Future Trends for Nursing Presence**

As with all concepts, historical context is likely to have an impact or change our understanding and uses of concepts. In this day and age of technological advances, the provision of nursing is changing its focus and locale. Sandelowski (2002) warned of this impending environmental change to nursing process and practice and its impact on nursing presence. In this reference, she discusses concerns over virtual nursing by elaborating on Liaschenko's two 1997 works: "Knowing the patient – a nursing imperative that presence accomplishes and toward which presence is partially directed – has always been seen minimally to require carnal knowledge of the particularity of a body occupying a defined physical space." "Tele-nursing practices (e.g., telephone nursing, telemetry, videoconferencing, and video-monitoring) are dramatic examples that nursing care no longer necessarily occurs in any certain physical space."



(both, p. 64). It is clear that the context for nursing presence and care environments are likely to influence and/or change patient perception of nursing presence as well as the nurse's opportunities for employing it. It is essential that a foundational instrument is refined for measurement of patient perception of nursing presence with evidence supporting its reliability and validity in traditional care contexts to establish a baseline prior to these dramatic changes becoming fully entrenched. McMahon and Christopher's (2011) mid-range theory of nursing presence wisely describes these new contexts for employment. A proximal dose is traditional nursing presence with body to body contact. Approximate dosing involves other communication means such as intercoms or phones for presencing. Virtual dosing involves "e-presence" or the context of virtual presence via electronic streaming. Finally, it will be important in the future to further investigate how these new contexts and delivery methods affect the nurse's enactment of nursing presence and the patient's interpretation of those experiences. This will not be possible unless an instrument with evidence of support for reliability and validity is established as a baseline for cross-performance measurement.

## CHAPTER 3

### METHODS

#### **Study Design**

To further develop the Presence of Nursing Scale (PONS), and determine the measurement quality and construct validity of the instrument by several tests, a psychometric analysis was conducted for the phenomenon of nursing presence as perceived by hospitalized adult inpatients. The measurement of reliability, validity and internal structure of the instrument is necessary to provide knowledge regarding internal factors assisting in subscale analysis for additional refinement and for comparison with the mid-range theory of nursing presence. Construct validity was evaluated using a comparison to unit-specific HCAHPS patient satisfaction data specific to nursing care. The PONS-R (the PONS minus question number 26, a single patient satisfaction question) was used to collect data for the purpose of assessing nursing presence in a sample of adult inpatients. Resultant PONS-R data was additionally comparatively analyzed in relation to unit-specific nurse workforce data.

#### **Setting**

The setting was a tertiary care, academic medical center in the Southeast, Wake Forest Baptist Medical Center in Winston-Salem, NC, chosen for convenience. The medical center has had a long-standing history (22 years) of being ranked among the nation's best hospitals by U.S. News & World Report (Wake Forest Baptist Medical Center, 2014) and was recognized in 2014 in the areas of cancer, nephrology, otolaryngology, pulmonary, cardiology/cardiothoracic surgery, endocrinology, gastroenterology/GI surgery, geriatrics, gynecology, neurology/neurosurgery, orthopedics, and urology. Wake Forest Baptist Health operates 1,004

acute care, rehabilitation and psychiatric care beds, outpatient services, and community health and information centers. The Medical Center Campus is located at Medical Center Boulevard in Winston-Salem, NC which houses the flagship tertiary care, teaching hospital containing 885 hospital beds. In 2013, the hospital employed 2,816 registered nurses and had 38,696 inpatient admissions (Wake Forest Baptist Medical Center, 2014). Wake Forest Baptist Medical Center was one of the first hospitals in the country and the first in the Carolinas to achieve Magnet status in 1999, and thus maintaining this recognition status for 17 years. The medical center offers many programs that support excellence in nursing such as, but not limited to new graduate residency programs, tuition reimbursement for continuing education and academic degree pursuit, shared governance senate, and support for active nurse participation in research.

### **Research Design**

A non-experimental, correlational, quantitative research design was utilized with two aspects: instrument psychometrics and inpatient study using the Presence of Nursing Scale-Revised (PONS-R). Unit-specific data of nursing workforce demographics (average nursing experience level, turnover rates, educational levels, and average nurse age) and historical unit-specific HCAHPS measures was compared with PONS-R data. External reliability of the instrument was evaluated by using the test-retest two days later on a subset of patients (n = 21). Unit-specific, historical HCAHPS data, was obtained from the institution to identify the lower performing unit for HCAHPS results. A subset of PONS-R data (n = 13) was analyzed to establish divergent validity.

### **Human Subjects Protection**

Permission to access subjects at the medical center was obtained through the medical center Institutional Review Board (Appendix A). Following this approval, evidence of written

approval was forwarded to the IRB at East Tennessee State University. ETSU IRB allows for formal reliance on an external IRB for individual protocols when required Association for the Accreditation of Human Research Protection Programs (AAHRPP) accreditation is in place. Per protocol, the study was additionally submitted for approval to the East Tennessee State University IRB and approval obtained.

### **Sample and Sampling Plan**

A convenience sample of adult hospitalized, inpatients in non-intensive care units at Wake Forest Baptist Medical Center, was utilized. To control for the influence of high technological environments as a confounding variable, and to ensure patients were stable enough to participate, intensive care units were not utilized. Of the 52 nursing units operated, 18 provided adult, non-intensive acute care services and were thus eligible to be sampled. Units that were in transition (moving within the hospital to new sites or under construction) or had a high incidence of certain confounding diagnoses, were excluded, leaving 10 sample units as detailed in Appendix B. The nursing units are housed within three separate towers of the medical center: Ardmore Tower, the Comprehensive Cancer Center and Reynolds Tower. Services are broad with a multitude of specialties which include the following: Cardiology, general medicine (two units), medical/renal, hematology/oncology (two units), surgical oncology, cardiothoracic surgery, gynecologic oncology/surgery, and trauma surgery. A sample of 122 patients were surveyed over four months from May to August 2015 with representation from all 10 units realized.

### **Inclusion Criteria**

Adult patients (18 years and older) who were located on one of the selected inpatient hospital units were identified from a unit census. Patients had to be alert and oriented,

understand English, and have been present on the nursing unit for at least 24 hours. As the hospital demographics are typically diverse, no specific measures were taken to ensure diversity in demographics.

### **Exclusion Criteria**

Patients who are unable to complete a survey due to their physical condition (i.e. unconscious, dementia, vision difficulties, sedation, etc.) were excluded. The primary investigator worked closely with nursing staff (often the charge RN) in final decision-making regarding diagnoses and/or physical/mental conditions that excluded a potential participant.

### **Sample Size**

The adequacy of sample size to conduct factor analysis is debated amongst many authors (MacCallum, Widaman, Zhang & Hong, 1999). In the present study, a minimum sample of 125 participants was established based on a minimum of 5 respondents per each of the 25 items on PONS-R (Bryant & Yarnold, 1995; Gorsuch, 1983; Everitt, 1975). In addition, a power analysis was completed. As the study is one of the first of its type, only more substantial effects that were medium-sized or larger were of interest. According to the widely adopted criteria of Cohen (1988), a medium effect size corresponds to an  $r$  value of roughly 0.3. Using  $r = 0.3$ ,  $\alpha = .05$ , and power = 0.80, the sample size needed for this study was calculated as 67.

To conduct test-retest reliability, a target of 30 of these respondents was sought for repeating completion of the tool at about 2 days after their initial completion. To measure divergent validity, a sample of additional respondents specifically obtained from patients on the unit identified with poorest performance on historical HCAHPS over the prior quarter (to obtain a sample size from that particular unit of 30).

## **Research Methods and Procedures**

The Principle Investigator (PI) who is a PhD in nursing candidate at ETSU (R.T.) was responsible for study procedures and timely data collection. The PI is also a part-time employee of Wake Forest Baptist Health and as such is allowed per medical center policy to serve as her own PI with support from the institution's nursing research department. In addition, the PI was provided ongoing oversight by the ETSU Dissertation Committee. The PI served as a sole data collector and therefore even though a Study Protocol was developed to train additional data collectors, this was not utilized (Appendix C). The PI completed all required institution-specific human subjects training for both institutions. A script was developed to ensure consistency with data collection procedures (Appendix D). As a current part-time registered nurse employed by the study institution, the PI was bound by all required confidentiality regulations of Health Insurance Portability and Accountability Act (HIPAA).

## **Instruments**

Instruments included a patient demographic and satisfaction form (designed by the PI) and the Presence of Nursing Scale (PONS) minus the traditional patient satisfaction question (PONS-R). Instead four items from the HCAHPS tool were added as nursing-specific patient satisfaction items to the Patient Demographic and Satisfaction Tool in an attempt to establish support for construct validity. The patient demographic form included these four nursing specific Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey questions for comparison purposes. The Patient Demographic and Satisfaction Form is provided in Appendix E. The PONS-R is attached as Appendix F. The intent of the HCAHPS initiative is to provide a standardized post-discharge survey instrument and data collection methodology for measuring patients' perspectives on hospital care and has

been mandatorily used in U.S. hospitals since 2005. While, the HCAHPS survey contains 21 patient perspectives on care and patient rating items that encompass nine key topics: communication with doctors, communication with nurses, responsiveness of hospital staff, pain management, communication about medicines, discharge information, cleanliness of the hospital environment, quietness of the hospital environment, and transition of care, the survey questions utilized for this study will be limited to questions 1-4 in the “Your Care From Nurses” section (Agency for Healthcare Research and Quality, 2014). Historical data from these four questions was obtained from the hospital quality department for comparison purposes.

Previous studies have assessed the measurement reliability and validity for the PONS in two separate studies as follows. Kostovich (2011) utilized an expert review to establish content validity. Construct validity was evaluated based on correlation with one patient satisfaction item using point biserial correlation calculation with results = 0.801. An internal consistency reliability of  $\alpha = 0.95$  supporting equality of individual items was resultant. Internal consistency reliability was also supported by scale statistics (mean score of 105.833 - possible minimum of 25 and maximum 125) and a variance of 257.85 and standard deviation of 16.05. Item mean = 4.233, mean item variance = 0.898 and an inter-item correlation = 0.473. Mean inter-item correlation = .47 (low of .20 and high of .81. Kostovich reported that 23 of the 625 inter-item correlations fell between .7-.81 and moderate discrimination of item-to-total correlations of at least .20 for all items (low = .21, high = .82). Test-retest reliability was attempted at 4 days after initial testing and proved reliable at correlation coefficient of 0.729, significant at the 0.05 level with both one and two-tailed tests, however, the sample size was only 8 patients due to short length of patient stay. Finally to evaluate demographic data in a secondary analysis, a one-way analysis of variance was performed using sum scores for the

various groups and no significant differences were identified. Hansbrough's (2011) study again supported the reliability of the PONS with a Cronbach's alpha of .937. Correlation of the PONS with the patient satisfaction item was large and statistically significant ( $p < 0.01$ ) using Spearman's rho.

### **Informed Consent**

There were no pre-screening questions or surveys for the participants. Patients that met the inclusion criteria were told that the hospital was participating in a study to evaluate the relational skill of the registered nurses. They were also told that it is important to the hospital to have the patient's perspective so that staff can understand how their practices affect their patients and know where they might have opportunities for improvement. Participation was discussed as completely voluntary and would in no way affect their care. Those choosing to participate were then introduced to the data collector who gave them the Disclosure form (Appendix G) to review which provided an overview of the study. If they had no questions and agreed to participate, the data collector then provided a copy of the total survey (Appendix E and Appendix F). As is consistent with prior use of the instrument in previous studies, the PONS-R includes a title at the top of the instrument indicating that completion of the tool constitutes consent, therefore written informed consent was considered obtained by the written completion of the instrument. The subject's completion of the total survey constituted their informed consent. Individual subjects with questions were provided answers on the spot. Participants were informed that study results would be presented or published in lieu of providing individual subjects additional information regarding the study. The number of subjects refusing participation was documented, along with the basic demographic profile (age, sex, race, unit type), if provided.



### **Risks and Benefits to Participants**

While no significant risks were identified for participants, patients who may be currently dissatisfied with their care or who are not physically feeling well, did occasionally decline participation. Patients were informed regarding data collection security measures as part of the Disclosure Form to allay any fears. Patients were informed that participation may help to inform improvements in relational care of nurses.

### **Participant Privacy and Confidentiality**

As all patient rooms at the institution are private, survey processes only take place in the patient room. Data was not collected in procedural or diagnostic areas. The patient was provided a sealed envelope in which to secure his/her completed survey for collection by the data collector and the patients were advised to seal these prior to turning in to the data collector. Typically, the data collector provided the survey materials then later returned to the patient room within one to two hours to obtain the envelope directly to further safeguard privacy. For those respondents who requested physical assistance with completion of the form due to weakness or inability to write on the form, the data collector assisted to complete the survey with the patient when staff were not present in the room.

### **Data Collection Methods and Procedures**

Data was collected according to the procedure above and outlined in the Presence of Nursing Scale Protocol (Appendix C). Instrumental data consisted of completed Patient Demographic and Satisfaction forms plus completed PONS-R tools. Nursing unit-specific data related to nursing demographics (average nursing experience level, turnover rates, educational levels, and average nurse age) and related to historical performance on four selected HCAHPS questions was obtained Wake Forest Baptist Medical Center as outlined in Appendix H. Data

was stored in a locked cabinet in a locked office by the PI to maintain security of data.

Data was collected over a four month period in 2015 and halted when an adequate sample size was achieved. Attempts were made to increase the number of surveys from the nursing unit with poorest HCAHPS performance in the prior quarter. Sampling for test-retest was also a focus of data collection throughout the study until at least 30 participants who completed an initial survey, then additionally, completed a second survey at least two days post-initial survey.

On days of data collection, a patient census from one or two of the sample units was obtained by the data collector. From this list, inclusion and exclusion criteria were applied by seeking information directly from the unit nursing staff, then all potential participants remaining were queried by the data collector for participation in the study. Surveys and instruments returned from participating patients were forwarded to the PI at the end of each day and data uploaded into a database using SPSS software for later analysis. The database was password protected and only known to the PI and stored on a single laptop computer which remained locked in a secure file cabinet in a locked office.

### **Data Analysis**

This section describes the data analysis process for the study based on the identified problem, study aims and research questions.

#### **Problem**

Nursing presence capability is a highly valued competency of expert nurses that leads to positive patient outcomes. The nursing workforce is being replaced with more and more professional nurses who are generationally part of the millennials, a generation of decreasing human-to-human communication

interest or skill, which may diminish nursing presence capability. This occurs at a time when value-based purchasing has tremendously increased the need for high quality nursing communication skill and inter-relationships with patients all that foster high patient satisfaction. In addition, research on nursing presence while growing, is relatively scant with are limited instruments developed for measurement of nursing presence. While several nursing theories denote nursing presence, and many concept analyses have outlined the pre-conditions, nurse and patient attributes, its outcomes, these theories have not been tested or refined. To date, only three nursing presence instruments exist and only one of these measures the patient perception of nursing presence, Presence of Nursing Scale (PONS). It is essential that tools measuring patient perception of nursing presence be further tested psychometrically to further refine our understanding of the phenomenon. Once reliable and valid instruments are developed and refined, nursing educators and leaders will be best able to evaluate capability of nurses and nursing students in this important and valued nursing competency.

## **Aims**

1. Evaluate the Presence of Nursing Scale using a robust sample size of hospitalized, adult patients in many nursing units to conduct the first exploratory factor analysis of the instrument.
2. Compare key attributes (nurse knowledge, professional maturity, moral maturity, relational maturity and personal maturity) noted in the Mid-Range Theory of Nursing Presence with any resultant subscales.
3. Compare hospital unit-specific patient satisfaction scores with unit-specific PONS-R data to evaluate for construct validity.
4. Compare nursing workforce demographic data with PONS-R results to evaluate any specific association with key nursing educational and/or experience factors.

## Research Questions

1. What is the internal consistency and construct validity of the original 25 items of the Presence of Nursing Scale-Revised?
2. How does reliability and validity evidence of the 25 original items of the PONS (PONS-R) in this sample compare to prior studies using the PONS instrument?
3. What factors are identified by conducting exploratory factor analysis?
4. Are resultant subscales and factors congruent with the Mid-Range Theory of Nursing Presence?
5. How do unit-specific data from HCAHPS patient satisfaction compare to Presence of Nursing Scale-Revised data during the study period?
6. Do relationships exist between unit-specific nurse demographic data and patient perception of nursing presence capability?
7. Do relationships exist between patient-specific demographic data and patient perception of nursing presence capability?

The alpha value was the conventional 0.05, so comparisons that have  $p < 0.05$  were considered statistically significant. For **Research Question 1**, the internal consistency and construct validity of the Presence of Nursing Scale-Revised was analyzed using three approaches. First, Cronbach's alpha was calculated to evaluate internal consistency. A Cronbach's alpha of 0.70 or higher indicates an adequate level of inter-correlation of the items within the instrument and supports the hypothesis that items are measuring the same concept (Vogt, 2005, p. 71). Second, sampling of 30 participants within two days following their first survey was attempted to evaluate test-retest reliability. High correlation between primary and secondary instrument responses is indicative of high construct validity (Vogt, 2005, p. 322-323).

Third, divergent validity was evaluated by attempting a sample of 30 participants from the nursing unit that has the poorest historical performance for patient satisfaction data. If the instrument is valid, it should show lower presence scores on that unit by comparison to the remaining sample. For **Research Question 2**, reliability and validity with the study sample using PONS-R was compared to prior studies that used the PONS instrument (Hansbrough, 2011; Kostovich, 2002). The analysis consisted of comparison of all provided values to determine level of agreement between studies. For **Research Question 3**, an exploratory factor analysis was conducted and analyzed. A principal component analysis used VARIMAX and Oblimin rotations. The number of factors was taken as the number of eigenvalues over 1 from scree plot evaluation and parallel analysis. Factor loadings and intra-factor correlations were also calculated. The meaning of the factors were surmised as related to the concept of nursing presence. For **Research Question 4**, resultant factors were analyzed in comparison to outlined conditions and attributes outlined within the Mid-Range Theory of Nursing Presence. For **Research Question 5**, unit-specific data from HCAHPS patient satisfaction (historical) and HCAPHPS (concurrent questions on the Patient Demographic and Satisfaction form) were compared to PONS-R data during the study period. Pearson's correlation coefficient was calculated and construct validity was evaluated between the continuous scale variables for statistical significance.

For **Research Question 6**, unit-specific nurse demographic data and patient perception of nursing presence was compared. As all unit-specific nurse demographic data was treated as continuous variables, Pearson r correlation was utilized to evaluate these comparisons with PONS-R data. For **Research Question 7**, patient-specific demographic data and patient perception of nursing presence were compared. For all categorical variables except for gender, a

one-way between groups ANOVA was conducted to determine whether there were differences in PONS-R summed scores for participants within demographic variable sets. Gender differences were examined using an independent t-test. The goal was to identify statistically significant differences for the demographic variables for perception of nursing presence scores.

### **Limitations of the Study**

This study was conducted in one large academic medical center in the Southeast selected for convenience using a convenience sample of patients and therefore the findings will not be generalizable to the total population of the hospital nor elsewhere. The study sought to replicate use of the original PONS components measuring nursing presence, however this represents only the third time the instrument has been utilized. The study period was during a historically lower census time for the medical center and thus may not reflect typical responses for nursing presence capability or patient satisfaction. The study was conducted solely by the PI without the benefit of additional trained data collectors, although the target sample size was mostly reached. While the goal for attainment of the divergent sample was 30, only a sample of 13 was attained. While the goal for attainment of the test-retest sample was 30, only a sample of 21 was attained. This was a non-experimental study with low internal validity meaning that causation cannot be assumed between any of the instrument variables in the study.

## CHAPTER 4

### RESULTS

This chapter describes the sampling demographic data and statistical analysis of the data for the Presence of Nursing Scale study. Research findings of the study are reported according to each of the seven research questions.

#### **Demographic Data**

##### **Patient-Specific Data**

Of the 122 acute care patients responding to the PONS-R, eight had some form of missing data for the PONS-R with a resultant total sample of 114. Patient-specific demographic data is displayed in Table 6, Appendix N. Based on gender, 43.9% (N= 50) were female and 56.1% (N= 64) were male. Patients were predominantly middle adult age (41-64 years), 57% (N= 66) with the elderly category (aged 65 and older) representing the next most prevalent age group at 31.6% (N= 36). Young adults (aged 18 – 40 years) only represented 11.4% of the sample (N=13). Patients were also predominantly Caucasian/white, 73.7% (N= 84) or African American, 23.6% (N= 27). Only three additional patients identified other race/ethnic backgrounds, Hispanic, 0.9% (N= 1), American Indian, 0.9% (N= 1) and other, 0.9% (N= 1). Patients reported residing largely in the state of North Carolina 86.8% (N= 101). Patients residing in other states included Virginia, 11.3% (N= 13) and West Virginia, 0.9% (N= 1). In terms of region, only 88.5% of patients reported this measure with 14 patients not reporting region, 11.5% (N= 14). Of those reporting region, the majority reported living in the same region as the hospital (Piedmont), 77.5% (N= 79). Patients residing in the Mountain region comprised the next largest group, 12.7% (N= 13) with additional regions represented as follows: Metrolina, 3.9% (N=4), Triangle, 3.9% (N= 4), Sandhills, 1% (N= 1), and Southeast, 1% (N= 1).

Employment status was evenly distributed between employed, 32% (N= 39), unemployed, 31.1% (N= 38), and retired, 36.9% (N= 45). Annual income level was reported by 95.1% of patients with six patients declining to complete. For these 116 patients, income ranged as follows: 1) below \$10,000, 23.6%, (N= 26); 2) \$10,000 - \$30,000, 34.6% (N= 38); 3) \$30,000 - \$60,000, 23.6% (N= 26); 4) \$60,000 - \$100,000, 12.7% (N=14; and 5) Greater than \$100,000, 5.5% (N= 6). The average amount of days on the unit at the time of the survey had a range of 39 days [(1 day minimum; 40 days maximum); mean = 7.57, standard deviation = 7.72]. Number of registered nurses which had taken care of the participants (via patient self-report) had a range of 38 nurses [(2 minimum; 40 maximum); mean = 8.68; standard deviation = 6.91].

### **Unit-Specific Data**

A total of ten non-intensive, acute care units were sampled during the study. Primary services included cardiothoracic surgery, 9%, (N= 11); gynecological oncology/surgery, 8.2% (N= 10); hematology/oncology (2 units), 9% (N=11) and 14.8% (N= 18) respectively; cardiology, 5.7% (N= 7); general medicine (2 units), 4.9% (N=6) and 13.1% (N= 16) respectively; trauma surgery, 10.7% (N=13); surgical oncology, 15.6% (N= 19); and medicine/renal, 9% (N=11). Unit-specific workforce data included average RN experience level, average RN age level, RN highest educational level by percentage (associates degree, bachelor's degree, master's degree), and annual RN turnover rate. Data by unit is provided in Table 7, Appendix O.

For the total sample, unit-specific average RN experience level had a range of 7 years [(3 years minimum; 10 years maximum); mean = 5.32, standard deviation = 1.62]. Unit-specific average RN age had a range of 7 years [(36 years minimum; 43 years maximum); mean = 37.78, standard deviation = 1.82]. Unit-specific percentage RNs with associates degree had a range of 35.5%



[(12.5% minimum; 48% maximum); mean = 36.32%, standard deviation = 10.79]. Unit-specific percentage RNs with bachelor's degree had a range of 31.2% [(46.9% minimum; 78.1% maximum); mean = 58.48% standard deviation = 9.92]. Unit-specific percentage RNs with master's degree had a range of 9.4% [(0.0% minimum; 9.4% maximum); mean = 5.21% standard deviation = 2.37]. RN annual turnover rate at the unit level had a range of 19.53% [(4 % minimum; 23.53% maximum); mean = 17.84%, standard deviation = 5.58].

### **HCAHPS Statistics**

Four HCAHPS nurse sensitive items were utilized for this study. Questions included the following: 1) How often did nurses treat you with courtesy and respect?; 2) How often did nurses listen carefully to you?; 3) How often did nurses explain things in a way you could understand?; 4) After pressing the call button, how often did you get help as soon as you wanted?. These items were rated as 1 (never), 2 (sometimes), 3 (usually) and 4 (always). Data for these four nurse sensitive items were gathered in two ways. First, unit-specific retrospective data for the prior six month period was compiled on each item rendering an average rating per item. In addition a historic total HCAHPS average score for the four items was established for each unit. HCAHPS average scores for units were as follows:

Cardiothoracic surgery, 3.63 (N= 627); gynecological oncology/surgery, 3.63 (N= 282); hematology/oncology (2 units), 3.69 (N=274) and 3.64 (N= 348) respectively; cardiology, 3.75 (N= 639); general medicine (2 units), 3.66 (N= 385) and 3.63 (N= 282) respectively; trauma surgery, 3.53 (N= 286); surgical oncology, 3.68 (N= 1005); and medicine/renal, 3.61(N=242). Historical HCAHPS nurse sensitive sum scores ranged by 0.22 points [(3.53 minimum; 3.75 maximum); mean = 3.64, standard deviation = .051].

In addition to retrospective HCAHPS data, current, patient-specific ratings on these same four nurse sensitive items were obtained as part of the study demographics page. A total current, patient-specific HCAHPS average score was calculated for all participants who completed all four questions (N= 120). Concurrent HCAHPS patient-specific average scores ranged by 2.5 points [(1.5 minimum; 4.0 maximum); mean = 3.48, standard deviation = .488].

### **PONS-R Statistics**

Of the 122 participants, 114 completed all questions on the PONS-R. Minimum and maximum scores on the PONS-R were 52 and 125, respectively, with a range of 73. Mean score was 107.03 with a standard deviation of 16.16.

### **Data Analysis**

The purpose of this study was to answer seven distinct research questions. Findings are reported specific to these research questions. For data analysis consistency, comparisons that have  $p < 0.05$  were considered statistically significant.

#### **Research Question 1:**

What is the internal consistency and construct validity of the Presence of Nursing Scale-Revised?

**Internal consistency reliability.** The PONS-R in this study proved to exhibit a high level of internal consistency reliability with a Cronbach's alpha of .974 on a total sample size of 114 completions. Scale statistics indicated a mean score of 107.03 (minimum score = 25; maximum score = 125) with a variance = 261.05 and standard deviation = 16.16. A Cronbach's alpha of 0.70 or higher indicates an adequate level of inter-correlation of the items within the instrument and supports the hypothesis that items are measuring the same concept (Vogt, 2005, p. 71).

Reliability testing was also conducted on the four current, nurse sensitive items of the HCAHPS. These items revealed a Cronbach's alpha of .797 on a total sample size of 120 completions. Scale statistics indicated a mean score of 13.93 (minimum score = 4; maximum score = 16) with a variance = 3.80 and standard deviation = 1.95.

**Construct validity.** As Kostovich (2002) compared the PONS to a single patient satisfaction item (yes/no) to attempt to assess construct validity using point biserial, this study instead sought to expand to evaluate sum scores of the PONS-R as compared to the current, HCAHPs total average score of four nurse sensitive items using Pearson's bivariate correlation testing. Pearson's  $r = .736$  and correlation was highly significant at the .01 level, showing a high level of correlation between the PONS-R instrument and nurse sensitive measures of patient satisfaction. This finding supports construct validity of the PONS-R.

**Test-retest reliability.** Test-retest reliability in a sample of 30 participants is a measure of external consistency. High correlation between primary and secondary instrument responses is indicative of high construct validity (Vogt, 2005, p. 322-323). In this study, a secondary instrument sample was completed with only 21 participants done at least 48 hours past the initial instrument completion. To measure the strength of the relationship between test one and test two based on PONS-R summed scores, a Pearson's correlation coefficient was utilized. The result was  $r = .791$  which was statistically significant at the .01 level indicating a high level of correlation between initial test and retest nursing presence summed scores. Using non-parametric testing was also conducted due to the smaller sample size. Spearman's  $\rho = .872$

and was statistically significant at the .01 level again indicating high reliability of the instrument.

**Divergent validity.** Divergent validity evaluates for reverse correlation between expected divergent samples. Although it was attempted to obtain a sample of 30 participants from the nursing unit that has the poorest historical performance for patient satisfaction data to complete this evaluation, a sample size of only thirteen was accomplished. The unit's service included trauma surgery and had a historical average HCAHPS score of 3.53. As stated earlier, historical HCAHPS average scores for the units ranged by .22 points [(3.53 minimum; 3.75 maximum); mean = 3.64, standard deviation = .051]. It was assumed that this lowest performing unit sample should show lower current HCAHPS average scores and lower nursing presence scores than the rest of the remaining sampled units. To evaluate this, an independent t-test was done to compare PONS-R summed score on the divergent sample as compared to all other unit PONS-R completions. Analysis of the historical and current HCAHPS average scores was undertaken to determine the differences on these measures for the poorest performing unit (the divergent sample) as compared to all other units. A statistically significant negative difference was found in both HCAHPS historical average score and patient-specific average HCAHPS score based on independent t-tests between divergent sample and remaining sample. Historical HCAHPS for divergent sample was [M = 3.53, SD = .00] and remaining units [M = 3.65, SD = .36;  $t(108) = -36.15$ ,  $p = .000$ ]. The magnitude of the differences was large (eta squared = .92) indicating a very large effect size as defined by Cohen (1988) where eta squared of 0.01 is considered a small effect size, 0.06 a moderate effect size, and .14 a large effect. Concurrent patient-specific HCAHPS for the divergent sample was [M = 3.02, SD = .71] and remaining units [M = 3.54, SD = .42;  $t(118) = -3.82$ ,  $p = .000$ ]. The magnitude of the differences was between moderate and large effect size (eta squared = .11). A statistically significant negative difference was likewise

found on PONS-R summed scores between the divergent unit sample and the remaining sample with poor performance unit [ $M = 93.75$ ,  $SD = 16.47$ ] and remaining units [ $M = 108.59$ ,  $SD = 15.46$ ;  $t(112) = -3.12$ ,  $p = .002$ ]. The magnitude of the differences was moderate (eta squared = .08). This supports divergent validity of the PONS-R instrument.

### **Research Question 2:**

How does reliability and validity evidence of the PONS-R in this sample compare to prior studies using this instrument?

**Internal consistency reliability.** The Cronbach's alpha of .974 in this study is highly comparable to an alpha of .95 with a sample of 330 patients (Kostovich, 2002) and .937 on a sample of 75 patients (Hansbrough, 2011). Scale statistics indicated a mean score of 107.03 (minimum score = 25; maximum score = 125) with a variance = 261.05 and standard deviation = 16.16 as compared to means of 105.8 (Kostovich, 2002) and 104.52 (Hansbrough, 2011). Kostovich (2002) reported a variance of 257.85 and standard deviation of 16.05. In the Hansbrough study, PONS score distribution was considered non-normal with skewness = -1.79 and Kurtosis = 3.92 while this study had a skewness of -1.06 and Kurtosis of .942 (improved in normality over the Hansbrough study), and a Kolmogorov-Smirnov statistic of .133. To further evaluate the high correlation against potential redundancy of items, Kostovich (2002) evaluated and found an inter-item correlation of .47 while this study had a higher value of .62 but still within Kerlinger's (1992) recommendation of .30 - .70. In our study 58 of the 625 inter-item correlations fell between .70 - .81 (marginally high) as only 23 of the same items fell between this same range in the earlier study. No inter-item evaluation is reported by Hansbrough. It was found that deletion of items in this study only decreased the reliability of

.974 to .972. This same consistency was found by Kostovich with an alpha reduction to .949 from .95.

**Construct validity.** As Kostovich (2002) compared the PONS to a single patient satisfaction item (yes/no) to attempt to assess construct validity using point biserial, this study instead sought to expand to evaluate sum scores of the PONS-R as compared to the current, HCAHPs total score of four nurse sensitive items using Pearson's bivariate correlation testing. Pearson's  $r = .736$  and correlation was highly significant at the .01 level, showing a high level of correlation between the PONS-R instrument and nurse sensitive measures of patient satisfaction. This finding supports construct validity of the PONS-R.

**Test-retest reliability.** Test-retest reliability was completed in the Kostovich study with a lower sample size of 8 patients. That initial plan called for retesting after seven days and when no patients were recruited, the retesting plan was revised to be a minimum of four days. To improve upon those results, for this study, retesting took place at a minimum of 48 hours (a shorter interval) and sampling was completed on 21 patients. This was done because the research protocol did not specify the hospital day the patient would be approached. Additionally, the length of stay was generally short in many inpatient units. Kostovich's (2002) results using Spearman's  $\rho = .729$ , significant at the .05 level while this study demonstrated a Spearman's  $\rho = .872$ , statistically significant at the .01 level. Additionally a Pearson's was done with  $r = .791$ , statistically significant at the .01 level indicating a high level of correlation between initial

test and retest nursing presence summed scores.

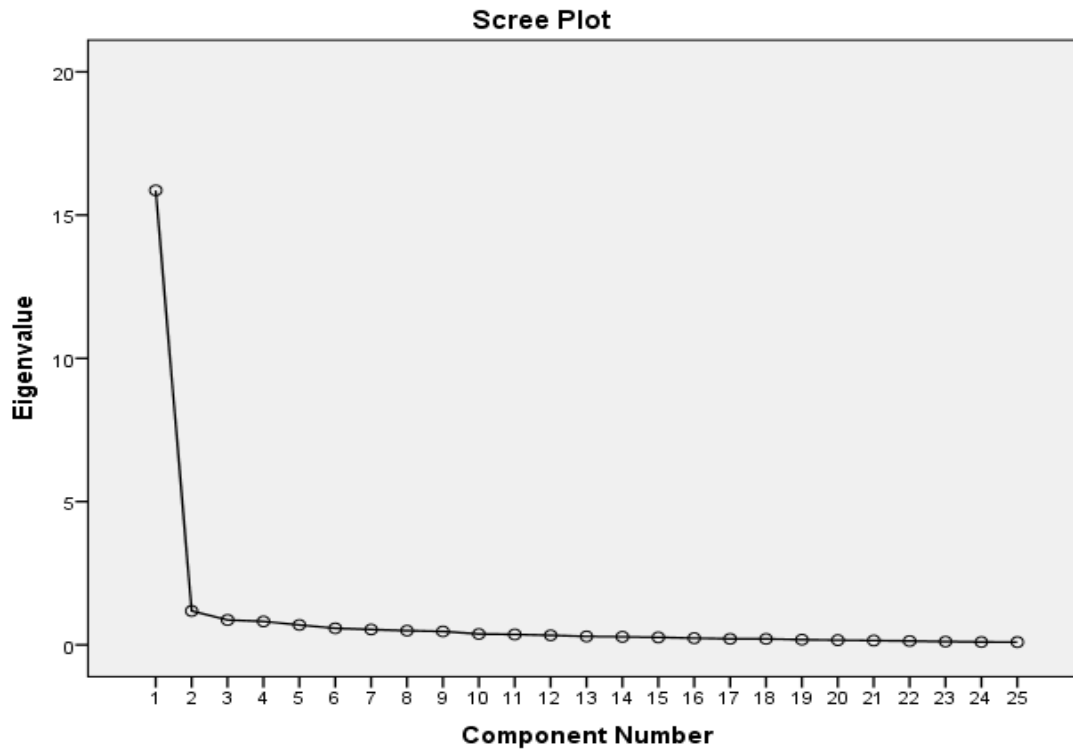
**Divergent validity.** Divergent validity attempts were not completed by either of the two previous studies on the PONS. For this study only a small sample size of thirteen was resulted, but did show a statistically significant result as noted above.

### **Research Question 3:**

What factors are identified by conducting exploratory factor analysis?

An exploratory factor analysis was conducted using the 25 questions which made up the summed scores for the PONS-R as variables. First, the correlation matrix was generated and evaluated for coefficients of .3 and above, for which all items met this measure. Correlation matrix values ranged from a low of .36 to a high of .82. Next, two measures were reviewed to assess factorability of the instrument items, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (Kaiser, 1970, 1974) and the Bartlett's test of sphericity (Bartlett, 1954). The KMO Measure of Sampling Adequacy was .959 on an index measuring from 0 - 1 with the minimum value for a good factor analysis stated to be .6 (Tabachnick & Fidell, 2011). The Bartlett's test was also found to be significant ( $p < .05$ ) at .000 meeting the standard for appropriateness for factor analysis.

Exploratory factory analysis revealed the presence of two components with eigenvalues exceeding 1, explaining 63.5 per cent, and 4.7 percent of the variance respectively. Inspection of the scree plot revealed a distinct break after the first component and minor break noted between the second and third components.



**Figure 2. Scree Plot**

To determine whether one or two factors are present, a parallel analysis was conducted (results noted in Table 8, Appendix P). The parallel analysis showed only one component with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (25 variables x 114 respondents). Further factor analysis testing was conducted by completing Varimax rotations (Table 9, Appendix Q) and Oblimin rotations (Table 10, Appendix R) without specification of factors and with specification to force two factors so that the correlations could be further evaluated.

When two components were forced, the second factor covered the most intimate items of the instrument including physical comforting, emotional comforting, understanding feelings, talking as a friend and meeting spiritual needs appeared to cluster together. Physical, emotional,



and spiritual intimacy is seen as the central functions that take place in the patient-nurse dyad and thereby indicate essential items. In conclusion, the PONS-R appears to be a simple, pure instrument with a single factor. The equivocal second factor could be developed into a concrete, separable factor if the PONS-R was extended, or at least, modified.

#### **Research Question 4:**

Are resultant subscales and factors congruent with the Mid-Range Theory of Nursing Presence?

As principle component analysis primarily only rendered one factor, it is impossible to compare factors with the theory components. It was noted that when factors of two or three were forced, there was clustering of five items (deemed intimacy factors) that included items of physical comforting, emotional comforting, understanding feelings, talking as a friend, and meeting spiritual needs. These items closely resemble the identified categories of patient needs (physical, psychological, spiritual) as well as the proximity (body to body) variable within the theoretical framework.

#### **Research Question 5:**

How do unit-specific data from HCAHPS patient satisfaction compare to Presence of Nursing Scale-Revised data during the study period?

To evaluate whether relationships existed between, patient-specific HCAHPS at the time of the survey and PONS-R data, an average HCAHPS score was utilized for the four, nurse sensitive patient satisfaction measures. This averaged score was compared to the summed PONS-R score. A sample of 113 was compared with all data present on both items. Pearson's correlation coefficient = .736 (highly correlated) and statistically significant at the .01 level (two-tailed). Not only is this supportive as stated earlier for construct validity of the PONS-R, but also

indicates that patients ratings of PONS-R aligned with patient satisfaction. Unit-specific data from historical HCAHPs averaged scores on the same four nurse sensitive items were also compared to the PONS-R data. In this comparison, 114 scores were evaluated with a resultant  $r = .084$ , indicating an absence of correlation between unit historical performance of the unit on HCAHPS and PONS-R summed scores. For a third comparison, patient-specific averaged HCAHPS scoring was compared to unit-specific HCAHPS averaged scoring. In this evaluation 120 responses were compared with a resulting Pearson's  $r = .178$  again indicating lack of correlational relationship between past HCAHPS and current HCAHPS.

**Research Question 6:**

Do relationships exist between unit-specific nurse demographic data and patient perception of nursing presence capability?

Unit-specific registered nurse demographic data included the following variables: average experience level, average age, percentage of highest educational level at associate's degree, bachelor's degree and master's degree, and annual RN turnover rate. Unit-specific workforce data is located in Table 7, Appendix O. All of these variables were treated as continuous variables and Pearson's correlation coefficient and/or Spearman's rho were utilized to evaluate for correlations. Comparison between PONS-R and unit-specific workforce factors are shown in Table 11, Appendix S.

**Research Question 7:**

Do relationships exist between patient-specific demographic data and patient perception of nursing presence capability?

As part of the Patient Demographics and Satisfaction Form (front page of the survey administered to participants), data on several patient-specific variables were collected. These variables included age, race/ethnic background, gender, state of residence, and region of residence for North Carolina residents, household annual income, and employment status. All demographic variables were queried using categorical options/ranges. Gender was categorized as either male or female. Age was categorized into three ranges: age 18 - 40 (young adult), age 41 – 64 (middle adult) and age 65 and older (older adult). Race/ethnic background was categorized with the following options: African/American, Caucasian/white, Hispanic, American Indian, Asian, and Other. State was listed as North Carolina or other with a write in category for other so participants could list other states. This data was captured with only three states listed which were later coded as 1) North Carolina, 2) Virginia, and 3) West Virginia. The regions of North Carolina were categorized as Piedmont, Mountains, Metrolina, Triangle, Sandhills, Southeast, Inner Banks, and Outer Banks. Annual household income was categorized in the following: 1) below \$10,000, 2) \$10,000 - \$30,000, 3) \$30,000 - \$60,000, and 4) greater than \$100,000. Employment status was categorized as employed, unemployed and retired. Patient demographics findings are denoted in Table 6. For all categorical variables except for gender, a one-way between groups ANOVA was conducted to determine whether there were differences in PONS-R summed scores for participants within demographic variable sets. The Kruskal-Wallis Test was also used when a non-parametric alternative was indicated. The Levene's test was used to establish homogeneity of variances with all patient demographic categories as part of the data analysis procedure. A p value of  $> .05$  indicates no violation of the homogeneity of variance assumption (Pallant, 2006). For all ANOVA tests, this p value or higher was met.

**Patient Age Level.** As stated earlier, patient age was categorized into young, middle and older adult. With a demonstrated result of  $[F(2, 111) = .812, p = .446]$ , no statistically significant difference was found in means between patient age groups and PONS-R summed scores. Likewise, the Kruskal-Wallis H-test showed that there was no statistically significant difference in PONS-R summed scores between different age groups,  $\chi^2(2) = .632, p = .729$ .

**Patient Race/Ethnic Background.** Race and ethnic background were categorized into five set categories with one write in for “Other” which could be recoded at the conclusion of data collection dependent on write-in categories identified. In this study only one respondent identified “other” as racial/ethnic background but did not identify a write-in category so it was coded as “other”. A one-way ANOVA evaluated how race/ethnic background might have on PONS-R summed scores. The result was  $[F(4, 109) = .257, p = .905]$ , no statistically significant difference was found in the means. Kruskal-Wallis H-test revealed no statistically significant difference between ethnic backgrounds,  $\chi^2(4) = 1.86, p = .762$ .

**State of Residence.** States of residence included only three states, North Carolina, Virginia, and West Virginia. As West Virginia was only identified by one respondent, data analysis for impact only considered state of residence for North Carolina and Virginia. Results for this ANOVA =  $[F(1, 112) = .744, p = .39]$ , no statistically significant difference was found in the means. Again Kruskal-Wallis H-test results also indicated no statistically significant difference between state of residence,  $\chi^2(1) = 1.06, p = .304$ .

**Regions of North Carolina.** Eight regions of North Carolina were identified and a 9th category established for those not living in a NC region. ANOVA results =  $[F(6, 106) = 1.58, p = .161]$ , no statistically significant difference was found in the means. However, Kruskal-Wallis

H-test showed that there was a statistically significant difference in PONS-R summed score between the different NC regions,  $\chi^2(6) = 13.32, p = 0.038$ , with a mean rank score of 105.50 for Triangle region, 95.50 for Southeast region, 73.00 for Sandhills region, 65.54 for Mountain region, 55.00 for Metrolina region, 54.18 for Piedmont region, and 45.27 for non-NC region.

**Household Annual Income.** Five income ranges were used to establish categorical income estimates. To evaluate the potential impact of annual household income on PONS-R summed score, the one-way ANOVA = [F (4, 106) = .334,  $p = .855$ ], no statistically significant difference was found in the means. Kruskal-Wallis H-test also revealed no significant difference,  $\chi^2(4) = 1.90, p = .754$ .

**Employment Status.** Three categories for employment were utilized to examine potential influence of employment on PONS-R summed scores and were evenly distributed. The one-way ANOVA expressed the following result: [F (2, 111) = .639,  $p = .529$ ], no statistically significant difference was found in the means.

**Gender.** To evaluate the potential influence of gender on the PONS-R summed scores, an independent-samples t-test was conducted. There was no significant difference in scores for females [M = 108.86, SD = 15.87] and males [M = 105.59, SD = 16.36;  $t(112) = 1.07, p = .29$ ]. The magnitude of the differences was small (eta squared = .01) as proposed by Cohen, 1988 in which .01 = small effect size, meaning negligible clinical effect and that gender accounts for approximately only one per cent of the variance.

**Number of Registered Nurses during stay.** Again this was a self-report scoring done by patients at the time of the survey. In several cases, patients could not provide an estimate and left this section blank, thus, there was only a sample of 87 for this variable. Number of

registered nurses reported per participants ranged by 38 nurses [(2 minimum; 40 maximum); mean = 8.68; standard deviation = 6.91]. The one-way ANOVA expressed the following result: [F 19, 87) = .629, p = .874], no statistically significant difference was found in the means.

**Length of Stay on Unit.** This variable was self-reported number of days patient had been on the unit in which he/she was at during the time of the survey being conducted. As stated earlier, the average amount of days on the unit ranged by 39 days [(1 day minimum; 40 days maximum); mean = 7.57, standard deviation = 7.72]. The one-way ANOVA expressed the following result: [F 21, 92) = .745, p = .775], no statistically significant difference was found in the means.

### Summary

This study demonstrated some new research findings relevant to the understanding of nursing presence within the context of inpatient nursing in an academic medical center. The Presence of Nursing Scale – Revised was utilized for the fourth time to evaluate patients' perceptions of nursing presence with registered nurses. As was demonstrated in previous research by Kostovich (2002) and Hansbrough (2011), the PONS-R instrument exhibited a high level of internal consistency reliability as evidenced by a Cronbach's alpha of .974 with a total sample of 114 patients. This compares with an alpha of .95 with sample of 330 patients (Kostovich, 2002) and .937 with a sample of 75 patients (Hansbrough, 2011). This study did express a higher inter-item correlation of .62 as compared to Kostovich (2002) which had .47. In this study 58 of the 625 inter-item correlations fell between .70-.81 which was marginally high.

Construct validity was established by demonstrating a Pearson's  $r = .736$  between the PONS-R and nurse sensitive measures of HCAHPS. Test-retest reliability was done on 21 patients PONS-R summed scores within a minimum of two days with Pearson's  $r = .79$  and

Spearman's rho = .87 (significant at the .01 level) as compared to Kostovich's (2002) Spearman's rho = -.73 (significant at the .05 level). Finally divergent validity was evaluated and established using comparison with HCAHPS historic average scores and patient-specific concurrent average scores on four nurse sensitive items for patient satisfaction with PONS-R summed scores between the sample of thirteen patients and the remaining sample. A statistically significant negative difference was found on PONS-R summed scores between the divergent sample and the remaining sample with divergent sample [M = 93.75, SD = 16.47] and remaining units [M = 108.59, SD = 15.46;  $t(112) = -3.12, p = .002$ ]. The magnitude of the differences was moderate (eta squared = .08).

This study also sought to evaluate the PONS-R instrument using exploratory factor analysis and to determine whether resultant factors would have particular comparison characteristics to attributes within proposed nursing theory on nursing presence. While only one true factor emerged, when the factors were forced, a slight inter-correlation was seen between items termed "intimacy" factors which included the following items: physical comforting, emotional comforting, understanding feelings, talking as a friend, and meeting spiritual needs. These do compare to the patient needs (physical, psychological, spiritual) and proximity (body to body) components within the mid-range theory of nursing presence, however, the psychometrics did not support further assessment of this weak potential factor.

This study is the first study of nursing presence to evaluate how nursing presence compares concurrently with nursing sensitive patient satisfaction measures or unit workforce measures, all of which have been supported as keys to success administratively in healthcare. It is interesting to note that while there was a statistically significant correlation at the .01 level (two-tailed) between concurrent nurse HCAHPS average score and PONS-R summed scores

with Pearson's  $r = .736$ , there was not statically significant correlation between historical HCAHPS performance and concurrent HCAHPS performance as evidenced by  $r = .178$ . In regards to unit workforce, RN average experience level, RN average age, RN percentage at educational levels and annual RN turnover rates were compared to PONS-R. Statistically significant negative correlations were determined between PONS-R summed scores and average RN experience level and average RN age, indicating a higher nursing presence score in units which had less seniority in experience and age. In addition, higher nursing presence scores were realized when compared to units with higher percentage of Associate degree nurses ( $r = .213$ , statistically significant at .05 level), also analyzed with Spearman's rho ( $r = .269$ , significant at the .01 level). Negative correlation differences were found between nursing presence and percentage of Bachelor's degree nurses ( $r = -.212$ , significant at the .05 level), and Spearman's rho ( $r = -.236$ , significant at the .05 level). Minimal negative correlation between PONS-R and percentage of Master's degree nurses ( $r = -.077$ , not significant), and Spearman's rho ( $r = -.027$ , no significance) was found. These correlations were unexpected, while a mild negative correlation with nursing presence and annual turnover rate ( $r = -.048$ ) was a more anticipated finding.

Finally, relationships were explored between patient-specific demographics and nursing presence. No statistically significant variances were found for any of the patient demographic data except for NC region in which one region (Triangle,  $n = 4$ ) had higher mean ranking that was significant. Remaining patient demographics with no relation included age level, race/ethnic background, state of residence, employment status, household annual income or gender as compared to PONS-R. Self-report was used to evaluate patient-specific factors such as number of RNs that had taken care of them on the unit as well as the length of stay on the unit. One-way



ANOVA found no statistically significant differences for nursing presence based on these variables.

After considering all of the above summarized findings as a whole, a picture emerges. The PONS-R is a reliable single factor instrument measuring nursing presence and can be further developed to assist in measurement of relational skills of nurses. Further development may include additional factor analysis with large sample sizes in different settings and/or further refinement with addition of intimacy factor items. Patient perception of nursing presence was only correlated with one patient demographic, that of NC region (Triangle region) in which sample for the region was only four patients. It is unknown how individual nurse demographics may have influenced this study. Nurse sensitive HCAHPS items were reliable just as prior HCAHPS (total instrument) implementation studies have shown (Giordano, et al., 2009) and were positively correlated with PONS-R.

## CHAPTER 5

### DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

#### **Psychometric Testing of the PONS-Revised**

##### **Reliability**

This study's primary aim was to ascertain the psychometric properties of the only instrument to date developed to measure nursing presence from the patient's perspective (Presence of Nursing Scale). This study, with a sample of 114 inpatients, established the highest to date internal consistency reliability of the PONS-R with a rating of  $r = .974$ , indicating items continue to measure the same concept when compared to same measure for previous studies such as Kostovich (2011) with a rating of  $r = .95$  and Hansbrough (2011) with a rating of  $r = .937$ . For this study the inter-item correlation of  $.62$  was within acceptable range and deletion of items only decreased reliability from  $.974$  to  $.972$ . Reliability was also established favorably using test-retest with larger samples (21 versus 8 patients) than a previous study (Kostovich, 2012) resulting in statistically significant reliability at the  $.01$  level using both parametric and non-parametric analysis methods.

##### **Validity**

Construct validity was established expanding the previous comparisons done by Kostovich and Hansbrough with one patient satisfaction item to PONS. For this study PONS-R was compared to four nurse-sensitive measures of patient satisfaction within an established patient satisfaction survey (HCAHPS) (Giordano et al., 2009). Concurrent mean scores for these four items were compared with PONS-R indicating highly significant correlation at the  $.01$  level.

Instrument validity was also established by assessing divergent validity of PONS-R on a

sub-sample for the poorest performing nursing unit in regards to historical nurse-sensitive HCAHPS items. This nursing unit also held the lowest concurrent HCAHPS score of all units sampled. A statistically significant negative difference with moderate magnitude of differences (eta squared = .08) was found between PONS-R for this unit and the remaining sample.

### **Exploratory Factor Analysis**

This study was the first to ever conduct exploratory factor analysis on the PONS-R, an important element in understanding the measurement properties of the instrument. Using principal component analysis, two factors resulted with eigenvalues greater than one. Scree plot analysis indicated a significant break after the first factor and only a minor one after the second. Parallel analysis provided evidence for the rejection of the 2<sup>nd</sup> factor, thus supporting that PONS-R is measuring primarily one concept. When two factors were forced with Oblimin rotation, five items clustered together respectively as noted in Table 10. These five items included the following: 1) emotionally comforted, 2) met spiritual needs, 3) physically comforted, 4) understood feelings, and 5) talked as a friend. Although only one clear factor was found, items suggest a secondary factor centered on physical and emotional intimacy between nurse and patient and will be discussed further below. Additionally as the sample size for this study was essentially at minimum for conducting factor analysis, it is felt that with a larger, more robust sample size, this weak, equivocal secondary factor may further be established. A better alternative is the addition of more items centered on intimacy to further develop the PONS-R measurement capabilities, as described and proposed next.

Intimacy is defined as “a state marked by emotional closeness” and/or “a quality suggesting closeness or warmth” (Merriam-Webster, 2016) which can be indicative of emotional closeness or physical closeness. Intimate relationships provide the forum for sharing emotions, feelings, and concerns.

From grand theory, Watson (1985) focuses on patient-nurse transactions that are inherently personal and esthetic as dimensions within the interchange. Swanson (1991) also defines nursing presence as being emotionally present with and for the patient. This borderline secondary factor we found is congruent with physical closeness or proximity as a component of nursing presence (Pettigrew, 1990; Fuller, 1991; Pederson, 1993; MacKimmon et al., 2005; Cantrell & Matula, 2009; and McMahon & Christopher, 2011). Several authors also specifically indicate that nursing presence requires intimacy and/or emotional connectivity/rapport, (Hines, 1992; Melnechenko, 2003; MacKimmon et al., 2005; Turner & Stokes, 2006; Finfgeld-Connett, 2006, and 2008; Hessel, 2009). Fredriksson (1999) and Melnechenko (2003) supported that nursing presence takes place under difficult situations, requires expression of feelings between nurse and patient and that at times the nurse risks emotional vulnerability. Osterman and Schwartz-Barcott (1996) discuss the depth of presence that could also indicate the depth of intimacy required to make meaningful connections.

The secondary factor is also congruent with spirituality which was stated as a clear characteristic of nursing presence (Pettigrew, 1985; Osterman & Schwartz-Barcott, 1996; Hessel, 2009) indicating perhaps assistance with intimacy with a higher being or joining together intimately to share in spirituality. Based on this review, it is clear that intimacy items are essential to nursing presence and are congruent with the mid-range theory of nursing presence framework components of patient needs (physical, psychological, spiritual) and proximity (body to body) variable, demonstrating the case for addition of new intimacy focused items in follow-up studies.

### **Patient Satisfaction as Outcome of Nursing Presence**

Patient satisfaction has been described as an outcome of nursing presence (Cantrell & Matula, 2009; Iseminger, et al., 2009). Both previous studies using PONS (Kostovich, 2012; Hansbrough, 2011) used a single patient satisfaction measure to evaluate for construct validity. It is therefore postulated that an established instrument such as HCAHPS which contains nurse-sensitive measures may correlate positively with PONS-R. In this study, four nurse-sensitive measures of HCAHPS were evaluated to

PONS-R in two ways: 1) historical unit-specific data and 2) concurrent patient-specific data. When concurrent nurse HCAHPS average score was compared to PONS-R, there was a statistically significant correlation at the .01 level, indicating high correlation. Not only does this support construct validity, but rather also indicates that from a theoretical standpoint that patient satisfaction with nurses is highly correlated with their nursing presence capability. One of the four nurse-sensitive measures (responsiveness in timely matter) is specifically referred to within the literature. Zyblock (2010) stated that frequent visits gain trust and optimize recognition of need/symptoms. Availability/accessibility are noted to be key in nursing presence for nurse/patient interactions (McKimmon, et al., 2005) and also nurse/parent interactions (Reis, et al., 2010). Papastavrou et al. (2011) also found that the factor of human presence contained a component regarding responding to calls. When this same assessment was conducted using historical nurse HCAHPS average score in comparison to PONS-R, there was absence of correlation which was an unanticipated finding. Additionally, this study also showed absence of correlation between historical nurse HCAHPS and concurrent nurse HCAHPS.

HCAHPS results is of utmost concern to hospitals who depend on these results to demonstrate one measure of patient care quality that is a key measure upon which value-based purchasing reimbursement is based. HCAHPS survey results is also of high concern because of its high visibility for hospital to hospital comparison by consumers easily via the internet (Centers for Medicare & Medicaid Services, 2016). Many healthcare providers and healthcare personnel espouse a firm disbelief in the reliability and true representativeness of HCAHPS survey results with is in direct opposition to what ongoing HCAHPS survey methodology studies have shown (Giordano, et al., 2009). The findings of this study support high reliability of four nurse-sensitive measures of the HCAHPS and a high correlation with PONS. Different from the traditional HCAHPS survey process, this study administered the HCAHPS during the hospitalization versus after discharge. Patients in the study had an average length of stay on the unit of 7.57 days (with a range of 1 day to 39 days) demonstrating a reasonable time to evaluate nursing care measures. It is unknown what the impact of administration of the PONS-R

instrument at the same time as the nurse-sensitive HCAHPS measures may have had, but there was not a correlation between unit historical HCAHPS and the study HCAHPS on these same measures. The full HCAHPS survey methodology to ensure reliability and validity is based on no intrusive surveys being administered during hospitalization, so as not to unduly influence the patient while still under care from staff. In this study, patients readily agreed to participate and typically showed no concern over participation which is different than generally held beliefs. To note, however, based on typical HCAHPS goals of 90% of patients indicating satisfaction as always (4 points) was not achieved in the overall sample. Data based on this typical measurement method for the total sample is as follows:

Question 1: How often did the nurse treat you with courtesy and respect? Always = .69.

Question 2: How often did the nurse listen to you carefully? Always = .54.

Question 3: How often did the nurse explain things in a way you could understand? Always = .61.

Question 4: After pressing the call button, how often did you get responses as soon as you wanted? Always = .43.

It is also important to note that these values per standards would not be considered acceptable, however, the level of nursing presence was considered high. Based on this small sample (by HCAHPS standards), more study using these joint measures is indicated to evaluate this variance from hospital expectations.

Absence of correlation between historic unit-specific nurse HCAHPS and concurrent nurse HCAHPS could be attributed to a variety reasons. As it has been often noted, patients may appear satisfied during stays, but then later demonstrate poor ratings on satisfaction surveys after being home. Also, patients earlier in their stay may perceive good satisfaction because he/she may not have been on the unit for many days thus far. It is also unknown the impact of post-discharge HCAHPS that may have been influenced by family members whereas, in this study, patients were particularly instructed that they alone must provide their own answers in completion of the study instruments. It is unknown how patient

volumes during the previous six months (winter months that have traditionally higher patient volumes) may have influenced workload and/or unit staffing and potentially impacted lower nursing HCAHPS scores than during the study period. The actual context of concurrent patient satisfaction surveying is not really found in literature as it is considered more important to survey post-discharge so that patients feel freer to be honest in their evaluation.

### **Contextual Factors of the Caring Environment**

Based on the prior literature review it was determined that factors within the caring environment and/or specific to individual or collective nursing workforce may have an impact on how well nursing presence was experienced by patients. Swanson (1991) focuses on experience level as key in gaining competency in nursing presence capability. She also indicates that inexperienced nurses need guidance from role models to assimilate presence capability. Godkin (2001) suggested that nurses' ability to presence improves with experience. Turpin (2014) suggested that the aging nursing workforce, increasing retirement rate of seasoned nurses, and the generational differences of the millennial nurses may influence nursing presence capability in a negative way. In this study, several unit workforce factors were evaluated in relation to the PONS-R summed scores including the following: 1) average experience level, 2) average age, 3) percentages of educational level attained (Associates, Bachelor's, or Master's), and 4) annual RN turnover rate. Findings were statistically significant but surprisingly did not support those assertions. For example, average RN experience level was negatively correlated with nursing presence and significant that the .05 level ( $r = -.185$ ), while average RN age was also negatively correlated to nursing presence ( $r = -.218$ ). Percentage of associates degree nurses at the unit-level was positively correlated and statistically significant at the .05 level to nursing presence ( $r = .213$ ), and Spearman's rho = .269, significant at the .01 level. Percentage of bachelor's nurse was negatively correlated to nursing presence and statistically significant at same level ( $r = -.212$ ) and Spearman's rho = -.236, significant at the .05 level. Both percentage of master's degree nurses and annual RN turnover rate were minimally negatively correlated to nursing presence and not significant ( $r = -.077$  and  $r = -.048$ ).

respectively).

Many hospitals attempting to minimize the deleterious effects of value-based purchasing have adopted care initiatives and/or patient care models such as patient-centered care (Betbeze, 2015). The study hospital has maintained a continuously accredited magnet status for decades and as such, its's care models may be influencing patient perception of both nursing presence and patient satisfaction. The medical center has adopted relationship-based care and shared governance for many years. Team-based plans for service excellence and recovery are in place at this hospital that may improve the patient experience (Betbeze, 2015), and may not be consistent with other hospitals in the region. Additionally, there is a strong workforce push to hire BSN-prepared registered nurses.to maintain magnet status. Several of these identified initiatives may in this case serve as confounding variables to unit workforce variables. While historical RN turnover rate was only minimally negatively correlated with nursing presence, Iseminger et al. (2009) postulated that reduced staff turnover may be an outcome of nurse presence. This is due to the level of nurse satisfaction that is thought to result from successful nurse presencing activities. RN turnover rates per unit are relatively high as noted in Table 7, Appendix O. While the overall RN turnover rate for the full organization is stated to be around 10%, 8 of the 10 study units have turnover rates in exceeding that and the national norm for turnover rate which is estimated at 15% (American Federation of State, County, and Municipal Employees, 2016). It is also noted that two sets of sister units (2 general medicine and 2 hematology/oncology) have quite a difference in turnover rates which shows variability even within a division. RN turnover rates should be explored in relation to experience levels as there is nationally a very high licensed nurse turnover rate for new nurses within the first 3 years of practice equaling 43% (Brewer, et al., 2012) and in relation to age levels due to the increasing retirement rate of older nurses (McMenamin, 2014).

Socioeconomic demographic factors were not assessed at the individual nurse or collectively by nursing unit. It is unclear what influence this may have had. If associate degree nurses, younger nurses, or those with less experience were more closely aligned to the patients in terms of community



connections or like backgrounds, this may have influenced these correlations with higher nurse presence ratings. Leininger (1991) attests that nursing presence is likely dependent on the emic view consisting of language expression perceptions, beliefs, and cultural practices along with etic view (more universal expressions). McMahon and Christopher (2011) in the mid-range theory of nursing presence indicate that age, gender, culture may affect the quality of interaction. So it seems realistic that socioeconomic demographic factors of the nurses may need further exploration as potential confounding variables not fully investigated in this study may exist.

### **Patient Demographics Related to Nursing Presence**

While no significant correlations were found between patient demographics and nursing presence, except for region of NC with a small sample for the highest performing region, there was limited variability in some demographic groups, for example, the sample was primarily Caucasian and African American and this likely does not represent the typical patient population of this regional hospital. As the inclusion requirements mandated the subjects to be able to understand English, due to no Spanish version of the PONS available, the Hispanic population was not represented well.

### **Limitations**

This study was conducted in one Southeast, academic medical center selected for convenience using a convenience sample of patients. The findings thus cannot be assumed to be generalizable to the total population of the hospital nor elsewhere. This is only the third study using PONS instrument so the PONS has not been fully translated for use with the Hispanic population or other foreign languages. As the study was conducted during summer months, it is unknown how unit-specific workforce factors could have affected due to vacations, lower census, etc. As the study was non-experimental in nature with low internal validity, it is impossible to assume causation between any of the instrument variables in the study. Sample size met only minimum requirements and thus may have not been robust enough to fully flesh

out the secondary intimacy factor identified by exploratory factor analysis. It is not known what influence that additional demographics of individual nurses may have had on nursing presence as this was not a measure within the study design.

### **Recommendations for Future Research**

Several recommendations are indicated based on study findings. First, a repeat of this study in a community-based hospital in Southeast (non-Magnet status) would be advantageous to evaluate for differences. Further concept analysis is indicated within the presence and caring literature to develop items appropriate in measuring the intimacy factor. An expert panel would likely be indicated for further development, assessment, and selection of additional instrument items to add, prior to conducting further psychometric instrument testing on the PONS-R. Future research needs to be done on expanding this barely discernable second factor.

It is important to consider conducting additional studies of concurrent nurse HCAHPS versus historic nurse HCAHPS to determine “effect” of in-hospital surveying versus post-discharge surveying. HCAHPS validation with PONS-R should be repeatedly done to further explore the concurrent correlation in the context of nationally expected HCAHPS mandated goals for performance. Additional correlational studies focusing on PONS-R and other patient quality outcomes measures during the study period could be considered using current study data with amendments to the IRB with the cooperation of the study hospital. Studies should be undertaken that expand nursing demographics beyond unit workforce variables as there may be underlying confounding variables that are unknown which correlate to either patient demographics or PONS-R results. Finally, as the Measurement of Presence Scale (MOPS) had reasonable reliability in its early studies, another good future study could involve comparison between nurse perceptions of nursing presence and patient perceptions of nursing presence using

PONS-R. This would likely attempt to further evaluate findings of Papastavrou, et al., (2011) in which nurses perception of nursing presence was higher than that of patients. It is unclear based only one study, how nurses perceive or validate patient's perception during the inter-relational experience.

### **Conclusions**

The Presence of Nursing Scale-Revised (PONS-R) demonstrated a high degree of reliability and validity during this study as a measure of nursing presence as perceived by patients in an academic medical center in the Southeastern United States. The PONS-R measured one concept. This instrument therefore has potential value for evaluating student nurse relational skills and consideration of its use for measuring relational skills should be encouraged as part of curriculum development. Research using the PONS-R with nursing students has not been yet undertaken, but should be considered. The PONS-R correlated with four value-based purchasing nurse-sensitive measures of HCAHPS. These HCAHPS measures proved reliable in this study when completing during hospitalization which is not allowed as part of the federal government mandate. HCAHPS measures did not reach percentage rates of ALWAYS as considered goals for hospitals, however nursing presence was reasonably high. This indicates that more studies based on HCAHPS are indicated to evaluate further. The future enhancement of the PONS-R should include revision for addition of more items to better express the secondary intimacy factor minimally expressed using exploratory factor analysis as items identified support previous literature regarding physical and emotional intimacy and spirituality within the nurse-patient inter-subjective encounter. Unexpected correlations occurred as findings of this study were in contrast to previous assumptions regarding younger nurses, less experienced nurses and higher educated nurses' presence capability . It is unknown what

influence the individual nurses demographics may have had on subject's perception of nursing presence as it was previously established that emic view may impact nursing presence (Leininger, 1991). This study confirmed that concurrent patient satisfaction is highly correlated with nursing presence, however, not correlated with historical patient satisfaction at the unit level. This may be due to a wide variety of confounding variables that need to be further explored. Patient demographics did not influence nursing presence.

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APPENDICES

APPENDIX A

Letter of Approval – WFUHS

MEMORANDUM

**To:** Rebecca Turpin  
10 Reynolds Women's Health

**From:** Chair, Institutional Review Board

**Date** 4/13/2015

**Approved:**

**Subject:** Expedited Review: IRB00032717  
Psychometric Testing of the Presence of Nursing Scale: Measurability of Patient Perceptions of Nursing Presence Capability of Nurses in an Academic Medical Center

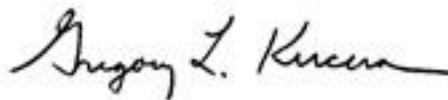
Study Documents:

Protocol Version: Presence of Nursing Scale Protocol.docx; Informed Consent Version: PONS-R Informed Consent Letter; Other Documents: Patient Satisfaction and Demographics Form.docx, PONS-R.docx, Sample Units and Services Provided.docx, Unit-Specific Nursing Workforce Data Collection Tool.docx

This research study qualifies for expedited review under the Federal Regulations [45CFR46.110]. These regulations allow an IRB to approve certain kinds of research involving no more than minimal risk to human subjects. The risks of harm anticipated in the proposed research are not greater than those ordinarily encountered by the general population in daily life or during the performance of routine physical, laboratory, or psychological exams or tests. [45CFR46.102(i)].

Upon review of the research, the IRB finds that this study is classified as Expedited Category 7. This research meets criteria for a waiver of written (signed) consent according to 45 CFR 46.117(c)(2). This research meets the criteria for a waiver of HIPAA authorization according to 45 CFR 164.512. Based on the information provided, the IRB has determined that HIPAA does not apply to this study.

IRB approval is for a period of 12 months from 4/13/2015. Please notify the Office of Research when the project is complete.



Gregory Kucera, Ph.D.

## **APPENDIX B**

### Sample Units and Services Provided

#### Ardmore Tower

- 8AE - Medicine
- 9AE - Medicine & Nephrology
- 10AE - Medicine

#### Cancer Center

- 5CC West – GYN Surgery & GYN/Oncology
- 6CC-Hematology/Oncology
- 7CC-Hematology/Oncology
- 9CC-Surgical Oncology

#### Reynolds Tower

- 5RT - CT Surgery
- 7RT - Cardiology
- 9RT – Trauma Surgery

## APPENDIX C

### Presence of Nursing Scale Protocol

**Study Title:** Presence of Nursing Scale Study

**Principal Investigator:** Rebecca Turpin, PhD(c), MSN, RN, NEA-BC

**Sponsor or funding source:** Wake Forest Baptist Health Department of Nursing

**Study Team:** Registered nurses who have completed data collection training by the PI

#### **Background, Rationale and Context**

Nursing presence capability is a highly valued competency of expert nurses that leads to positive patient outcomes. As the workforce of nurses is slowly replaced with more and more professional nurses who are generationally part of the millennials, there is concern that norms of decreased human-to-human communication interest or skill, may diminish nursing presence capability in the profession. This potential dilemma may occur at a time when value-based purchasing has tremendously increased the need for high quality nursing communication skill and inter-relationships with patients all that foster high patient satisfaction.

There are limited instruments developed for measurement of nursing presence. While several nursing theories denote nursing presence, and many concept analyses have outlined the pre-conditions, nurse and patient attributes, its outcomes, these theories have not been tested or refined. To date, three instruments exist with two that measure the nurse perception of nursing presence and only one that measures the patient perception of nursing presence, Presence of Nursing Scale (PONS-R). It is essential that tools measuring patient perception of nursing presence be further tested and psychometrically tested to further refine our understanding of the phenomenon. Only when nursing has a more precise understanding of the phenomenon, will nursing educators and leaders be able to teach nurses and nursing students this competency and validate their capability with follow-up post assessment with patients.

Additionally, over the last couple years, WFBH was the site for testing Watson's Caring Theory with use of The Caritas Patient Assessment Score (CPAS) as part of a multi-site clinical research project. Nursing presence and caring are similar concepts and as such, instruments measuring these concepts may serve to establish a level of site-specific, construct validity based on large sample sizes and further exploratory factor analysis. To date, the PONS has only been tested in the west and mid-western United States, therefore WFBH can serve for data collection in an additional U.S. region.

The purpose of the research is to allow hospital leaders to compare their patient's perceptions of nursing capability in truly "being with" their patients in a way that connects deeply with them. As the largest medical center system in North Carolina, technological advances make the hospital superior for care. It is unknown how these high-tech environments affect ability to presence and/or connect with patients. As a magnet hospital focused on and devoted to optimizing care environments, data from this study will provide patient perception information to perhaps guide the design of work environments so that they may be most conducive to interpersonal interactions. It may also identify demographic information indicating if particular patient populations have greater needs for interactional skill or if specific work environments within the medical center indicate best practice. The outcomes of this study can be shared educationally with staff nurses at its conclusion.

#### **Objectives**

Seven research questions will be the objective of this study:

Research Questions

1. What is the internal consistency and construct validity of the Presence of Nursing Scale?
2. How do reliability and validity with this sample compare to prior studies using this instrument?
3. What factors are identified by conducting exploratory factor analysis?
4. Are resultant subscales and factors congruent with the Mid-Range Theory of Nursing Presence?
5. How do unit-specific data from HCAHPS patient satisfaction compare to Presence of Nursing Scale data during the study period?
6. Do relationships exist between unit-specific nurse demographic data and patient perception of nursing presence capability?
7. Do relationships exist between patient-specific demographic data and patient perception of nursing presence capability?

### **Methods and Measures**

**Design** - This descriptive, comparative study, will conduct initial exploratory factor analysis of the Presence of Nursing Scale (PONS-R) and provide comparative data to the organization related to patient perceptions of presencing capability.

**Setting** – All adult non-intensive care, inpatient units.

### **Subjects selection criteria**

- **Inclusion Criteria**

Adult patients (18 years and older) who have been admitted to one of the hospital units participating in the study. Patients must be alert and oriented and understand English and have been admitted to the study unit for at least 24 hours. The sample will be drawn randomly so the demographics should reflect a wide range of ages, men and women, and individuals from racial and ethnic minority groups who receive care in the participating hospitals. Because the survey is written in English, some ethnic minority groups may not be represented because of language.

- **Exclusion Criteria**

Patients under the age of 18, patients who are unable to read and speak English and patients who are unable to complete a survey due to their physical condition (ie unconscious or sedated). Family members will not be allowed to complete the survey based on their own perceptions for the patient.

- **Sample Size**

A minimum of 125 adult inpatients from randomly selected units (21 adult, non-intensive care units) will be recruited for participation in the study. Based on hospital patient satisfaction data, the poorest performance unit will have an additional sample of = 30 participants for the purpose of establishing construct validity through divergent validity analysis. As the purpose of this study involves psychometric testing of the PONS-R instrument, test-retest validity will be attempted. A sample of at least 30 will be sought of the original 125, to participate in a secondary completion of the PONS-R at least two days after the first completion.

### **Interventions and Interactions**

**Instruments** include a Patient Demographic and Satisfaction form (designed by the PI) and the Presence of Nursing Scale - Revised. Other comparative unit level quality indicators (HCAPS patient satisfaction data) will be added to the database. All individual patient data (PONS-R and demographic indicators) will be anonymous and will not contain any patient identifiers. All unit level quality indicators will be

collected in aggregate form and will not contain any individual patient identification. The site coordinator will provide unit level quality information specific to the study period.

There are no pre-screening questions or surveys for the participants. Individuals will be told that the hospital is participating in a study to evaluate relational skill of the registered nurses. They will be told that it is important to the hospital to have the patient's perspective so that staff can understand how their practices affect their patients and know where they might have opportunities for improvement. They will be told that their participation is completely voluntary and in no way will affect their care. If they agree to participate, they will be introduced to the data collector who will give them the disclosure to read and they will be asked if they have any questions. If they have no questions and are still willing to participate, the data collector will provide them with a copy of the survey. If the individual does have a question that the data collector cannot answer, the patient will be directed to contact the PI whose contact information will be on the disclosure form.

A Principle Investigator (PI), a PhD in nursing candidate, and current RN employee) will be responsible for the study procedures with the oversight of her ETSU Dissertation Committee. This person will be responsible for timely patient data collection (including following randomization procedure) and submission of quality data. The PI will be responsible for training data collectors and submitting evidence to the Nursing Research Council chair of completion of human subjects training for all individuals from their site who will participate as data collectors. A random sample of patients will be asked to complete a brief survey during their hospital stay. Data will be entered into a secure site by the PI who will oversee data entry at the university. Participating units will be provided a report of their performance at the conclusion of the study compared to that of similar units.

### **Outcome Measure(s)**

Unit aggregate scores on the PONS-R survey

Historic & concurrent Unit-specific HCAHPS nursing-specific patient satisfaction data

Unit-specific nurse workforce demographics (age, experience, turnover,

Hospital aggregate scores on the PONS-R survey

### **Analytical Plan**

**Data analysis** will include descriptive and inferential statistics. Factor analysis will be conducted on the PONS-R to further refine the subscales of measuring nursing presence. Historical data and concurrent nursing specific HCAHPS measures will be compared to PONS-R data. Data on PONS-R will be compared with prior studies using PONS.

### **Human Subjects Protection**

#### **Subject Recruitment Methods**

A **sample** of 100 patients from identified non-intensive, acute care hospital units will be randomly selected for study inclusion over the study period. Participation is voluntary for patients. No patient identifiers will be collected. All data are collected by survey procedures and are aggregated to the nursing unit and not linked to individual participants in any way. All survey data will be kept in secure locked cabinets in a locked room by the PI. Reports for any one nursing unit will not be shared with others. Any publications or presentations including these data will not include hospital or nursing unit identifiers. Any data entered and stored on the study database will be password protected.

#### **Informed Consent**

Written informed consent will not be obtained. The risk of harm or discomfort that may occur as a result of taking part in this research study is not expected to be more than in daily life or from routine physical or psychological examinations or tests. The rights and welfare of study will be protected through the use

of measures to maintain the confidentiality of study information. Study results will be presented or published in lieu of providing individual subjects additional information regarding the study.

- a. Patients will be told that their participation is completely voluntary and in no way will affect their care. If they agree to participate, they will be given the Study Disclosure Form to read and will be asked if they have any questions. If they have no questions and are still willing to participate, the data collector will provide them with a copy of the survey. If the individual does have a question that the data collector cannot answer, the patient will be directed to contact the PI whose contact information will be on the Study Disclosure Form. They will be verbally told by the data collector and if they agree to participate the information will be reinforced in the Disclosure form. Participation requires completion of a single survey. If the participant refuses, they will not be enrolled in the study. If they agree to complete the survey, once they have done so, there are no further study requirements. The study involves completion of a single survey. It will be emphasized with all study data collectors that if a patient for any reason is not willing or able to complete the survey, they should not try to cajole them into doing so.

### **Confidentiality and Privacy**

Confidentiality will be protected by collecting only information needed to assess study outcomes, minimizing to the fullest extent possible the collection of any information that could directly identify subjects, and maintaining all study information in a secure manner. To help ensure subject privacy and confidentiality, no protected health information will be collected. Following data collection, information will be destroyed consistent with data validation and study design, producing an anonymous analytical data set. Data access will be limited to study staff. Data and records will be kept locked and secured, with any computer data password protected. No reference to any individual participant will appear in reports, presentations, or publications that may arise from the study.

### **Data and Safety Monitoring**

The principal investigator will be responsible for the overall monitoring of the data and safety of study participants. The principal investigator will be assisted by other members of the study staff.

### **Reporting of Unanticipated Problems, Adverse Events or Deviations**

Any unanticipated problems, serious and unexpected adverse events, deviations or protocol changes will be promptly reported by the principal investigator or designated member of the research team to the IRB and sponsor or appropriate government agency if appropriate.

## **References**

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3. Kostovich, C. (2012). Development and psychometric assessment of the Presence of Nursing Scale. *Nursing Science Quarterly*, 25(2), 167-175.

## **Appendix**

1. Copy of PONS-R
2. Copy of Patient Demographic and Satisfaction form
3. Copy of Study Disclosure form

## APPENDIX D

### Study Script

#### **Presence of Nursing Study Script**

The following script will be used by all data collectors to ensure continuity and consistency with the participant introduction to study and recruitment process to ensure informed consent.

“Hello my name is \_\_\_\_\_ and I am helping with a research study being conducted here at Wake Forest Baptist Health. This study is being done by a nursing doctoral student in nursing to obtain her PhD degree.

The study will evaluate how well nurses in this hospital have interacted with you and made connections with you. To better teach newer nurses and future nursing students about ways to best communicate with patients in the hospital effectively, it is important to do research to improve surveys that ask patients their perception of nursing care and time spent with you. The purpose of this study is to find out how well our current surveys measure this.

The study involves completing a one-page *Patient Demographics and Satisfaction form* and completing a two-page **Presence of Nursing Scale**. Completion of the forms should take approximately 15 minutes. Your specific information will not be shared with anyone and will be maintained confidential just to the investigator. The information you provide will NOT be shared with any of your nursing care providers. It will be compiled together with other patients’ information to get a better understanding of how nursing care and connections are perceived on each nursing unit. You will be asked four patient satisfaction questions specific to nursing care, but you might be later be surveyed by the hospital on these items as part of a regular quality survey, however those will have nothing to do with this study.

Participation in this study is entirely voluntary and up to you. You may stop participating by not completing the survey forms. A very few patients may be asked to complete the same survey again in two days using exactly the same forms. This lets us decide whether the survey forms are consistent in measurement. Completion of the second form is also purely voluntary.

If you have any questions regarding the survey, I will be giving you the contact information for the primary investigator. Please feel free to contact her for any further information or concerns you may have with participation.

I will leave these surveys with you and return later today to collect them. Please put them in the envelope when you are finished. We do ask that ONLY patients complete them based on their own impressions not those of your family or our staff as the purpose of the study is to really know how the nurses communicated with you alone.

Do you have any questions of me at this time? If not, would you be willing to participate? If yes, here are your forms and return envelope. Please seal it when you are finished. Thank you for your participation.

## APPENDIX E

### Patient Demographics and Satisfaction Form

Dear Study Participant,

For completion of this study, we request that you provide some basic demographic information that will be used only for the study purpose. For privacy purposes, please DO NOT list any identifying information on the study forms. Please complete this form and the attached "Presence of Nursing Scale" in full. Place your completed forms in the provided envelope and seal and these will be picked up by a member of the research team.

**Participant Information:** Please select the option that *BEST describes YOU*.

**Age:**  18 years to 40 years  41 years to 64 years  65 years or older

***Race/Ethnic Background:***

African/American  Caucasian/White  Hispanic  
 American Indian  Asian  Other\_\_\_\_\_

**Gender:**  Female  Male

**State you live in:**  North Carolina  Other\_\_\_\_\_

**Region of NC:**  Piedmont  Mountains  Metrolina  Triangle  Sandhills  
 Southeast  Inner Banks  Outer Banks

***Household Annual Income:***

Below \$10,000  \$10,000-\$30,000  \$30,000-\$60,000  \$60,000-\$100,000  
 Greater than \$100,000

**Employment Status:**  Employed  Unemployed  Retired

**Patient Satisfaction Information:** Please answer your current satisfaction level with these questions specific to YOUR FLOOR NURSES during this hospital stay.

1. How often did nurse treat you with COURTESY and RESPECT?  
 Never  Sometimes  Usually  Always
2. How often did nurses LISTEN CAREFULLY TO YOU?  
 Never  Sometimes  Usually  Always
3. How often did nurses EXPLAIN THINGS in a way you could understand?  
 Never  Sometimes  Usually  Always
4. After pressing the call button, how often did you get help AS SOON AS YOU WANTED?  
 Never  Sometimes  Usually  Always



## APPENDIX F

### Presence of Nursing Scale - Revised

#### COMPLETION OF THIS SURVEY IS CONSENT TO PARTICIPATE

Please answer the following questions by circling your response. There are no right or wrong answers. Your answers will NOT be shared with any of the nursing staff. Your responses will be kept confidential.

**Answer these questions as you think about the REGISTERED NURSES that have cared for you during this hospitalization.**

1. Has the presence of these REGISTERED NURSES made a difference in your life because they have cared for you? (The difference can be positive or negative).

|     |    |
|-----|----|
| Yes | No |
|-----|----|

**If you answered YES to the above question, please answer questions 2-26.**

**If you answered NO to the above question, you are FINISHED.**

2. These REGISTERED NURSES were open to my concerns.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

3. These REGISTERED NURSES taught me what I needed to know.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

4. These REGISTERED NURSES "checked" on me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

5. These REGISTERED NURSES met my spiritual needs.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

6. These REGISTERED NURSES talked to me as a friend.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

7. These REGISTERED NURSES physically comforted me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

8. These REGISTERED NURSES emotionally comforted me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

9. These REGISTERED NURSES understood my feelings.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

10. These REGISTERED NURSES earned my trust.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

11. These REGISTERED NURSES were skilled in providing my care.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

12. These REGISTERED NURSES were there if I needed them.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

13. These REGISTERED NURSES helped my day run smoothly.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

14. These REGISTERED NURSES created a sense of healing around me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

15. These REGISTERED NURSES listened and responded to my needs.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

16. These REGISTERED NURSES calmed my fears.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

17. These REGISTERED NURSES were concerned about me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

18. These REGISTERED NURSES were committed to care for me.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

19. These REGISTERED NURSES made me feel safe.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

20. These REGISTERED NURSES made me feel at peace.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

21. These REGISTERED NURSES took care of me as a person, not as a disease.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

22. These REGISTERED NURSES gave me as much control over my healthcare as possible.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

23. These REGISTERED NURSES made the quality of my life better.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

24. I had confidence in these REGISTERED NURSES.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

25. I felt a connection between myself and these REGISTERED NURSES.

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

26. The presence of these REGISTERED NURSES made a difference to me:

|       |        |              |            |        |
|-------|--------|--------------|------------|--------|
| Never | Rarely | Occasionally | Frequently | Always |
|-------|--------|--------------|------------|--------|

## APPENDIX G

### Study Disclosure Form

#### Presence of Nursing Study

This study is being conducted by a nursing doctoral student in pursuit of obtaining her PhD degree. The study will evaluate how well nurses in this hospital have interacted with you and made connections with you. To better teach newer nurses and nursing students in the future about ways to best communicate the patients in the hospital effectively, it is important to research and improve upon surveys that ask patients their perception of nursing care and time spent with you. The purpose of this study is to find out how well our current surveys measure this.

The study involves completing a one-page *Patient Demographics and Satisfaction form* and completing a two-page **Presence of Nursing Scale**. Completion of the forms should take approximately 15 minutes. Your specific information will not be shared with anyone and will be maintained confidential just to the investigator. No information you specifically provide will be shared with any of your nursing care providers. The information will all be compiled together to get a better understanding of how nursing care and connections are perceived on each nursing unit. Although you are asked four patient satisfaction questions specific to nursing care, you may additionally be later be surveyed by the hospital on these items as part of a regular quality survey by the medical center that has nothing to do with this study.

Participation in this study is entirely voluntary and up to you. You may stop participating by not completing the survey forms. A small portion of patients may be asked within two days if they will complete a second survey (exactly the same forms). This lets us decide whether the survey forms are consistent in measurement. Again completion of the second form is purely voluntary.

If you have any questions regarding the survey, contact information for the primary investigator is provided below. Please feel free to contact the investigator for any further information or concerns you may have with participation.

Rebecca L. Turpin, PhD(c), MSN, RN  
Primary Investigator  
(336) 480-5487  
[Turpinr@goldmail.etsu.edu](mailto:Turpinr@goldmail.etsu.edu)



## APPENDIX I

**Data Analysis Table 1. Key Theoretical Models/Frameworks of Nursing Presence**

| Model/Framework  | Theorist/Author(s)  | Description   |
|--|---|---|
| <p>Halldorsdottir's Theory of Caring AND</p> <p>Nurse's Compassionate Competence</p> | <p>Bailey (2011)</p> <p>Halldorsdottir (1991)</p> <p>Halldorsdottir &amp; Karlsdottir (1996)</p> <p>Halldorsdottir (2012)</p> | <p>Caring to Uncaring Continuum - Five Basic Modes of Being with Another: Life-giving – biogenic, Life-Sustaining – bioactive, Life-Neutral – biopassive, Life-Restraining – biostatic, Life-Destroying – biocidal. Nursing presence likely occurs during biogenic and bioactive modes. Potential guide for employing nurse presence and/or measuring it.</p> <p>Compassionate competence includes wisdom, clinical competence, communication/connection, attentiveness, self-knowing/development and caring.</p> |
| <p>Hierarchy of Healing Presence</p>   | <p>Godkin (2001)</p> <p>Godkin &amp; Godkin (2004)</p>  | <p>Nursing presence is described in a linear ascending fashion beginning with bedside presence (uniqueness, &amp; connecting with the patient experience) extending to clinical presence (sensing &amp; going beyond scientific data), then extending to healing presence (know what &amp; when to act, being present). As nurse task maturity grows, the nurse presence capability is optimized. Nursing presence indicators are outlined in the 2004 article.</p>   |
| <p>Mayo Nursing Care Model</p>   | <p>Harms, et al. (2010)</p>   | <p>The nurse-patient &amp; family relationship is lived through seven principle caring roles: caring healer, problem solver, navigator, teacher, pivotal communicator, vigilant guardian, and transformational leaders.</p>   |
| <p>Mid-Range Theory of Nursing Presence</p>  | <p>McMahon &amp; Christopher (2011)</p>   | <p>Very comprehensive model represents nurse characteristics, client characteristics, and compatibility factors within the nurse-client dyad (relationship). Key components of nursing presence and variables influencing its successful application are outlined. Nurse determines level of intentionality, and select dose &amp; delivery mode of presence. Desired client outcomes are listed.</p>   |

|   |                            |   |
|---|----------------------------|---|
| Orlando's theory of deliberative nursing process and Crick & Dodge model of social information processing | Sheldon & Ellington (2008) | A hybrid model is proposed. The nurse encodes and interprets patient cues using thought and feeling, producing arousal regulation, response access, and response decision. Nurse performs activity that is deliberate and reciprocal based on additional data intake from ongoing patient cues and responses.   |
| Paradigm for nursing interventions. Suffering and chronic sorrow  | Melvin & Heater (2004)     | Through enacting of nursing presence, the client receives expert communication skills, compassion, human touch, trust, and honesty. These inputs move the client to experience self-transcendence, autonomy, feeling of truly being heard, with decreases in isolation, abandonment, and despair. Outcomes include the client finding meaning and peace.  |
| Relational self-organization in workforce redevelopment   | Ray & Turkel (2012)        | Nurse ethical decision points (to provide care in manner consistent with caring & presencing) have a direct impact (positively or negatively) on organizational success.  |
| Theory of the relational work of nurses   | DeFrino (2009)             | Derived from parent theory of relational work of women (Fletcher, et al., 2000), this model presents how nurses use relational work to preserve work, self-achieve, create team, and mutually empower. Factors causing relational practices of nurses to disappear are presented (likely important in the design of workload to facilitate improved relational practice and retention in practice).   |
| Transformative Nursing Presence model   | Iseminger, et al. (2009)   | Actual and perceived barriers to nursing presence identified. Transcendent practices are employed that lead to enhanced nursing presence, and then lead to patient/family and nurse outcomes/benefits. Transcendent practices include awareness, empathic appreciation, appreciative abandonment, respectful listening, skilled communication, selective focusing, availability, awe, openness, flexibility, supportive milieu, embrace another's situation, alignment with organization. |

## APPENDIX J

**Table 2. Instruments Relevant to Measurement of Nursing Presence**

| <b>Instrument</b>   | <b>Author</b>                    | <b>Description</b>   | <b>Reliability and Validity Data</b>  |
|---|----------------------------------|--|---|
| Caring Behaviours Inventory – 24                            | Papastavrou, et al. (2010)       | Revised from the original 43-item tool (Wolf et al., 1994), to 24-items. Based on Watson’s Transpersonal Caring Theory. Contains a sub-scale of “assurance of human presence” and thus could be a potential construct validity measure.  | Internal consistency (Cronbach’s alpha) = 0.94 (nurses) & 0.96 (patients).  |
| Caring Nurse-Patient Interaction Scale (CNPI-Short Scale)   | Cosette, et al. (2006)           | Revised from an original 70-item questionnaire, the tool contains 23 items reflecting four caring domains: humanistic care, relational care, clinical care, and comforting care.   | All items relate to their theoretical domain alone (factor loading $\geq$ 0.40). Alpha coefficients for the four domains = 0.63 – 0.74, 0.90-0.92, 0.80-0.94, & 0.61-0.76 respectively.   |
| Nurse Caring Patient Scale                                  | Della-Monica (2008)              | Developed from a meta-synthesis of patient descriptors within a “mid-range theory of Nurse Caring”. Contains three attributes: 1) Presence, concern for the other; 2) Knowledgeable, competent care; and 3) Respect for the person.  | Factor analysis resulted in parsimonious three factor solution that accounted for 50.49% of the total variance. The final NCPS contained 23 items with an alpha of 0.91. The presence item contains 11 items with an alpha of 0.89.   |
| Patient Evaluation of Emotional Care during Hospitalisation | Williams, et al. (2011)          | Tool to evaluate quality of interpersonal interactions of staff that had been experienced during hospitalization. Initial instrument testing in 2005 resulted in 3 sub-scales of Level of Security, Level of Knowing, and Level of Personal Knowing.   | Confirmatory factor analysis for this study substantiated four sub-scales, Level of Security, Level of Knowing, Level of Personal Value and Level of Connection. Cronbach’s alpha coefficients ranged from 0.73-0.86, however, the subscale for Level of Connection, was lower at 0.59. This may be due to its being a new sub-scale. |
| Presence of Nursing Scale (PONS)                            | Kostovich (2012)                 | Instrument with 25-items to evaluate patient perception of nursing presence. Includes an additional initial item to evaluate with nursing presence has made a difference in care plus two final items to evaluate patient satisfaction.  | Content validity established by expert review. Point by serial correlation coefficient = 0.801 between total PONS score and patient satisfaction item to establish construct validity. High reliability with Cronbach’s alpha of 0.95.  |
| Technological Competency as Caring In Nursing Instrument    | Parcells & Locsin (2011)         | Expresses five core assumptions of the theory with 5 items each. This is a modification from the original 30-item tool (Locsin, 1999). This revision was done by having 13 experts rate item validity. Several items are representative of NP attributes or conditions.  | Item validity rating range from .38 – 1.00. Items .70 and below were deleted and items rated .70-.95 were modified based on expert recommendations.   |
| Watson Caritas Patient Score                                | Watson, Brew, & D’Alfonso (2010) | Contains five critical caring questions, with a 7-point Likert scale to assess frequency of authentic human caring practices. The items are derived from the 10 Caritas Processes™ of Watson’s Human Caring theory. The scale has different versions and has been translated into Italian, Hebrew, and Arabic. | Is currently being evaluated in extensive multi-site clinical research in systems who have implemented the Human Caring model.  |

## APPENDIX K

**Table 3. Nursing Presence Inpatient Research - Qualitative**

| Author/Title             | Study Design             | Sample Type & Size  | Data Sources   | Setting   | Research Questions/Hypothesis  | Instruments | Results/Comments   |
|--------------------------|--------------------------|---|--|---|--|-------------|--|
| Brown (1986)             | Qualitative, descriptive | Convenience, adult hospitalized patients (n=50)   | Taped & transcribed accounts of caring nurse experiences | Medical-surgical area of hospital, Northeast US | To describe the patient's experience of caring by a nurse            | NONE        | <i>Reassuring presence</i> by the nurse was most important quality in the experience of "care".  |
| Cantrell & Matula (2009) | Hermeneutic              | Purposive, childhood cancer survivors, n=11(3 male, 8 female)   | Focus group & individual interviews                      | Oncology Center in North East US                | Describe experiences in being cared for by pediatric oncology nurses | NONE        | Participants knew when nurses were <i>authentic</i> and made effort <i>to be present emotionally for them</i> . Expert care seen as incomplete without compassion. |
| Cohen, et al. (1994)     | Phenomenological         | Convenience, nurses on a surgical unit (n=24) who identified adult surgical patients, interviewed post-discharge at home (n=24) | Open-ended interviews                                    | Surgical unit US                                | Describe patient experiences as compared to nurse accounts.          | NONE        | <i>Attentive Presence</i> is described by patients when an attentive attitude is coupled with understanding and helpfulness/responsiveness.                        |
| Davis (2005)             | Phenomenological         | Purposive, & conceptually driven sequential, adult patients   | Interview  | South central US                                | How do patients describe good nursing care?                          | NONE        | <i>Nursing presence seen as defining characteristic of good nursing care</i> : most common theme was nursing presence (being there & being with). In               |



|                           |                          |  |   |  |   |   |   |
|---------------------------|--------------------------|--|---|--|---|---|---|
|                           |                          | (n=11), 7 female, 4 male                               |   |  |   |   | descriptions of bad nursing care, presence was conspicuously absent.  |
| Doona, et al. (1999)      | Hermeneutic              | 30 Nursing Judgment narratives from 3 previous studies | Transcripts from each data set (n=10 per set) | Critical care, perinatal & psychiatric care settings, Northeast US | 1.What are the common features of the context of nursing judgment?<br>2.What are the features of the nurses' connection with the patient that contribute to nursing judgment? | NONE  | <b>Six features of nursing presence were identified:</b> uniqueness, connecting with the patient's experience, sensing, going beyond the scientific date, knowing (what will work & when to act), and being with the patient.   |
| Duis-Nittsche (2002)      | Qualitative, descriptive | Seven nurse-patient dyads                              | Semi-structured interviews                    | South central US   | Describe the nature, experience and impact of nursing presence within the nurse/patient relationship.   | Nurse & Researcher developed interview tool | <b>Nurse themes of nursing presence:</b> knowing the patient, responding to needs, attitudes/beliefs, bonding with the patient, influencing others, & relationships. <b>Patient themes:</b> knowing me, accessibility, bonding, supporting & encouraging me/others, healing.  |
| Edvardsson, et al. (2011) | Grounded Theory          | Patients with moderate to severe dementia              | Participant observation (36 hours)            | 24-bed, Psychogeriatric ward in university hospital in Sweden      | Explore the psychosocial climate and its influence on the well-being of people with dementia in a hospital psychogeriatric unit.  | NONE  | Different modes of <b>staff presence</b> or absence influenced patient well-being. Modes: <b>sharing place &amp; moment</b> (presence), sharing place but not moment (task orientation), sharing neither place nor moment (absence). Sharing place & moment associated with less observations of anxious behavior and more signs of well-being (smiles, |

|                          |                              |   |                                     |  |  |   |  |
|--------------------------|------------------------------|---|-------------------------------------|--|--|---|--|
|                          |                              |   |                                     |  |  |   | laughter)  |
| Hain, et al. (2007)      | Qualitative, grounded theory | Convenience, expert nurse participants (n=9)                    | Interviews                          | Ottawa, Ontario, Canada  | Examine how critical care nurses practice nurse presence with their patients.  | NONE  | <b><i>Presence as a practice emerged as a three-phased process:</i></b> 1) commitment, (initial sensing & engagement), 2) presencing strategies, & 3) connection. Ways of being: empathetic, authentic. Ways of doing: advocacy, reassurance, support. |
| Hanson (2004)            | Qualitative, descriptive     | Random, regionalized mailing to critical care nurses (n=84)     | Mailed survey                       | Southwest US   | Identify categories or patterns related to caring based on personal experiences of critical care nurses & determine whether findings validate Swanson's Caring Theory. | Survey with 13 demographic items & 2 open-ended questions | <b><i>"Being there"</i></b> included themes of taking time to listen, asking questions and allowing time to talk, and doing little things. This theme seemed to validate Swanson's "Being With" component of theory.                                   |
| Jackson (2004)           | Qualitative                  | Homogenous, criterion & network, medical-surgical nurses (n=11) | Semi-structured depth interviews    | University-affiliated, community hospitals in large metropolitan area (US) | What factors contribute to nurses' self-image as a healer or self-image of not being a healer?   | NONE  | Emergent themes: Healing is about caring connections/relationships, & involves <b><i>nursing presence (listening, being with)</i></b> .  |
| MacKinnon, et al. (2005) | Hermeneutic                  | Purposive, post-partum women within 6 months of delivery (n=6)  | Audiotaped & transcribed interviews | Urban center in Canada   | What meanings do women in labor attribute to the intrapartum nurse's presence during their childbirth experience?  | NONE  | <b><i>Nurse presence</i></b> was the way in which a nurse was "there for them" described as: to be available, be emotionally involved, help create special moments, hear/respond to concerns, share responsibility for keeping them safe, & to be      |

|                         |                          |   |  |  |  |      |   |
|-------------------------|--------------------------|---|--|--|--|------|---|
|                         |                          |   |  |  |  |      | a go between with them & family. Other key concepts included nurse competence, being known & understood & getting to know the nurses. <b>Nursing presence</b> involved being there (physical presence), being with (emotional presence) & being for (advocacy).   |
| Mohnkern, S. (1992)     | Qualitative              | Nurses (n=15)   | Interviews   | Southwest US   | Describe antecedents, defining attributes & consequences of presence.  | NONE | <b>Antecedents:</b> Patient in need who trusts the nurse, Nurse with mission & desire to help patient (altruism), has an affinity for patient, demonstrates instinct, insight, intuition, maturity/self-confidence. <b>Defining attributes:</b> initial physical closeness, metaphysical connection/exchange. <b>Consequences:</b> positive patient progress, improved patient functioning or death, patient desire for more nurse contact, nurse availability continues, nurse personal & professional development promoted. |
| Osterman, et al. (2010) | Qualitative, descriptive | Convenience, Nurses (n=5), hospital inpatients (n=10) | Participant-observation, with informal & formal interviews | 30-35 bed oncology unit in a 275-bed community hospital in New | Identify & describe various forms of presence that occurred with any one nurse while providing daily care on an oncology unit. | NONE | <b>Nursing presence</b> was not a deliberate nursing strategy. Presence was embedded in individual nurses' manner & approach & easily identified by patients. Cues from the patients were the stimulus for  |

|                     |                           |  |                            |  |   |      |   |
|---------------------|---------------------------|--|----------------------------|--|---|------|---|
|                     |                           |  |                            | England, US  | Determine if similarities existed in the use of presence between nurses.  |      | guiding the level of presence provided by the nurse (partial or full). Openness & spontaneity to respond & alter levels of presence was based on the interplay between the patient's needs and behaviors, the current context of the unit & the nurse's past experience.  |
| Pettigrew (1988)    | Phenomenological          | Purposive, Family members of cancer patients (n=6) | Un-structured interviews   | After death of terminal patient, Western US        | What are the essential elements of the lived-experience of the nurse's presence as experienced by family members or friends of a terminally-ill cancer patient? | NONE | Nurse's presence evolved around time of crisis. Presence recognized by: deliberate behavior, verbal affirmation, good listening & non-verbal skills, clinical competency, spiritual care, action beyond ordinary, unrestricted availability, compassion, valuing personhood & staying power, nurse vulnerability/investment. Occurs upon invitation from the suffering. |
| Reis, et al. (2010) | Qualitative, interpretive | Purposive, parents of NICU patients (n=10)         | Semi-structured interviews | Tertiary-level care 69-bed NICU in Alberta, Canada | Explore parental perceptions of the nurse's contribution to the parents' NICU experience & their satisfaction with the care of the infants.                     | NONE | Perceptive engagement, cautious guidance, and <i>subtle presence</i> were seen as antecedents in development of their relationship with the bedside nurse. Ideal nurses seen as teacher, guardian, and facilitator. <i>Presence is described as being available &amp; accessible to parents to support them, offering constructive correction, and</i>                  |

|                          |             |                                      |                       |   |  |      |  |
|--------------------------|-------------|--------------------------------------|-----------------------|---|--|------|--|
|                          |             |                                      |                       |   |  |      | <i>providing parents with positive affirmation.</i> A model of negotiated partnership is provided.   |
| Turner d.& Stokes (2006) | Hermeneutic | Convenience, Registered Nurses, n=14 | Individual interviews | Acute care hospital & long-term care facility in Melbourne, Australia | Understand the hope-facilitation strategies used while caring for patients | NONE | Two emergent themes: “connecting with the inner being” & “journeying with them, building trust over time” are aligned with <i>presencing</i> . Type of facility and potentially length of time together impacted the depth of hope facilitation. |

## APPENDIX L

**Table 4. Nursing Presence Inpatient Research - Quantitative**

| Author/Title         | Study Design                        | Sample Type & Size  | Data Sources   | Setting                                    | Research Questions/Hypothesis  | Instruments  | Results/Comments  |
|----------------------|-------------------------------------|---|--|--|--|--|---|
| Busch, et al. (2012) | Quantitative, comparative two group | Randomised block, hospitalized patients receiving either therapeutic touch (TT) (n = 8) or nurse presence (NP) (n = 11) | Instruments, saliva cortisol, pain medication administration records | 20 bed burn ward in Rotterdam, Netherlands | Will TT or NP have different effects of reducing anxiety, pain, cortisol level and pain medication in burn patients? | Burn Specific Pain Anxiety Scale (BSPAS) for pre-procedure pain/anxiety, & Visual Analog Thermoment (VAT) for actual pain, | Anxiety: no statistically significant differences found between interventions except by day 10 with post-procedure anxiety 19.0 (TT) vs. 38.7 (NP), $p \leq 0.05$ . Pain: no statistically significant differences between groups. Cortisol: On day 2 of tx, the TT group showed a statistically higher cortisol level compared with the NP group before dressing change (12.2 vs. 5.8, $p = 0.014$ ). Pain medication: NP patients received more morphine than TT patients on day 1 ( $p = 0.037$ ) & day 2 ( $p = 0.015$ ). When taking all pain medications together in a sum score, no significant differences were noted between groups. |
| Foust (1998)         | Quantitative                        | Random, registered nurses (n=210)   | Survey instruments   | South central US                           | Examine relationship of presence, self-esteem, and demographic   | Measurement of Presence Scale (Hines, 1991), MOP Visual  | Presence level and self-esteem level was high with respective means of 231, SD = 16.52 and 34, SD = 4.46. The mean of the MOPVAS was 85, SD = 1.73.   |

|                   |                                      |  |                    |  |  |  |   |
|-------------------|--------------------------------------|--|--------------------|--|--|--|---|
|                   |                                      |  |                    |  | characteristics of registered nurses and conduct instrument development.   | Analog Scale (MOPVAS), & Rosenberg Self-Esteem Scale (RSES)  | Reliability MOPS = alpha of .9106, for Rosenberg's Self-Esteem Scale alpha = 0.8571. Internal consistency for MOPS 0.8512. Validity supported with low correlations of MOPS and MOPVAS $r = 0.263$ ( $p = 0.01$ ) and MOPVAS and RSES $r = .329$ . ( $p = .01$ ). MOPS factor analysis subscale factors was different than for Hines, 1991, but similar. <b>Results supportive of instrument measurement of presence.</b> |
| Hansbrough (2011) | Quantitative, instrument development | Convenience, hospitalized patients (n=75), & nurses (n=24) | Survey Instruments | Western US   | What is the reliability & validity of the PONS as tested against a single-item measure of patient satisfaction? What is the relationship between PONS score and levels of nursing expertise (NEL)? | Presence of Nursing Scale (PONS), a single-item measure of patient satisfaction, & Nurse Expertise Level (NEL) | PONS reliable with Cronbach's alpha = 0.937, Correlation between PONS & patient satisfaction large as determined by Spearman's rho ( $p < 0.01$ ). Nursing expertise level categorized for all nurse participants. Correlations between NEL & PONS were inconclusive.   |
| Hines (1991)      | Quantitative, exploratory            | Convenience, registered nurses (n=324)                     | Survey Instrument  | Hospitals, clinics & locations for nurses meeting in the Midwest, West, & South US | To test and explore the Measurement of Presence Scale (MOPS) to conduct scholarly inquiry about the phenomenon of presence. Reliability will be $> .70$ for the                                    | Measurement of Presence Scale (MOPS)   | MOPS reliability with Cronbach's alpha = 0.9324. Subscale alpha correlation coefficients $> .060$ . Nine subscales were interpreted: 1) valuing/attending to self/others, 2) connecting, 3) transacting, 4) enduring memory from past, 5) engaging  |

|                            |   |   |                                      |   |  |  |   |
|----------------------------|---|---|--------------------------------------|---|--|--|---|
|                            |   |   |                                      |   | tool and > .60 for subscales.  |  | for growth, 6) encountering, 7) availability, 8) person or even sustaining memory, and 9) disclosing & enclosing. Correlation between total MOPS and subscales was significant at the 0.01 level.   |
| Kostovich (2002 & 2012)    | Quantitative, field testing of instrument | Convenience, acutely ill, hospitalized adult patients   | Instrument                           | Medical-surgical units of hospital Midwest, US  | Develop and conduct psychometric testing on first patient-perceived measurement scale for nursing presence | <i>Presence of Nursing Sale</i> , new instrument | Instrument addressed 25 items identified by prior nursing presence concept analysis and based on Paterson & Zderad's (1976) theoretical framework. Construct validity was established by comparing the total instrument score with a single-item measure of patient satisfaction with a very high positive correlation (rpb=.801). Reliability (Cronbach's alpha) was 0.95 and test-retest reliability of 0.729.      |
| Papastavrou, et al. (2011) | Quantitative, descriptive comparative     | Convenience sample from 34 hospitals. Surgical inpatients (n=1537) & their nurses for that shift (n=1148) | Participant-completed questionnaires | Inpatient surgical wards in six European countries: Cyprus, the Czech Republic, Finland, Greece, Hungary, & Italy | Compare patients' & nurses' perceptions of caring behaviors.   | Caring-Behaviors Inventory – 24                  | Significant differences found between patient and nurse views on the sub-scale of <b><i>“assurance of human presence”</i></b> with nurses rating themselves higher than the patients (p < 0.001), while the sub-scale of positive connectedness was not significantly different. Factors for assurance of presence included: visiting the patient, communicating, encouraging calling, & responding to patient calls. |



## APPENDIX M

**Table 5. Comparison of PONS Items to Mid-Range Theory of Nursing Presence**

### Components

| Item Number | Item Measure                      | Theory Components Analysis   |
|-------------|-----------------------------------|--|
| 2           | Nurse open to patient concerns    | Degree of intention to be present, nurse openness  |
| 3           | Nurse teaching                    | Knowledge, professional maturity, ability to determine need  |
| 4           | Nurse “checked on” me             | Recognition of need, intention to be present, impacted by competing demands, correct dose                                    |
| 5           | Nurse met spiritual needs         | Knowledge, personal/moral maturity, spirituality of dyad   |
| 6           | Nurse talked as friend            | Relational maturity, relationship history, nurse openness  |
| 7           | Nurse physically comforted        | Knowledge, degree of presencing intent, Comfort is desired patient outcome of presence                                       |
| 8           | Nurse emotionally comforted       | Relational maturity, degree of presencing intent, Comfort is desired patient outcome of presence                             |
| 9           | Nurse understood feelings         | Relational maturity, ability to recognize needs  |
| 10          | Nurse earned trust                | Knowledge, relational maturity, Trust is precursor to patient openness to presencing   |
| 11          | Nurse skilled in care             | Knowledge, ability to recognize need, degree of intent to present  |
| 12          | Nurse there when needed           | Ability to recognize need, professional maturity to cope with workload demands, degree of intent to be present, correct dose |
| 13          | Nurse helped day run smooth       | Ability to recognize need, professional maturity to cope with workload demands   |
| 14          | Nurse created sense of healing    | Desired client outcome   |
| 15          | Nurse listened/responded to needs | Relational maturity, knowledge, professional maturity, recognition of needs, degree of intent to be present, correct dose    |
| 16          | Nurse calmed fears                | Desired client outcomes  |
| 17          | Nurse concerned about me          | Relational maturity, degree of intent to be present, recognition of needs  |
| 18          | Nurse committed to care           | Moral maturity   |
| 19          | Nurse made me feel safe           | Relational maturity, knowledge, Desired client outcome   |
| 20          | Nurse made me feel at peace       | Relational maturity, knowledge, Desired client outcome   |
| 21          | Nurse fostered personhood         | Professional, relational, personal & moral maturity  |
| 22          | Nurse gave control                | Desired client outcome, correct dose   |
| 23          | Nurse improved quality of life    | Desired client outcome   |
| 24          | Confidence in nurse               | Knowledge, professional, relational maturity, degree of intent to be present, recognition of needs, correct dose             |
| 25          | Connection with nurse felt        | Presencing experience  |
| 26          | Presence made difference          | Presencing experience, correct dose, Patient perception of desired client outcome  |

## APPENDIX N

**Table 6. Patient Demographics**

|   |  |                         |                             |                 |                        |                  |
|---|--|-------------------------|-----------------------------|-----------------|------------------------|------------------|
| <b>Gender</b>                           | <b>Male</b>  |                         |                             | <b>Female</b>   |                        |                  |
|   | 56.1% (N=64)   |                         |                             | 43.9% (N=50)    |                        |                  |
| <b>Age</b>                              | <b>Young Adult (18-40)</b>   |                         | <b>Middle Adult (41-64)</b> |                 | <b>Elderly (65+)</b>   |                  |
|   | 11.4% (N=13)   |                         | 57% (N=66)                  |                 | 31.6% (N=36)           |                  |
| <b>Ethnicity</b>                        | <b>Caucasian</b>   | <b>African American</b> | <b>Hispanic</b>             |                 | <b>American Indian</b> | <b>Other</b>     |
|   | 73.7% (N=84)   | 23.6% (N=27)            | 0.9% (N=1)                  |                 | 0.9% (N=1)             | 0.9% (N=1)       |
| <b>State of Residence</b>               | <b>North Carolina</b>  |                         | <b>Virginia</b>             |                 | <b>W. Virginia</b>     |                  |
|   | 86.8% (N=101)  |                         | 11.3% (N=13)                |                 | 0.9% (N=1)             |                  |
| <b>NC Region</b>                        | <b>Piedmont</b>  | <b>Mountains</b>        | <b>Metrolina</b>            | <b>Triangle</b> | <b>Sandhills</b>       | <b>Southeast</b> |
|   | 77.5% (N=79)   | 12.7% (N=13)            | 3.9% (N=4)                  | 3.9% (N=4)      | 1% (N=1)               | 1% (N=1)         |
| <b>Employment Status</b>                | <b>Employed</b>  |                         | <b>Unemployed</b>           |                 | <b>Retired</b>         |                  |
|   | 32% (N=39)   |                         | 31.1% (N=38)                |                 | 36.9% (N=45)           |                  |
| <b>Annual Household Income</b>          | <b>Below 10K</b>   |                         | <b>10K-30K</b>              | <b>30K-60K</b>  | <b>60K-100K</b>        | <b>Over 100K</b> |
|   | 23.6% (N=26)   |                         | 34.6% (N=38)                | 23.6% (N=26)    | 12.7% (N=14)           | 5.5% (N=6)       |
| <b>Average Days on the Unit</b>         | 39 day range [(1 day minimum; 40 day maximum); mean = 7.57, stand deviation = 7.72]. |                         |                             |                 |                        |                  |
| <b>Number of RNs that provided care</b> | 38 RN range [(2 minimum; 40 maximum); mean = 8.68; standard deviation = 6.91].       |                         |                             |                 |                        |                  |

## APPENDIX O

**Table 7. Unit-Specific Nursing Workforce Data**

| <b>Nursing Unit</b>            | <b>Sample Percentage</b> | <b>Average RN Experience Level in Years</b> | <b>Average RN Age in Years</b> | <b>RN Percentage Associates Degree</b> | <b>RN Percentage Bachelor's Degree</b> | <b>RN Percentage Master's Degree</b> | <b>Annual RN Turnover Rate</b> |
|--------------------------------|--------------------------|---|--------------------------------|--|--|--------------------------------------|--------------------------------|
| <b>*Trauma Surgery</b>         | <b>10.7%</b><br>(N=13)   | <b>6</b>                                    | <b>40</b>                      | <b>26.9</b>                            | <b>69.2</b>                            | <b>3.8</b>                           | <b>18.18</b>                   |
| <b>General Medicine #1</b>     | <b>4.9%</b><br>(N=6)     | <b>4</b>                                    | <b>37</b>                      | <b>31.7</b>                            | <b>65.9</b>                            | <b>2.4</b>                           | <b>9.84</b>                    |
| <b>General Medicine #2</b>     | <b>13.1%</b><br>(N=16)   | <b>5</b>                                    | <b>39</b>                      | <b>46.9</b>                            | <b>46.9</b>                            | <b>6.3</b>                           | <b>22.64</b>                   |
| <b>Medicine /Renal</b>         | <b>9%</b><br>(N=11)      | <b>6</b>                                    | <b>37</b>                      | <b>12.5</b>                            | <b>78.1</b>                            | <b>9.4</b>                           | <b>17.86</b>                   |
| <b>Cardiothoracic Surgery</b>  | <b>9%</b><br>(N=11)      | <b>5</b>                                    | <b>36</b>                      | <b>48</b>                              | <b>52</b>                              | <b>0</b>                             | <b>21.05</b>                   |
| <b>Cardiology</b>              | <b>5.7%</b><br>(N=7)     | <b>10</b>                                   | <b>43</b>                      | <b>20</b>                              | <b>72</b>                              | <b>8</b>                             | <b>19.61</b>                   |
| <b>Hematology /Oncology #1</b> | <b>9%</b><br>(N=11)      | <b>7</b>                                    | <b>38</b>                      | <b>30.9</b>                            | <b>61.8</b>                            | <b>7.3</b>                           | <b>23.53</b>                   |
| <b>Hematology /Oncology #2</b> | <b>14.8%</b><br>(N=18)   | <b>3</b>                                    | <b>36</b>                      | <b>45.3</b>                            | <b>49.1</b>                            | <b>5.7</b>                           | <b>16.09</b>                   |
| <b>Gyn Oncology Surgery</b>    | <b>8.2%</b><br>(N=10)    | <b>6</b>                                    | <b>37</b>                      | <b>25</b>                              | <b>67.9</b>                            | <b>7.1</b>                           | <b>4.0</b>                     |
| <b>Surgical Oncology</b>       | <b>15.6%</b><br>(N=19)   | <b>5</b>                                    | <b>37</b>                      | <b>43.9</b>                            | <b>51.2</b>                            | <b>4.9</b>                           | <b>21.33</b>                   |

\*indicates divergent sample

## APPENDIX P

**Table 8. Comparison of eigenvalues from EFA and corresponding criterion values  
obtained from parallel analysis**

| <b>Component number</b> | <b>Actual eigenvalue from PCA</b> | <b>Criterion value from parallel analysis</b> | <b>Decision</b> |
|-------------------------|-----------------------------------|---|-----------------|
| 1                       | 15.865                            | 1.9745  | Accept          |
| 2                       | 1.183                             | 1.7988  | Reject          |
| 3                       | .867                              | 1.6801  | Reject          |
| 4                       | .819                              | 1.5776  | Reject          |

## APPENDIX Q

**Table 9. Factor Loadings for PONS-R with VARIMAX rotation**

**Component Matrix<sup>a</sup>**

|  | Component |      |
|--|-----------|------|
|  | 1         | 2    |
| Committed to Care                        | .879      |      |
| Connection with RNs                      | .877      |      |
| Confidence in RNs                        | .860      |      |
| Made Quality of Life Better              | .859      |      |
| Earned Trust                             | .854      |      |
| Concerned About Me                       | .850      |      |
| Created Sense of Healing                 | .843      |      |
| Made Feel at Peace                       | .842      |      |
| Made Feel Safe                           | .840      |      |
| Day Ran Smooth                           | .825      |      |
| Listened/Responded to Needs              | .825      |      |
| Understood Feelings                      | .820      | .317 |
| NP Made Difference                       | .810      |      |
| Calmed Fears                             | .809      |      |
| Care as Person, not Disease              | .798      |      |
| Gave Control as Possible There If Needed | .781      |      |
| Open to Concerns                         | .770      |      |
| Skilled in Care                          | .765      |      |
| Emotionally Comforted                    | .763      |      |
| Physically Comforted                     | .739      | .515 |
| Taught What Needed                       | .732      | .414 |
| Talked As Friend                         | .715      |      |
| Talked As Friend                         | .709      |      |
| Checked On Me                            | .675      |      |
| Met Spiritual Needs                      | .604      | .492 |

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**APPENDIX R**

**Table 10. Pattern Matrix with Oblimin rotation (2-factors forced)**

**Pattern Matrix<sup>a</sup>**

|                             | Component |      |
|-----------------------------|-----------|------|
|                             | 1         | 2    |
| Committed to Care           | .964      |      |
| Made Feel Safe              | .925      |      |
| Confidence in RNs           | .893      |      |
| Open to Concerns            | .887      |      |
| Listened/Responded to Needs | .884      |      |
| Concerned About Me          | .872      |      |
| Made Feel at Peace          | .867      |      |
| Made Quality of Life Better | .855      |      |
| Care as Person, not Disease | .842      |      |
| Day Ran Smooth              | .819      |      |
| There If Needed             | .791      |      |
| Created Sense of Healing    | .756      |      |
| Calmed Fears                | .708      |      |
| NP Made Difference          | .703      |      |
| Checked On Me               | .654      |      |
| Gave Control as Possible    | .641      |      |
| Taught What Needed          | .637      |      |
| Connection with RNs         | .623      | .321 |
| Earned Trust                | .591      | .332 |
| Skilled in Care             | .563      |      |
| Emotionally Comforted       |           | .891 |
| Met Spiritual Needs         |           | .828 |
| Physically Comforted        |           | .748 |
| Understood Feelings         | .309      | .631 |
| Talked As Friend            |           | .541 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

**APPENDIX S**

**Table 11. Comparison of PONS-R to Unit-specific Workforce Factors**

|        | Avg. RN Experience Level | Avg. RN Age | % RNs with Associate's Degree | % RNs with Bachelor's Degree | % RNs with Master's Degree | RN Turnover Rate |
|--------|--------------------------|-------------|-------------------------------|------------------------------|----------------------------|------------------|
| PONS-R | r = -.185 *              | r = -.218   | r = .213 *                    | r = -.212*                   | r = -.077                  | r = -.048        |

\*= statistically significant at the .05 level.

\*\*= statistically significant at the .01 level.

## VITA

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