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# Patients' Perceptions of Nurse Caring Behaviors in an Emergency Department

Thesis submitted to

Marshall University College of Nursing and Health Professions

In partial fulfillment of the

Requirements for the degree of

Master of Science in Nursing Administration

By

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as meeting the research requirements for the master's degree.

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#### Abstract

#### Patients' Perceptions of Nurse Caring Behaviors in an Emergency Department

The purpose of this study was to (a) determine which caring behaviors of the nurse do patients' perceive as being the most and the least important, (b) examine patients' perceptions of nurse caring behaviors in relationship to their age and perception of illness; and (c) compare and contrast responses between patients and parents of children who are patients. Data for this questionnaire (N = 59) were collected over a two-month period at a not-for-profit, teaching hospital, which specializes in the care of women and children in an Appalachian state located in the southeastern United States. The Caring Behaviors Assessment instrument is a 63-item questionnaire and used a Likert-type summation scale. An additional three qualitative questions were asked to correlate data with patients' age range, perception of severity of illness, and whether or not the person completing the survey was a patient or a parent of a patient. Analysis of data was completed using descriptive and inferential statistics. The results of this study revealed Human Needs Assistance as the most important subscale and this correlates with the results of other similar studies using the CBA tool. The results of the study also revealed, "being kind and considerate" as the single most important behavior by the nurse to indicate a sense of caring by the patient or parent of a patient. This finding is mirrored in other studies as the most important behavior; however, "being kind and considerate" is found in the top ten lists of most important single items in other studies using the CBA tool.

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#### Chapter One

#### Introduction

The purpose of this chapter was to describe the purpose of the study, provide background information, state the research questions, define the operational terms and discuss the importance of the study in terms of administration, practice and education.

#### Purpose of the Study

The purpose of the study was to determine which behaviors of nurses do patients' perceive as demonstrating caring. The concept of caring has been described as a complex human phenomena and an ontological state of being (Watson, 2002), which manifests itself externally through thoughts, actions, and behaviors. In order to better meet the needs of patients, it is important that nurses understand and identify which behaviors patients view as caring behaviors in order to optimize the nurse-patient experience. Patients who feel cared for achieve higher levels of coping skills, report increased satisfaction with the care they receive and are less likely to seek litigation.

#### Background

The shortage of nurses and the decreased length of stay for patients in hospitals have created a chaotic healthcare environment. The importance of knowing what patients' perceive as caring behaviors is a key element to providing compassionate nursing care. The concept of caring is considered a basic characteristic of the profession of nursing and it has been studied over the years in a variety of patient care and educational settings (Kipp, 2001). Latham (1996) says that positive caring experiences with healthcare personnel results in more effective coping by patients. Davis and Duffy (1999) describe the relationship between nurse caring behaviors and patient satisfaction as having a high

correlation. Tucker (1998) notes the importance in maintaining high patient satisfaction with regards to healthcare facilities winning contracts from third-party payers. Caring is also considered an important value in the business arena in order to successfully provide cost effective services (Issel & Kahn, 1998).

Several theorists (Benner & Wrubel, 1989; Habermas, 1995; Leininger, 1981; Watson, 1979) have spoken to the importance of caring in nursing. Each acknowledges the value of caring, but addresses the concept of caring from different perspectives.

Information regarding the patients' perception of caring in ambulatory areas, specifically in an ED is limited. Research regarding patient satisfaction in these areas confirms that patients who experience a sense of caring from ED personnel have a higher patient satisfaction score (Hudson & Terese, 1992). In a study completed by Watson, Marshall, and Fosbinder (1999) the elderly patient seen in an ED listed "caring service" as an important indicator of patient satisfaction. Kipp (2001) describes the patients' perception of a caring attitude by the nurse as a significant quality outcome factor noting that after implementation of caring standards in an ED setting patient satisfaction increased. These caring standards consisted of effective communication, courteous consideration, respect, attentiveness, and promotion of a sense of rest and protection to patients and their families.

#### Significance

The environment in which nurses' provide care for their patients has become one, which suffers from short-staffing, mandatory overtime hours, extensive documentation requirements, and limited resources. Increasing admission rates coupled with prolonged Emergency Department (ED) stays due to bed shortages and increasing workloads have

left ED nurses anxious as to whether or not they are meeting their patients needs (Baldursdottir, Jonsdottir, Reykjavik, 2002). Changes in insurance reimbursement have shortened the length of hospital stays for many patients (Wolf, Colahan, Costello, Warwick, Ambrose and Giardino, 1998). The result of interactions in this type of environment may promote frustration, anxiety, and a sense of not being cared for by nurses. This may be especially true in a busy ambulatory patient setting where the nurse has only a few hours or less to provide care to a patient in such a way that conveys a sense of caring. Portraying a caring attitude is important in promoting patient satisfaction and warding of potential litigation (Hudson & Terese, 1992). Caring also has an ethical and a moral component and it is an essential element in forming successful temporary relationships where goals and satisfaction can be achieved (Sumner, 2001).

The American Nurses Association's publication titled Nursing's Social Policy Statement (1998, p. 6) states

"definitions of nursing more frequently acknowledge four essential features of contemporary nursing practice" including "provision of a caring relationship that facilitates health and healing."

This study is important because in order for the Profession of Nursing to meet its social obligation to provide a "caring relationship" in which our services are given we must explore what constitutes a caring relationship for our patients. The objectives of this research are to (a) identify behaviors by the nurse which elicit a sense of caring as perceived by the patient and (b) which caring behaviors of the nurse are perceived by the patient and the least important.

#### **Problem Statement**

Identification of those nursing behaviors, which reflect the patient's perception of caring is the problem. The perception of an uncaring environment can lead to increased anxiety and diminished coping abilities for the patient. The perception of an uncaring environment can also contribute to financial loss and litigation for the nurse and the healthcare institution (Hudson & Terese, 1992). The purpose of this study will be to examine which behaviors the patients' perceive as being indicators of caring on the part of the nurse in the ED The knowledge gained from this study could be used to educate nurses on those behaviors which stimulate a perception of caring for the patient; thus, lessening patient anxiety, supporting positive coping, and avoiding financial loss and litigation.

#### **Research Questions**

Using the Caring Behaviors Assessment questionnaire the following are the questions this research study will address:

- 1. What behaviors by the nurse elicit a sense of caring as perceived by the patient receiving care in the Emergency Department?
- 2. Which caring behaviors of the nurse are perceived by the patient as being most and least important?

#### **Operational Definitions**

For the purpose of this study, the operational definitions will include the following: *Caring*: is defined using Jean Watson's ten carative factors which include a) formation of humantistic-alturistic system of values which can be described as satisfaction through giving and the extension of the sense of self, (b) instillation of faith-hope which describes

an effective nurse-patient relationship that promotes health-seeking behaviors, (c) cultivation of sensitivity to self and others which describes a self actualization process on the part of the nurse that allows the nurse to be more sensitive to others, (d) development of a helping-trust relationship which is evidenced by congruence, empathy and effective communication, (e) promotion and acceptance of the expression of positive and negative feelings, (f) using scientific problem-solving for decision making, (g) promotion of interpersonal teaching-learning which encourages the patient to provide self care to promote personal growth and wellness, (h) recognition of the internal and external environment on the health and illness of individuals, (I) assistance to meet human needs realizing basic needs must be met before other needs can be addressed, and (j) helping patients develop their own health promotion strategies. The patients' perception of caring is the dependant variable and will be measured using the Caring Behaviors Assessment tool (CBA).

*Nurse caring behaviors*: refer to those physical, emotional and spiritual interactions of the nurse as perceived by the patient that result in the satisfaction of certain human needs as measured by the CBA questionnaire. Watson defines these behaviors as carative factors and these are the independent variables of the study.

#### Significance of the Problem

*Nursing Practice.* Research has demonstrated that patients who feel they have been cared for report a higher level of satisfaction with their nursing care (Wolf, Calahan, Costello, Warwick, Ambrose, & Giardino, 1998. Defining which aspects of the nurse's behaviors affects the perception of caring is an important step in supporting evidenced based practice initiatives that may improve patient care and patient satisfaction. The results of

this study can be used to design an educational program for staff in the ED in order to enhance patient satisfaction.

*Nursing Administration.* Issel and Kahn (1998) report that caring behaviors enhance patient satisfaction and increased patient satisfaction has a positive affect on the generation of revenue for the facility. Patients who feel cared for are more likely to communicate their needs more effectively, become active participants in their own care, and seek litigation less often. The results of many studies on caring seem to suggest that patients equate their perception of caring to the level of competency of the care giver (Schultz et al, 1998).

This information may be relevant to institutions that support the sharing or "floating" of nurses from one unit to another throughout the hospital. How can a nurse appear competent in every area of practice? What impact does the lack of competency have on patients' perception of caring? These are a few questions that must be asked in today's fast paced, short- staffed environment. The results of this research will provide insight to Nurse Administrators who are seeking to improve patient satisfaction in the Emergency Department.

*Nursing Education.* Identification of the patients' perception of nurse caring behaviors will aide educators of nursing students who are teaching students how to operationalize the concepts and theories associated with nurse caring behaviors to benefit patients. Hospital orientation programs may also benefit from this knowledge by providing information to new nurses that will improve performance and better meet the needs of the patients. The results of this study will provide direction for educational development of nursing student and staff members in the ED.

# Summary

The ability to provide competent, cost-effective services in a caring environment is an ongoing challenge. The patients' perception of being cared for in a caring environment has been linked to increased patient satisfaction and a decreased incidence of litigation. The results of this study can be used to support and design program development for staff nurses and nursing students by Nursing Administrators and Educators. Nursing practice will be enhanced by the use of evidence based practice initiatives.

#### Chapter Two

The patients' perception of nurse caring behaviors has been researched in several areas of practice using Cronin and Harrison's Caring Behaviors Assessment instrument. The following review of the literature discusses five of those research studies.

#### Literature Review

Schultz, Bridgham, Smith and Higgins (1998) conducted an exploratory comparative survey examining the perceptions of nurse caring behaviors of the hospitalized long-term antepartum patient and the short-stay postpartum patient. The purpose of the study was to identify differences between the groups regarding what nurse caring behaviors were most and least important. The study was conducted at a 40-bed maternity unit that serves as a high-risk referral center for the state. Following approval from the hospital institutional review board, a non-probability convenience sample of antepartum and short-stay postpartum patients were recruited to participate. The convenience sample consisted of 21 antepartum patients and 21 postpartum patients. Inclusion criteria for the antepartum patients consisted of having a hospital stay prior to delivery of at least seven days. The inclusion criteria for the short-stay postpartum patient consisted of those who remained in the hospital 24-36 hours after delivery. Exclusionary criteria included a hospital stay less than 24 hours, women who were hospitalized 48-167 hours predelivery, women who had experienced fetal loss, women who remained hospitalized longer than 36 hours postpartum, women with secondary psychiatric diagnosis, and women unable to read, write, speak or comprehend English.

The Caring Behaviors Assessment tool was the instrument used for this study and was given to the antepartum patients during their stay in the hospital. The postpartum patients

received the survey through a mail after agreeing upon discharge to participate in the study. Thirty-five questionnaires were mailed and yielded a 60% response rate. There were no statistically significant differences in the mean age of the antepartum participants (M = 27.2, SD = 6.03) as compared to the postpartum participants (M = 29.7, SD = 3.7) or in the average number of years of education. There was a significant difference in marital status between the groups, with 19 married women in the postpartum group as compared to only 13 married women in the antepartum group. The antepartum participants reported and average of 2.9 pregnancies as compared to the postpartum participants who's average was 2.5 pregnancies. This was the first pregnancy for 10 of the participants.

Computations of mean scores and standard deviations for each item showed no statistically significant differences in total mean scores between the groups. Individual item scores ranged from means of 2.29-4.9. There were no significant correlations between the total score for the CBA and age, years of education, para, or gravida of the respondents. There was not a statistically significant difference in the total mean CBA score of married women (M = 267.1, SD 23.5 and unmarried women (M = 258.5, SD = 23.4). The subscale scores also showed no significant difference between the groups and items in the Human Needs Assistance subscale ranked highest as seen in previous studies. Schultz et al. suggest that since items in this subscale reflected the nurses' level of knowledge; patients may equate caring with competence. Items in the Existential/Phenomenological/Spiritual group ranked the lowest for both groups. Limitations to the study included use of a small sample size and the length of the CBA tool.

Dorsey, Phillips, and Williams (2001) conducted a descriptive correlational study to explore differences in adult patients' perceptions of nurse caring behaviors between a group of patients with sickle cell disease (SCD) and a group of patients with general medical conditions. They also examined the differences of perceptions of nurse caring behaviors between men with SCD and women with SCD. Following approval from the Ethics Committee of the College of Nursing at the University of South Carolina a sample of 29 African American adults with SCD was conveniently recruited from support group members of sickle cell foundations throughout the state of South Carolina. A comparison sample of 34 African American adults who had been hospitalized for other medical conditions was conveniently recruited from a large regional hospital in South Carolina. A modified version of the Caring Behaviors Assessment tool (CBA) was used to identify patients' perception of the degree of caring behaviors demonstrated by healthcare providers. The seven subscales of the modified version yielded a Cronbach's coefficient alpha range of  $\alpha = .88$  to .94. The modification consisted of changing the wording and was used to measure patient satisfaction with nursing care. The instruments were distributed to the patients' with SCD using the snowball technique.

Inclusion criteria for the study consisted of African American adults with SCD, 18 years of age or older, able to read and write English, give informed consent, and who had been hospitalized in the past year because of SCD. The SCD sample consisted of 29 participants (11 males, 18 females) and the general medical sample consisted of 34 participants (11 males, 23 females). The mean age of the SCD sample was 35.8 years (SD = 3.9) and the mean age for the general medical patients was 48.9 (SD = 1.9). The mean age for men in the SCD sample was 39.1 (SD = 12.9), and the mean age for women in the

SCD sample was 33.72 (SD = 8.12). Demographics reported with regards to socioeconomic levels of the adults with SCD appeared to be similar.

A packet containing the instrument, a consent form and a stamped self-addressed envelope was distributed to the participants by mail or at support group meetings or clinic visits. A reminder post card was sent for instruments not returned within ten days. Data analysis using descriptive statistics was calculated for each demographic variable. Independent t-tests were performed for each of the research questions. Mean scores for the total CBA was 234 (SD=49.2) for adults with SCD and 258 for adults with other medical conditions. Adults with SCD reported a lower perception of nurses' caring behaviors than adults with other medical conditions. The mean score calculated for females with SCD was 216 (SD = 44.) and the mean score calculated for males with SCD was 262.7 (SD =34.3). Men with SCD reported a greater perception of nurses' caring behaviors than women with SCD. Limitations to the study included a small sample size, inability of the patient to distinguish nurses from other healthcare providers such as nurse aids, and participants' responses were retrospective of previous admissions.

Baldursdottir and Jonsdottir (2002) conducted a non-experimental, descriptive study to explore patients' perceptions of caring behaviors received in an Emergency Department environment. The purpose of this study was to identify which nurse caring behaviors are identified as important indicators of caring to the patient. Following approval from the Ethical Committee at the University Hospital in Reykjavik, Iceland (UHI), a nonprobability convenience sample was obtained from a list of patients who were seen in the ED in a one-month time frame and who were not admitted to the hospital after being seen. The convenience sample consisted of 300 adults who were 18

years of age or older. The questionnaire was mailed to the patient two weeks after being discharged with a letter of explanation and a return stamped and addressed envelope. This mailing was repeated at the 4<sup>th</sup> and 6<sup>th</sup> week after discharge to increase the response rate.

One hundred eighty two (61%) of 300 patients returned the 61-item questionnaire, which was designed, based on Cronin and Harrison's Caring Behaviors Assessment (CBA) tool. This instrument consisted of a 5 point Likert-type scale for response to most questions and contained a few open ended questions to enable the patient to make comments regarding additional measures the nurse could have done to make them feel cared for. Using a study sample the seven subscales were measured for internal consistency reliability using Cronbach coefficient alpha  $\alpha = .66$  to .90. The instrument was translated into Icelandic from the English version with the help of three bilingual persons and then pilot tested with 20 patients to ensure that the previously established face and content validity remained. Two items were dropped from the original, as they were not applicable to this culture for this study. Another Cronbach's coefficient alpha revealed internal consistency reliability coefficients ranging from  $\alpha = .69-.89$  for the translated version. Mean scores and standard deviations were calculated for each item, and then the items were grouped into the seven subscales, which consisted of: (a) Human Needs Assistance, (b) Supportive/Protective and Corrective Environment, (c) Teaching/Learning, (d) Humanism/Faith-Hope/Sensitivity, (e) Helping/Trust, (f) Existential/Phenomenological and Spiritual forces, and (g) Expression of Positive/Negative feelings.

Nonparametric Analysis of Variance was completed using the Mann-Whitney U test comparing the subscales with the categories of perceived illness and the demographic

variables. The results showed women's scores were significantly higher than men's scores in all subscales except humanism/faith-hope/sensitivity and expression of positive/ negative feelings. Kruskal-Willis One-Way Analysis of Variance on the subscales in relation to age, education level, and perception of illness showed that age (older people) rated nurse caring behaviors as more important. People with low educational level scored higher on the subscales of (a) Human Needs Assistance, (b) Teaching/Learning, (c) Humanism/Faith-hope/Sensitivity, and (c) Expression of Positive/Negative Feelings. The single most important item from the patients' perception was "know what they are doing". This finding supports Watson's thought that caring is demonstrated by using actions that help the patient to become healthier while maintaining respect and dignity.

Limitations to the study included using only one hospital to collect data, use of a convenience sample, and absence of data from those patients who were too ill and were admitted to the hospital.

Huggins, Gandy and Kohut (1993) conducted a descriptive non-experimental study that attempted to replicate Cronin and Harrison's' study. The convenience sample in this study was taken from a large metropolitan area in Southeastern United States. Two hospitals were used, the first being a large Level II trauma center which had 24, 632 ED visits last year and the other hospital was located 11 miles away in a more residential area section of the city and had 29,179 ED visits in the same year.

Inclusion criteria consisted of the patient being discharged from the ED, having a telephone, and an admission triage sheet on the chart. Data were collected by telephone interviews within 30 days of the patient being discharged. A modified version of the CBA tool was used to accommodate telephone interviews using an ED population. A

Post Hoc Analysis for each of the six subscales using Cronbach's coefficient alpha revealed internal consistency values that were similar to the original tool. The seventh subscale on the original version, which was titled Existential/Phenomenological/ Spiritual, was omitted on the modified tool because the researchers felt the questions associated with this subscale were not applicable to patients' in the ED. Pilot testing of the revised tool indicated a Cronbach's coefficient alpha that closely correlated with the original tool ( $\alpha = .72$ - .87). The tool used 53 nursing behaviors that patients rated on a four-point Likert scale (1=unimportant, 2 = somewhat important, 3 = very important, 4 =absolute must). The sample consisted of 288 patients, yielding a 48% response rate. The patients were triaged by the nurse into three different categories: (a) emergent, (b) urgent, and (c) non-urgent.

Demographic analysis consisted of frequency tables to report patient responses, along with univariate and multivariate nonparametric analysis using Kruskall-Wallis One-Way ANOVA and Chi-Square. Spearmen's rank-order correlation was used to discuss the magnitude of the relationship between the variables. Results of the study were consistent with Cronin and Harrison's findings. The highest ranked subscale across all three triage designations that was the most important indicator of nurse caring was labeled Human Needs and Assistance. This subscale consists of items that reflect the technical competency of the nurse. Interestingly, the non-urgent group of patients listed more nurse caring behaviors as "must-haves" than both the urgent and emergent group. This result indicated that the least ill patients have the highest expectations of nurses for their care. Limitations to this study included inability to generalize the results to other patient populations outside the ED setting. Also, the time interval from the ED experience to data collection may have affected the results because it was as long as 30 days before the

Marini (1999) conducted a non-experimental, descriptive study to explore patients' perceptions of caring behaviors at two long-term care communities. The purpose of the study was to identify which behaviors performed by the nursing staff were important indicators of caring to the older adult patient. Following approval by a college Research Review Committee and approval from the Directors of Nursing at both research sites a convenience sample of 21 older adults were recruited to participate in the study. The inclusion criteria for the study consisted of adults who were 60 years of age or older, were cognitively aware, and had no severe hearing or speech impairment. The sample consisted of fifteen women and six men ranging in ages from 74 to 97 years of age. The mean age of the subjects was 87.9 (SD = 5.87).

Once again Cronin and Harrison's Caring Behaviors Assessment (CBA) tool was used. The print size of the original questionnaire was enlarged for easier reading and one question was changed from "Help me plan for my discharge from the hospital" to "Help me plan for my day" because the latter wording was more appropriate for participants in a long-term care environment. Mean scores and standard deviations were calculated for each item on the questionnaire and results ranged from 4.57 for the most important item ("Knowing what they are doing") to 2.76 (Talk to me about my life before coming to the facility"). Overall item mean scores for each of the seven subscales were calculated and the highest ranked subscale was "Human needs assistance", which consisted of items such as "Know when it's necessary to call the doctor" and "Check on me very closely".

Limitations to the study included a small sample size and the long length of the instrument.

In summary, Baldursdotir and Jonsdottir (2002) study identified the single most important item on the CBA tool that indicated caring from the patients' perceptive was "know what they are doing" which was part of the Human Needs and Assistance subscale. Using the CBA research instrument, patients with a variety of medical needs such as the elderly patient, the pregnant patient or those needing emergency care have consistently identified this subscale as the most important indicator of nurse caring behaviors. In a study by Dorsey et al. (2001), those patients' with sickle cell disease reported a lower perception of nurses' caring behaviors than adults with other general medical conditions. SCD is a complex disease process and the lower perception of nurse caring behaviors in comparison to the patient with general medical conditions may be a reflection of a lack of competency in effectively caring for patient's with this complex disease process. Further research into this area of caring and competency may be indicated.

Patients being cared for in the ED are a diverse group of individuals. They suffer from a broad range of illness and present to the ED in varying stages of acuity. This review of the literature illustrates the perception of caring by several types of patients. These types of patients represent a small sample of the patient population that will be cared for at some point during their illness in the ED. The varying results of these studies support the need for further research regarding the patients' perceptions of nurse caring behaviors in an area where care is provided to a broad range of patient populations in various stages of illness.

#### Theoretical Framework

The theoretical framework being used for this study is a nursing theory known as the Theory of Human Caring by Jean Watson. It was chosen because of its everevolving, well-developed framework incorporating ten elements of caring which she terms "carative factors". The instrument for this study is titled Caring Behaviors Assessment tool (CBA) and it is based on Watson's (1985, 1988) theory (Watson, 2002). The CBA tool identifies seven subsets of questions that encompass all ten carative factors which are as follows: (a) Formation of humanistic-altruistic system of values, (b) Instillation of Faith-Hope, (c) Cultivation of sensitivity to self and others, (d) Development of a helping-trust relationship (e) Promotion and acceptance of the expression of positive and negative feelings (f) Systematic use of the scientific problemsolving method for decision-making (g) Promotion of interpersonal teaching-learning,(h) provision for supportive protective and corrective mental, physical, social cultural and spiritual environment, (i) Assistance with gratification of human needs, (j) Allowance for existential phenomenological forces (Watson, 1979).

As her theory continued to evolve Watson (1996, p.153) describes caring as transpersonal caring which occurs when the nurse "seeks to recognize, accurately detect and connect with the inner condition of spirit of another through genuine presencing and being centered in the caring moment; actions, words, behaviors, cognition, body language, feelings, intuition, thought, senses, the energy field, and so on, all contribute to transpersonal caring connection. The nurse's ability to connect with another at this transpersonal spirit-to- spirit level is translated via movements, gestures, facial expressions, procedures, information, touch, sound, verbal expressions and other

scientific, technical, aesthetic, and human means of communication, into nursing human art/acts or intentional caring-healing modalities."

Watson's theory of caring incorporating the CBA tool has been the basis of several research studies looking at the patients' perception of nurse caring behaviors. Those patient populations which have been studied include (a) post-myocardial infarction patients, (b) medical-surgical patients, (c) post-surgery patients, Emergency Department patients, (d) AIDS patients, (e) obstetric patients, (f) long-term care, assisted living patients, and (g) hospitalized cardiac patients (Watson, 2002). Watson's theory has a strong foundation of support from theorists from other disciplines and her theory of caring is widely accepted. However, the abstractness of the concepts of caring does not allow for clear instruction on how to form a caring relationship. Tomey and Alligood (p.155) noted that Watson's theory "is more about being than about doing and it must be thoroughly internalized by the nurse to be actualized in practice." Watson (2002) admits that caring is a complex phenomenon which may not lend itself to replication by concrete means such as behaviors and tasks. However, because caring is so important to clinical practice continued research to help operationalize Watson's theory of caring is necessary.

#### Summary

The concepts from Watson's theory being used are the ten carative factors which describe elements of caring. The CBA tool which has been used in numerous studies including this study identifies seven subsets of questions that encompass all ten carative factors which are as follows: (a) Formation of humanistic-altruistic system of values, (b) Instillation of Faith-Hope, (c) Cultivation of sensitivity to self and others, (d) Development of a helping-trust relationship (e) Promotion and acceptance of the

expression of positive and negative feelings (f) Systematic use of the scientific problemsolving method for decision-making (g) Promotion of interpersonal teaching-learning,(h) provision for supportive protective and corrective mental, physical, social cultural and spiritual environment, (i) Assistance with gratification of human needs, (j) Allowance for existential phenomenological forces (Watson, 1979).

#### Chapter Three

#### Introduction

This chapter will describe the methodology used to collect and analyze the data. The following topics will be discussed, (a) method, (b) design, (c) setting, (d) sample, (e) instrument, and (f) analysis of data.

#### Method

A non-experimental method was used to determine which behaviors on the part of the nurse did the patients' perceive as nurse-caring behaviors, and of those behaviors, which were most important and least important to provoking a sense of caring.

#### Design

A prospective descriptive study using an anonymous questionnaire survey was used to collect data from patients who had experienced a visit in the ED. Demographic variables included in the research were (a) perception of severity of illness, (b) age range, and (c) whether the person completing the survey was the patient or the parent of a child. Descriptive statistics were used to determine: (a) Which item on the questionnaire, from the patients perception, is the most and the least important indicator of caring behavior by the nurse, (b) which of the seven subscales is the most and the least important indicator of caring by the nurse, (c) how does perception of illness and age range relate to perception of nurse caring behaviors; and (d) How does the perception of nurse caring behaviors by an adult patient compare to the perception of nurse caring behaviors by a parent of a child.

#### Setting

The setting for the study was a not-for-profit teaching hospital located in the Southeastern United States. The census in this 18-bed ED is approximately 2,500 patients per month and consists mainly of women and children. The ED is staffed on a daily basis with a physician, a Physician's Assistant, Registered Nurses, Attendants and a Clerk. This setting was chosen because of a paucity of information regarding parent perception of nurse caring behaviors.

#### Sampling

A nonprobability convenience sample of fifty-nine patients was asked to participate during the months of March and April. No record review was necessary. The inclusion criteria consisted of: (a) English speaking parents of children and patients, age eighteen years of age and older, who can read, (b) agree to participate in the study, and (c) are present in the Emergency Department when the questionnaires are distributed. The researcher distributed and collected all of the questionnaires. The questionnaires were given to the patient or parent during their Emergency Department visit and were completed and recollected before discharge from the Emergency Department. The exclusion criteria consisted of (a) adult patients and parents of children who could not read or speak English because the questionnaire was written only in English and (b) those patients/parents of children who appeared in severe distress in order to avoid introducing additional stressors.

#### Instruments

After receiving permission from the authors Cronin and Harrison's Caring Behaviors Assessment tool was used to collect data (Appendix A). This tool is a 63-item

questionnaire that uses a 5-point Likert scale and is based on Watson's ten carative factors. An open-ended question asking what else the nurse could do to make you feel cared about is at the end of the questionnaire. This qualitative item allows patients to further individualize their responses and may provide further insight into what patient's perceive as nurse caring behaviors. The instrument contains seven subscales, that includes (a) Humanism/Faith-Hope/Sensitivity, (b) Helping/Trust, (c) Expression of Positive/Negative feelings, (d) Teaching/Learning, (e) Human Needs Assistance, (f) Supportive/Protective/Corrective environment and, (g) Existential/Phenomenological/ Spiritual forces. Reliability for each of the seven subscales has been reported and consists of Cronbach coefficient alpha scores ranging from  $\alpha = .66$  to .90. Face and content validity were reported using a panel of experts and interrater reliabilities were reported at  $\alpha = .75$  or greater. Data regarding age and perceived level of illness was collected to examine whether these variables affect the patients' perception of nurse caring behaviors. *Procedures* 

Before implementation, this proposal was reviewed and approved by the Institutional Review Board of the participating hospital (Appendix B). The study was conducted in an Emergency Department that specializes in the care of women and children. Participants included patients being cared for in the ED, or parents of patients less than 18 years of age. The researcher gave packets containing a copy of the survey and a cover letter to those patients or parents who agreed to participate in the study (Appendix C). Information on returning the survey in the envelope before discharge from the ED was given. Consent to participate in the study was implied by the return of the completed questionnaire.

#### Analysis of Data

Descriptive statistics will consist of mean scores and standard deviation to determine the patients' perception of the least and the most important items, which indicate, nurse caring behaviors. All items were grouped into one of the seven subscales and the overall mean for each subscale will be calculated to determine rank distribution of the subscale. Nonparametric testing using the Mann-Whitney U and Kruskal-Wallis one-way analysis of variance will be used to examine response to the CBA according to demographic variables of age and perceived degree of illness.

#### Limitations

There are several limitations to this study. The first limitation is the inability to generalize these results to all ED settings since only women and parents were surveyed. The second limitation is response burden due to the long length of the 63-item instrument. The third limitation is researcher bias because the researcher presented the instrument to the patient and collected the completed form. Finally, there is an environmental bias due to the uncontrolled distractions and the noisy environment in the Emergency Department.

#### Gantt Chart

The following is the time line illustrating implementation of the study. The first meeting with the Thesis Committee was early in December 2002. The remainder of the project progressed along at regular intervals. IRB approval occurred within two weeks of submission and data collection was completed by the middle of April. Analysis of the data was completed in June and the project was completed and submitted to the Thesis Committee. (Appendix D)

## Conclusion

The information gained from this research project may be invaluable as nurses struggle to provide quality care in the fast paced environment of an Emergency Department. Past research has shown that patients' perception of caring by healthcare workers affects many areas of patient care including, (a) patient satisfaction, (b) health promotion and, (c) issues regarding litigation. Methodology, including design, setting and sample, instruments, procedures, and analysis of data were explained. In addition, there was discussion regarding anticipated limitations of the study and implications for nursing practice.

#### Chapter Four

#### Introduction

The purpose of this study was to examine which nursing behaviors the patient perceived as being nurse-caring behaviors. The first research question addressed what the patient or parent of a patient perceived as being the most important set of nursing behaviors. The second research question addressed what the patient or parent of a patient perceived as the most important and the least important specific behaviors to indicate caring by the nurse.

#### Results

#### **Demographics**

The sample (N = 57) consisted of patients and parents of children who were patients in an Emergency Department at a Women and Children's hospital. The majority of adult patients completing the questionnaire were between the ages of 18-25 years (50%). The majority of parents completing the questionnaire were between the ages of 26-40 years (74%). The parents perceived their children as being severely ill 3 percent of the time, moderately ill 80 percent of the time and mildly ill 17 percent of the time. The adult patients perceived themselves as being severely ill 10 percent of the time, moderately ill 40 percent of the time and mildly ill 50 percent of the time. (See table 1).

#### Inferential Statistics

A Cronbach's alpha coefficient was computed for each of the seven subscales and the results indicated a range of  $\alpha = .73$ -.89. The subscale Human Needs Assistance ( $\alpha = .89$ ) had the highest level of reliability and the subscale Teaching/Learning ( $\alpha = .73$ ) had the lowest level of reliability. (See table 2). A comparison of the means between the subscales indicated the Human Needs Assistance subscale (M = 4.54, SD = .66) was perceived by the participants as being the most important set of behaviors by the nurse that conveyed a sense of caring toward the patient in the Emergency Department environment. A comparison of the mean scores for each item on the questionnaire

indicated "Be kind and considerate" (M = 4.81, SD = .48) and "Treat me as an individual" (M = 4.77, SD = .77) were the highest ranked specific nursing behaviors. These highest ranked specific nursing behaviors were part of the Humanism/Faithhope/Sensitivity subscale that was ranked second overall in importance of behaviors by the nurse to convey a sense of caring to the patient. Listed in subsequent order of importance the other single item behaviors perceived by the patient to indicate a sense of caring by the nurse included: 1) "Answer my questions clearly"; 2)"Know what they are doing"; 3) Know how to handle equipment"; 4)"Know how to give shots, IV's, etc"; 5) "Really listen when I talk"; 6) "Give my pain medication when I need it"; and 7) "Keep my family informed of my progress".

A comparison of the mean scores for each item indicated "Visit me if I move to another hospital unit" (M = 2.32, SD = 1.35) and "Touch me when I need it for comfort" (M = 2.86, SD = 1.40) were the lowest ranked items for nurse caring behaviors by the patient. Each of these items were part of the Helping/Trust subscale which was ranked fifth in importance overall. See tables 3 and 4 for a listing of the top ten most and least important single items.

A Pearson's Product Moment test was computed among the subscales and revealed significant correlations among all of the scales (Table 5). No significant correlations were found between the subscales and the socio-demographic variables.

#### Discussion

These findings are important because they indicate that regardless of the patients age or their perception of severity of illness parents and patients alike share the same perception regarding which nursing behaviors are the most indicative to the sense of caring. In addition, the lack of significant correlations between the subscales and the socio-demographic variable demonstrates the versatility of using the CBA tool in various research populations. This study supports the findings of other studies using the CBA instrument by identifying the subscale Human Needs Assistance as the highest ranked subscale. The most important single item reported in this study ("Be kind and considerate") was not the highest-ranking item in any of the other studies although it was among the ten most important items in other studies using the CBA tool in the Emergency Department setting. (Table 6). Perhaps the expectations of patients and parents being cared for in a women and children's specialty hospital are more focused on nurturing types of behaviors. The results of this study are correlated with the framework of the Watson's theory because the CBA instrument used to collect data mirrors Watson's carative factors. For instance, the Human Needs Assistance subscale is reflective of the carative factor that describes the nurse recognizing how the internal and external environment influences the health and illness of an individual. Watson (2002) reports the first three of her carative factors were combined to form the Humanism/Faithhope/Sensitivity subscale which contains the most important single nursing behavior to indicate caring in this study which was "Be kind and considerate". Those three carative factors described the development of the nurse-patient relationship through empathy, effective communication, acceptance of positive and negative feelings and effective problem solving for decision-making

#### Implications

#### Nursing Administration

The results of this study are important to Nursing Administration because the findings provide direction for staff development for both experienced and new staff members. Orientation programs often contain information regarding motor skills and paperwork. The results of this study and others support the concept of developing orientation programs for new graduates and workshops for experienced staff members on how to

relay a sense of caring to the patient in today's hectic Emergency Department environment.

#### Practice

The results of this study and others provide some concrete information on what behaviors the patient or parent of a patient would like to experience in the Emergency Department environment. This information can be given to staff members in order to enhance the way they provide care to the patient. Also, programs may be developed in order to help nurses meet the caring expectations of patients and parents. For instance, the development of a patient liaison role to keep families informed of their loved ones progress during busy times in the Emergency Department is an example of how these results could be used to initiate evidence related practice changes.

#### Research

The results of this study can be used to advance research in the concept of caring as well as the patient's expectations of the nursing staff. What do the patient's consider to be "kind and considerate" and how does that compare with what the staff nurses consider this to be? How is portraying kindness taught to nurses? These data provided and other similar study findings provide a foundation for further research to expand the concept of caring. The need for evidenced based practice in Nursing directs that research tools and studies continue to be developed and initiated to further explore the concept of caring. This is an essential step to close the gap between the nurse's and the patient's perceptions' of caring thus providing for a more therapeutic environment in which to provide nursing care.

#### Limitations

This study was limited to adult patients and parents who received care in one department of one hospital. The results cannot be generalized to the Emergency Department population at large because it was a convenience sample in a specialty hospital serving women and children. The tool was lengthy and response burden may be present. However, the results of this study compare in many ways and support the results of comparable studies using the CBA instrument with regards to identification of the subscale and nurse caring behaviors that most often elicit a sense of being cared for.

#### Recommendations

Further studies are recommended to include the perception of caring from the child population to provide insight as to whether or not children have special needs in relation to caring.

#### References

- Baldursdottir, M. S., & Jonsdottir, H. (2002). The importance of nurse caring behaviors as perceived by patients receiving care at an emergency department. *Heart & Lung*, 31(1), 67-75.
- Columbe, K. H., Yeakel, S., Maljanian, R., & Bohannon, R. W. (2002). Caring behaviors inventory: analysis of response by hospitalized surgical patients. *Outcomes Management Nursing Practice*, 6(3), 138-41.
- Davis, B. A., & Duffy, E. (1999). Patient satisfaction with nursing care in a rural and an urban emergency department. *Australian Journal of Rural Health*, *7*, 97-103.
- Dorsey, C., Phillips, K. D., & Williams, C. (2001). Adults sickle cell patients' perceptions of nurses' caring behaviors. *ABNF Journal*, 12(5), 95.
- Hudson, T. (1992). Caring important in ED patient satisfaction survey. *Hospitals*, 66(4), 36.
- Huggins, K. N., Gandy, W. M., & Kohut, C. D. (1993). Emergency department patients' perception of nurse caring behaviors. *Heart & Lung*, 22, 356-64.
- Issel, M., & Kahn, D. (1998). The economic value of caring. *Health Care Management Review*, 23(4), 43-53.
- Kipp, K. M. (2001). Implementing nursing care standards in the emergency department. *Journal of Nursing Administration*, 31(2), 85-90.
- Latham, C. P. (1996). Predictors of patient outcomes following interactions with nurses. *Western Journal of Nursing Research*, *18*(5), 548-564.
- Marini, B. (1999). Institutionalized older adults' perceptions of nurse caring behaviors: A pilot study. *Journal of Gerontological Nursing*, 25(5), 10.
- Raper, J., Davis, B. A., & Scott, L. (1999). Patent satisfaction with emergency department triage nursing care: A multicenter study. *Journal of Nursing Care Quality*, 13(6), 11-24.

- Schultz, A. A., Bridgham, C., Smith, M. E., & Higgins, D. (1998). Perceptions of caring:
  Comparison of antepartum and postpartum patients. *Clinical Nursing Research*, 7(4), 363-378.
- Smerke, J. M. (1990). Ethical components of caring. Critical Care Nursing Clinics of North America, 2(3), 509-13.
- Sumner, J. (2001). Caring in nursing: a different interpretation. *Journal of Advanced Nursing*, *35*(6), 926-32.
- Watson, J. (2002). Assessing and Measuring Caring in Nursing and Health Science. New York: Springer Publishing Company.
- Watson, W. T., Marshall, E. S., & Fosbinder, D. (1999). Elderly patients' perceptions of care in the emergency department. *Journal of Emergency Nursing*, 25(7), 88-92.
- Wolf, Z. R., Colahan, M., Costello, A., Warwick, F., Ambrose, M. S., & Giardino, E. R. (1998). Relationship between nurse caring and patient satisfaction. *Medsurg Nursing*, 7(2), 99.

# Table 1.

Socio-demographic Variables of the study sample (N=57).

Patient Variables	Parent	Adult Patient	Total		
	n (%)	n (%)	N (%)		
Age Range					
18-25 years	4 (11)	11 (50)	15 (26)		
26-40 years	26 (75)	9 (41)	35 (61)		
41-60 years	5 (14)	2 (9)	7 (13)		
61-100 years	0	0	0		
Perception of severity of illness					
Mildly sick	6 (17)	11 (50)	17 (30)		
Moderately sick	28 (80)	8 (36)	36 (63)		
Severely sick	1 (3)	3 (14)	4 (7)		

# Table 2

# Means, Standard Deviations, and Cronbach's Alpha coefficient alpha results of the Study CBA subscales and comparison of Cronin and Harrison's Cronbach's alpha subscales.

Subscale	Mean	SD	Cronbach	Cronin &
			alpha	Harrison's
				Cronbach alpha
1. Human needs assistance	4.54	.66	.89	.89
2. Humanism/faith-hope/Sensitivity	4.42	.60	.86	.84
3. Supportive/Protective/corrective	4.19	.73	.82	.79
environment				
4. Teaching/learning	4.17	.69	.73	.90
5. Helping/trust	3.79	.69	.82	.76
6. Expression of positive/negative	3.68	1.08	.85	.67
feelings				
7. Existential/phenom./spiritual forces	3.61	1.14	.83	.66
8. Overall Results			.92	

Table 3.

Mean and standard deviation (SD) scores for the 10 most important nurse caring behaviors.

Item	Mean (SD)
1. Be kind and considerate	4.81 (0.48)
2. Treat me as an individual	4.77 (0.65)
<ol><li>Answer my questions clearly</li></ol>	4.74 (0.61)
4. Know what they are doing	4.74 (0.76)
5. Know how to handle equipment	4.74 (0.76)
<ol><li>Know how to give shots, IV's, etc.</li></ol>	4.70 (0.80)
<ol><li>Really listen when I talk</li></ol>	4.68 (0.60)
8. Treat me with respect	4.67 (0.76)
9. Give my pain medication when I need it	4.65 (0.83)
10. Keep my family informed of my progress	4.65 (0.91)

Table 4.

Mean and standard deviation (SD) scores for the Ten least important nurse caring behaviors.

Items	Mean (SD)
1. Visit me if I move to another hospital unit	2.32 (1.35)
2. Touch me when I need it	2.86 (1.40)
3. Talk to me about my life outside the hospital	2.93 (1.46)
4. Ask me what I like to be called	3.26 (1.38)
5. Help me understand my feelings	3.40 (1.33)
6. Help me see that past experiences are important	3.46 (1.35)
7. Encourage me to talk about how I feel	3.46 (1.32)
8. Help me feel good about myself	3.58 (1.42)
9. Help me plan ways to meet those goals	3.60 (1.30)
10. Help me plan for my discharge from the hospital	3.72 (1.29)

Table 5.

Faith	Trust	Feelings	Teach	Support	Needs	Spirit
1.00						
.71**	1.00					
.56**	.77**	1.00				
.65**	.59**	.68**	1.00			
.77**	.68**	.70**	.76**	1.00		
.76**	.53**	.50**	.69**	.77**	1.00	
.57**	.66**	.64**	.62**	.72**	.54**	1.00
	1.00 .71** .56** .65** .77** .76**	1.00      .71**    1.00      .56**    .77**      .65**    .59**      .77**    .68**      .76**    .53**	1.00      .71**    1.00      .56**    .77**    1.00      .65**    .59**    .68**      .77**    .68**    .70**      .76**    .53**    .50**	1.00      .71**    1.00      .56**    .77**    1.00      .65**    .59**    .68**    1.00      .77**    .68**    .70**    .76**      .76**    .53**    .50**    .69**	1.00      .71**    1.00      .56**    .77**    1.00      .65**    .59**    .68**    1.00      .77**    .68**    .70**    .76**    1.00      .76**    .53**    .50**    .69**    .77**	1.00      .71**    1.00      .56**    .77**    1.00      .65**    .59**    .68**    1.00      .77**    .68**    .70**    .76**    1.00      .76**    .53**    .50**    .69**    .77**    1.00

Pearson's Product Moment list correlation among the subscales.

\* p = .05

\*\* p = .01 Correlation is significant at the 0.01 level (2-tailed).

# Table 6

Comparison of previous study results using the Caring Behaviors Assessment tool regarding Most Important behavior and Highest Ranked Behavior.

		Re	sults
• •		Most Important	Highest ranked
Authors	Subject (No.)	CBA Item	CBA subscale
Cronin and	Patients after	Know what they	Human needs
Harrison, 1998	myocardial infarction (22)	are doing	assistance
Huggins, Gandy,	Patients visiting	Know what they	Human needs
and Kohut, 1993	the ED in the Southeastern USA (288)	are doing	assistance
Schultz,	Antepartum and		
Bridgham, Smith and Higgins (1998)	postpartum patients (35)		Human needs assistance
Marini (1999)	Older adults residing in institutional setting (21)	Know what they are doing	Human needs assistance
Baldursdottir and Jonsdottir	Patients visiting an ED in Iceland	Know what they are doing	Human needs assistance

## Appendix A

## November 4, 2002

Lynn Kimble, BSN

Dear Lynn:

Thank you for your interest in the Caring Behaviors Assessment. Enclosed is a copy of the tool and additional information regarding its development. Please feel free to use the CBA. In return, we ask that you acknowledge its authorship (reference to the <u>Heart & Lung</u> article is sufficient) and, upon completion of your work, please send us a copy of your abstract. We would also appreciate the results of any further reliability and validity testing of the CBA.

We will be most interested in your findings. If we can answer any questions or be of any further assistance, please feel free to contact us.

Sincerely, LANSING SCHOOL OF NURSING AND HEALTH SCIENCES

Sherill Hones Cronin

Sherill Nones Cronin, PhD, RN, C Professor

Barbara Harrison, MSN, RN, C Chair, BSN Program

/bsm Enclosure

#### Appendix **B**



ROBERT C. BYRD HEALTH SCIENCES CENTER OF WEST VIRGINIA UNIVERSITY/CHARLESTON DIVISION

February 24, 2003

Lynn Kimble, BSN 5327 Dalewood Drive Cross Lanes, WV 25313

RE: Your application dated February 12, 2003 regarding study number 03-02-1462: Patient's Perceptions of Nurse-Caring Behaviors in the Emergency Department

Dear Ms. Kimble:

I have reviewed your request for exempt status for your study listed above. I agree that this study qualifies as exempt from review under FDA and NIH (OHRP) guidelines with the following category: 2: Survey/Interview/Observational Research. You are approved to conduct your study. In twelve months you will receive a letter requesting an update of the status of your study as of February 24, 2004, unless you notify me that you have finalized your study before that date.

Thank you for keeping the Office of Research and Grants Administration informed of your activities with this study.

Sincerely,

pett Chipac.

Beth R. Chiparo, MA Research Review Coordinator

Cc: Patti Salisbury, Sponsored Projects Coordinator

The Institutional Review Board for the Protection of Human Subjects 3110 MacCorkle Avenue, SE, Room 3283 Charleston, West Virginia 25304 (304) 388-9971 An Equal Employment Opportunity/Affirmative Action Employer

FAX (304) 388-9976

#### Appendix C

March 1, 2003

To Patients of Women and Children's Hospital:

Thank you for your participation in this project. Providing care to patients in a compassionate and sensitive way is a goal of this institution. Today's healthcare environment has created many challenges for health care workers to overcome. In order to fulfill the requirements for my master's thesis, I have chosen to survey patients in this busy Emergency Department to see what behaviors a nurse demonstrates that would make you, a patient or parent of a patient, feel cared for. The information you provide by filling out this questionnaire will be kept anonymous and confidential. No names will be used on any of the papers. You do not have to answer all the questions and your participation in this project is strictly voluntary. The purpose of this project is to gain information that will help nurses better meet the needs of patients.

Thank you for your participation,

Sym & Kimbee

Lynn Kimble, RN, BSN Marshall University College of Nursing and Health Professionals

# Appendix D

Gantt Chart															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Thesis Committee Mtg.	X														
Submit to IRB		Х													
Begin Data Collection				X											
Complete Data Collection						Х									
Analyze Data									X						
Thesis Committee Mtg.											Х				
Present Findings														Х	