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THE DIFFERENCE IN EMERGENCY DEPARTMENT
PATIENT SATISFACTION WHEN TREATED BY
AN EMERGENCY NURSE PRACTITIONER
VS. MEDICAL DOCTORS

By

Robin L. Schultze, RN, BSN, Capt, USAF, NC

A Thesis

submitted in partial fulfillment

of the requirements for the degree of

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School of Nursing

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Abstract

Patient satisfaction is currently being used as an outcome measure of the quality of care. While there has been some literature published regarding patient satisfaction with nurse practitioners (NPs), especially in the outpatient setting, very little literature could be located on patient satisfaction with Emergency Nurse Practitioners (ENPs). This study attempted to answer the following research question: What is the difference in Emergency Department (ED) patient satisfaction when cared for by an ENP vs. Medical Doctors (MDs)? A descriptive study was used to identify the differences in ED patient satisfaction. It was conducted at a rural emergency department with a population of patients residing in Fayette and surrounding counties of Texas who presented to the ED. A convenience sample of patients was obtained. The inclusion criteria were patients who were at least 18 years of age, who were discharged to home from the ED, who could read and write English, and who could complete the survey without help from another person. Collection of data was accomplished through a 12 item patient satisfaction survey (PSS) developed by the investigator. The PSS asked patients to rate satisfaction by indicating the degree to which their expectations were met. Descriptive statistics were used to describe the demographic characteristics of the sample. Due to unequal sample sizes (ENP $n = 26$, MD $n = 12$), Welch approximate t-test for independent samples was used to compare the ENP and MDs on their grand mean satisfaction score. There were no statistically significant differences between the ENP and MDs on the basis of the grand mean satisfaction score. A Mann-Whitney U test was used to compare the two groups on the basis of the patients'

responses to individual satisfaction questions. This test found that there were no statistically significant differences in satisfaction scores between the ENP and MDs at the .05 level.

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The Committee for the
Protection of Human Subjects

NOTICE OF APPROVAL TO BEGIN RESEARCH

November 21, 1997

HSC-SN-97-021 - "The Difference in Emergency Department Patient Satisfaction when Treated by Emergency Nurse Practitioners vs. Medical Doctors"
P.I.: Robin Schultze, MSN Student

PROVISIONS: Unless otherwise noted, this approval relates to the research to be conducted under the above referenced title and/or to any associated materials considered at this meeting, e.g. study documents, informed consents, etc.

APPROVED: At a Convened Meeting

APPROVAL DATE: November 21, 1997

EXPIRATION DATE: October 31, 1998

CHAIRPERSON: Anne Dougherty, M.D.

Subject to any provisions noted above, you may now begin this research.

CHANGES - The P.I. must receive approval from the CPHS before initiating any changes, including those required by the sponsor, which would affect human subjects, e.g. changes in methods or procedures, numbers or kinds of human subjects, or revisions to the informed consent document or procedures. The addition of co-investigators must also receive approval from the CPHS. **ALL PROTOCOL REVISIONS MUST BE SUBMITTED TO THE SPONSOR OF THE RESEARCH.**

INFORMED CONSENT - Informed consent must be obtained by the P.I. or designee using the format and procedures approved by the CPHS. The P.I. must instruct the designee in the methods approved by the CPHS for the consent process. The individual obtaining informed consent must also sign the consent document.

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An undertaking such as a thesis is no small feat and I would like to take this opportunity to acknowledge and thank all the people who have made this possible. First, I would like to thank my thesis committee, whose help with writing was immeasurable. Dr. Frank Cole, Elda Ramirez and Bob Leach were all instrumental in the success of my thesis and also kept me focused when I would tend to wander in directions unrelated to the study. I would also like to thank the Emergency Department staff at Fayette Memorial Hospital, where this research was undertaken. Their participation allowed me to conduct the study without driving 180 miles every day for data collection. Additionally, I would like to acknowledge the Houston Chapter of the Emergency Nurses Association for assistance in the form of a research grant. The money I received was most helpful in being able to afford my research. I would also like to thank my husband, Tom, for his immense love and patience throughout this process. I spent many more hours with my study and my writing than I did with my husband, yet he continued to love and support me. Finally, I would like to thank my Lord and Savior, Jesus Christ, who kept me going even during my most frustrating times. The successful completion of this thesis is to His glory.

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CHAPTER 1

Introduction

Patient satisfaction as an outcome measure of health care has been a topic of great interest to health care organizations and regulators over the last decade (Eriksen, 1988, 1995; Maciejewski, Kawiecki, & Rockwood, 1997; Press, Ganey, & Malone, 1990; Ross, Sinacore, & Steward, 1995). One of the reasons for this increased interest is that the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) now requires that all hospitals have a formal complaint management system (Strasser, Aharony, & Greenberger, 1993). Additionally, JCAHO recently departed from its reliance on Donabedian's (1980) structure and process and has focused on outcomes as a cornerstone for accreditation (Jackson & Kroenke, 1997). Another reason is due to changes in the healthcare industry such as increased competition, escalating malpractice claims, rising consumerism and growing demand for accountability. Some employers and payors even require that the hospitals with which they contract for healthcare services monitor patient satisfaction (Press, et al., 1990). Finally, the Health Care Finance Administration (HCFA) is investigating the feasibility of developing a report card that includes patient satisfaction for Medicare managed care organizations.

One of the strategies to improve quality of care, especially in ambulatory care settings, is the use of nurse practitioners (NPs) (Larrabee, Ferri, & Hartig, 1997). According to Elda Ramirez, a certified emergency nurse and family nurse practitioner working in the emergency department (ED) as an NP, "the NP role is a perfect vehicle for nursing to take a leading role in ensuring quality patient care in the managed care arena"

(1996, p. 540). The utilization of NPs in various patient settings has occurred since the mid 1960s (Brush & Capezuti, 1996). However, most of the research accomplished to date on patient satisfaction with NPs has concentrated on outpatient settings other than the ED. There has been some research on medical doctor (MD) attitudes regarding NPs in the ED (Cairo, 1996), as well as patient satisfaction between NPs in primary care settings (Larrabee, et al., 1997). However, the investigator has discovered very little research on patient satisfaction with NPs in the ED.

Furthermore, there are now NPs working in EDs who have graduated from a master's level nursing program that specializes in emergency care. Previously, with the exception of five emergency nurse practitioner (ENP) programs in the 1970s and 1980s (Hayden, Clore, & Davies, 1982), an NP working in the ED was educated as a family nurse practitioner (FNP) with a focus on primary care, pediatric nurse practitioner (PNP) with a focus on children, or an adult nurse practitioner (ANP) with a focus on adults (Cole & Ramirez, 1997). The role of the true ENP, who has been educated to care for patients with non-urgent, urgent and emergent conditions in the ED, is only two years old (Cole & Ramirez, 1997; The University of Texas Houston Health Science Center School of Nursing, 1997). The investigator located no research on ED patient satisfaction when cared for by these specialty educated NPs.

Statement of the Problem

Patient satisfaction surveys are frequently being utilized in the current era of health care as an outcome measure of quality of care. Because the very specialized role of the ENP is so new, little research has been located by the investigator on the patient

satisfaction of ENPs working in EDs. This study will overcome the problem of a deficiency in research and literature regarding ED patient satisfaction when cared for by ENPs vs. MDs.

Theoretical Framework

The theoretical framework that was used to guide this study was proposed by Greeneich, Long, and Miller (1992) as a Nursing Taxonomy of Patient Satisfaction. This taxonomy is composed of three tracts: the patient, the nurse, and the organization. Although this framework is a taxonomy specifically for nursing, it was adapted for ENPs and MDs by substituting the word provider for nurse. Therefore, the three tracts become the patient, the provider, and the organization in the Provider Taxonomy of Patient Satisfaction (see Figure 1).

The patient tract has expectations as its dimension (Greeneich, 1993; Greeneich, et al., 1992). An expectation is the anticipation that something will happen. The patient brings expectations about the provider and the care environment to the ED when seeking care. Validation of patient expectations becomes the critical determinant in patient satisfaction because “if patient expectations are not met, whether valid or not, the resulting outcome for quality of care may be negated” (Greeneich, et al., p. 47).

The provider tract has inherent personality characteristics, provider care characteristics, and proficiency as its dimensions. The inherent personality characteristics are those attributes the provider brings to the job, such as empathy (Greeneich, 1993; Greeneich, et al, 1992). Empathy is a broad term that often includes individualized

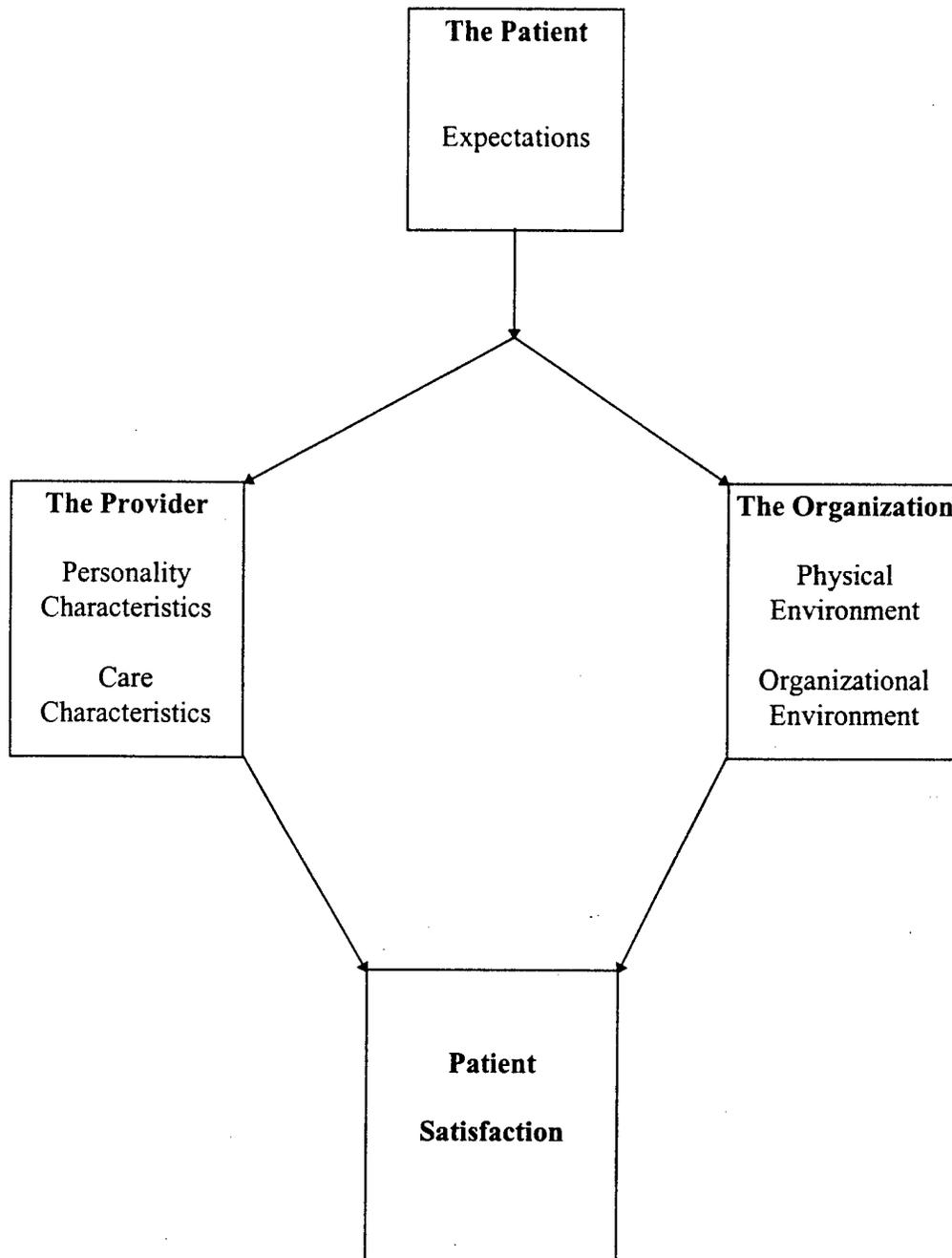


Figure 1. Provider taxonomy of patient satisfaction: the theoretical framework used to guide, describe and explain the study

attention, kindness, courtesy, and keeping the patient informed (Eriksen, 1995).

According to Ware, Davies-Avery, and Stewart (1977), personality attributes have a positive impact on patient satisfaction. The dimension of provider care characteristics includes those attributes that promote meaningful provider-patient interactions such as communication, caring, and again, empathy. The dimension of proficiency includes the provider's mastery of tasks and technical skills as well as professional knowledge. Because patients usually do not have an accurate knowledge base to determine if a provider is skillful or knowledgeable (Eriksen, 1995), the dimension of proficiency will not be examined in this study.

The final tract of organization has the health care milieu as its dimension. The environment in which care takes place is the health care milieu and encompasses the domains of physical environment and organizational environment. For the purpose of this study the physical environment was the ED at a small rural hospital. The organizational environment includes staffing mix and in this study was represented by the care provided by the ENP or MD.

Purpose

Considering the inability of the investigator to locate data regarding patient satisfaction of ED patients when cared for by ENPs or MDs, the purpose of this study was to identify the differences in ED patient satisfaction when cared for by an ENP vs. MDs.

Definition of Terms

For the purpose of this study, the following key terms are conceptually defined:

Emergency Department. A department within a hospital that provides care to patients of all ages with non-urgent, urgent, and emergent illnesses and injuries.

Emergent illnesses and injuries. Should be seen immediately to prevent loss of life, limb, or eyesight (Ramler, 1990).

Non-urgent illnesses and injuries. Can safely wait indefinitely for care without risk of loss of life, limb, or eyesight (Ramler, 1990).

Urgent illnesses and injuries. Should be seen as soon as possible to reduce the complications of the illness or injury (Ramler, 1990).

Emergency Nurse Practitioner (ENP). A registered nurse (RN) who has graduated from a master's or post-master's program designed to care for patients with non-urgent, urgent and emergent illnesses and injuries in the ED and can assess, diagnose, and treat patients with those conditions. The ENP is one of the two levels of the independent variable.

Medical Doctor (MD). A physician who is not a surgeon, who can assess, diagnose and treat patients with non-urgent, urgent, and emergent conditions in the ED. The MD is the second of the two levels of the independent variable.

Patient Satisfaction. The evaluation of the cognitive or emotional response that results from the interaction of the patient's expectations of provider care and the patient's perception of the actual provider care. This definition views satisfaction as a match

between the patient's expectations of care and the perception of the care actually received (Eriksen, 1995; Greeneich, et al., 1992). The degree of patient satisfaction is the dependent variable.

Provider. The ENP or MD who assesses, diagnoses, and treats the patient in the ED.

Research Question

This study addressed the following question:

What is the difference in ED patient satisfaction when cared for by an ENP vs. MDs?

Significance

The investigation of patient satisfaction with ENPs in the ED is relevant to the profession and practice of nursing. Despite the presence of NPs working in EDs across the United States (Buchanan & Powers, 1996; Ramirez, 1996; Selfridge-Thomas & Shea, 1997), the investigator found very little literature regarding patient satisfaction with care provided by ENPs. This study has provided a beginning base of knowledge on patient satisfaction with ENPs.

According to Press, et al. (1990), patient satisfaction surveys that are properly conducted provide objective quantitative data that can be used to document and reward performance improvements. Patient perceptions of quality, as measured through satisfaction surveys, are significant determinants of providers' survival and success (Bowers, Koehler, & Swan, 1994). Properly conducted patient satisfaction surveys might

therefore be used by health care institutions to determine the policy of utilizing ENPs in their EDs, thus advancing nursing practice and the profession of nursing.

Assumptions

The following assumptions were identified for this investigation:

1. All patients had expectations and made evaluations concerning care given by the health care provider in the ED.
2. All participants completed the satisfaction survey based on their immediately preceding ED visit.
3. All participants provided honest responses on their surveys.
4. The instrument measured degrees of patient satisfaction.

Limitations

The limitations of the study included:

1. The sample was obtained from only one emergency department.
2. A convenience sampling technique was used for the study.
3. The study investigated only one NP compared to several MDs.

Summary

Patient satisfaction is being used more often these days as an outcome measure of the quality of care. While there has been some literature published regarding patient satisfaction with NPs, especially in the outpatient setting, very little literature could be located on patient satisfaction with ENPs.

An adaptation of Greeneich and associates' model of patient satisfaction was used as the theoretical framework for this study. This model states that the patient's expectations, the provider's personality characteristics and care characteristics, and the environment's physical and organizational characteristics all contribute to the outcome of patient satisfaction

The key terms of the study: emergency department, non-urgent, urgent and emergent illnesses and injuries, ENP, MD, patient satisfaction and provider, were conceptually defined.

The study attempted to answer the following research question: What is the difference in ED patient satisfaction when cared for by an ENP vs. MDs? The answer to that question should provide a base of knowledge regarding patient satisfaction with ENPs. The assumptions and limitations of the study were also presented in this chapter.

CHAPTER II

Review of the Literature

A continually growing body of descriptive and empirical literature exists regarding patient satisfaction. Additionally, there is an escalating amount of literature relating to NPs in various settings, some even concerning NPs working in the ED. This chapter presents an outline of the review of the relevant literature in the following areas: patient satisfaction, patient satisfaction with NPs in outpatient care settings, and patient satisfaction with NPs in emergency care settings.

Major Topics

Patient Satisfaction

Recent changes in the health care industry such as increasing competition, escalating malpractice claims, rising consumerism, growing demand for accountability, outcomes measurement and the high cost of dissatisfaction have forced health care executives to pay more attention to the quality of care provided in their institutions (Press, et al., 1990). However, it is the advent of managed care with its inherent competition and the increasingly sophisticated consumer of health care that has driven hospitals to look at patient satisfaction as an outcome of quality care (Ford, Bach, & Fottler, 1997; Jackson & Kroenke, 1997; Ross, et al, 1995). Satisfaction as an outcome measure directly reflects patients' opinions and their probability of selecting a specific care provider (Maciejewski, et al., 1997; Strasser, et al., 1993). Indeed, patient perceptions of quality have become a significant determinant of health care providers' success and survival (Bowers, et al., 1994).

Although the utilization of patient satisfaction as a quality of care indicator is relatively new (Aharony & Strasser, 1993), research in this area is not new. Interest in satisfaction began in the 1940s and continued to grow in the following decades (Jackson & Kroenke, 1997). Initially, doctor-patient relationships were examined and the research gained attention when it was shown that there was increased compliance in the medical treatment if a patient was satisfied with his or her provider. During the 1960s and 1970s, the research literature burgeoned because of the entrance of the federal government into the health care arena and the changing cultural milieu toward more consumer satisfaction.

Today, the research on patient satisfaction is driven by cost containment and competition (Jackson & Kroenke, 1997). In the patient's eyes, monitoring satisfaction ensures that quality of care is not compromised in order to decrease cost or increase profit. Additionally, this research may be used to change health care delivery systems (Aharony & Strasser, 1993; Jackson & Kroenke, 1997).

Factors that appear to be associated with satisfaction include patient demographics, physical status, expectations of care, interpersonal attitudes of the provider, and the care milieu. In 1977, Ware, et al. postulated that age, gender, and education of the patient are important factors in patient satisfaction. They reported that older persons were more satisfied than younger persons with their physicians and with medical care services in general. Likewise, more educated persons and females tend to be more satisfied with care. These findings have been confirmed by Aharony and Strasser (1993), and Ford, et al. (1997).

Regarding the health status of the patient, studies have shown that there is a positive correlation between health status and satisfaction (Aharony & Strasser, 1993). In other words, the healthier the patient, the more satisfied he or she is with health care.

Expectations of care account for only a small variation in patient satisfaction according to Aharony & Strasser (1993). However, according to Greeneich, et al. (1992), expectations play an integral part of satisfaction. In fact, they suggest that a patient's expectations are required antecedents to satisfaction.

Interpersonal attributes of the provider such as respect, time spent with the patient, and especially communication, correlate strongly with patient satisfaction (Jackson & Kroenke, 1997; Maciejewski, et al., 1997). Patients want their care givers to care for them. According to Bowers and associates (1994), caring was a significant predictor of satisfaction ($b = .16, p = .00$). The aspect patients are most often the least satisfied with is communication (Maciejewski, et al., 1997). Additionally, Bowers, et al. suggest that the interpersonal aspect of caring is a significant predictor of satisfaction ($b = .12, p = .03$).

The care milieu proposed by Greeneich, et al. (1992), has an impact on the provider's ability to meet patient expectations. The care milieu, or organization, consists of the physical setting in the ED as well as the organizational setting. The organizational setting includes the provider staffing mix in the ED. Donabedian (1980) labeled this the structure portion of his structure, process, and outcome model for assessing quality of care.

According to Aharony and Strasser (1993) and Eriksen (1995), the technical aspects of care should not be used when measuring patient satisfaction. This is because patients rarely have the knowledge base to accurately judge if the provider is skillful. Additionally, the technical aspects of care do not account for a large amount of variation in satisfaction (Maciejewski, et al., 1997). Lastly, strict attention to the technical aspects of care will result in patient complaints of slow and uncaring service (Bowers, et al., 1994).

Finally, the use of family members and friends to complete satisfaction surveys for the patients should not be done (Aharony & Strasser, 1993). Typically, proxies rate satisfaction lower than the patient, thereby presenting a bias (Ford, et al., 1997).

A variety of methods are available to measure patient satisfaction. Self-administered surveys provide a quantitative measure and can produce statistically valid results because they are very likely to reflect patient attitudes (Ford, et al., 1997). Additionally, surveys allow the investigator to use rating questions, which are the best measures of patient satisfaction. This is consistent with Eriksen's (1995) view that satisfaction with a provider is a rating based on the patient's expectations and the actual care received.

Patient Satisfaction with Nurse Practitioners in Outpatient Care Settings

The role of the NP was developed in 1965 by nurse Loretta Ford and physician Henry Silver at the University of Colorado (Brush & Capezuti, 1996; McGrath, 1990; Mundinger, 1994). The role, initially as a pediatric NP, evolved to bridge the gap between

the cost and availability of health care and the needs of children. It also sought to augment the skills of nursing professionals through advanced education.

Although originally a pediatric focus, the role of the NP has expanded to include most areas in the primary care arena. In a meta-analysis of the literature, Brown and Grimes (1995) found that the majority of NPs practice in internal medicine, general/family practice, and pediatric clinics. However, due to the history of effectiveness in the primary care setting, NPs have been introduced into the acute care arena. Nurse practitioners are working with the otolaryngology, nephrology and general surgery services at the University of Missouri Hospital and Clinics (Knaus, Burton, Davis, Felton, & Fobes, 1997) and with the trauma service at the University of California, Davis, Medical Center (Spisso, Holcroft, McKennan, & O'Callaghan, 1990).

Patient satisfaction studies accomplished on NPs working in these areas have been favorable. In a study at the University of California, Davis, Medical Center, written patient complaints decreased by 56 % after the implementation of the role (Spisso, et al., 1990). Munding (1994) reported that patients seen in collaborative NP/MD practices are more satisfied and less litigious. In a meta-analysis, Brush and Capezuti (1996) found that when patients were interviewed about satisfaction, most reported they were generally satisfied and felt comfortable with the NP who provided their care. Patients seen in the acute care setting were "extremely satisfied" with the care they received from NPs (Knaus, et al., 1997, p. 24.) According to Larrabee and associates, "numerous studies have demonstrated patient satisfaction with NP care in primary care settings and revealed

favorable comparisons between patient satisfaction with physician care and NP care” (1997, p. 9).

Patient Satisfaction with NPs in the Emergency Care Setting

The role of the ENP evolved as a response to the demand for quality of care in the ED (Cairo, 1996; Hayden, et al., 1982). According to Cole & Ramirez (1997) and Ramirez (1996), ENPs can work in various settings, from fast track and acute care areas to Level I trauma centers. In one setting, an NP staffed a minor emergency area within the ED and provided care for approximately 21% of the adult emergency population (Buchanan & Powers, 1996). Additional evidence of NPs working with emergency patients can be found at a community teaching hospital in California, where a family NP and adult NP staff the fast track clinic adjacent to the ED (Selfridge-Thomas & Shea, 1997).

Patient satisfaction with NPs in the ED has also been favorable. According to Buchanan & Powers (1996), patient complaints are extremely rare and no lawsuits have been filed against the NPs working in a fast track area. While overall satisfaction between NPs and MDs in the ED showed no significant difference, one study reported that 77.4 % of the patients were completely satisfied with NP care while only 48.4 % of the patients were completely satisfied with MD care (Powers, Jalowiec, & Reichelt, 1984).

CHAPTER III

Methodology

Design and Methods

The purpose of this study was to identify the differences in ED patient satisfaction when cared for by an ENP vs. MDs. The study was classified as ex post facto, which attempts to understand relationships among variables as they naturally occur (Polit & Hungler, 1995). Since very little research was located in the literature regarding patient satisfaction with ENPs, the study provided a base of knowledge about this subject.

This chapter discusses the population and setting from which the sample was chosen, the method for selecting the sample, instrumentation, procedure for collecting the data, protection of human subjects, study design, and the analysis of the data.

Setting, Population, and Sample

This study was conducted at the rural emergency department of Fayette Memorial Hospital, a small community hospital in LaGrange, TX. The ED has two treatment rooms and a daily census of approximately 20 patients. Provider coverage for the ED is contracted by a staffing group that employs one ENP and several MDs. When the ENP is scheduled for duty, he is the only emergency health care provider working a 12 hour shift. The ENP graduated from the program at University of Texas-Houston Health Science Center in 1995 while all but one of the physicians in the staffing group are board certified emergency physicians.

The population consisted of patients residing in Fayette and surrounding counties who presented to the ED at Fayette Memorial Hospital. The sample was a convenience

sample of those patients presenting to the ED during the time of data collection. Inclusion criteria were patients who could read and write English, who were at least 18 years of age, who were discharged to home from the ED, and who could complete the survey without help from another person. Family members were not allowed to complete the survey because research shows proxies rate satisfaction differently than the patient (Aharony & Strasser, 1993; Ford, et al., 1997)

Instrumentation

Data were collected using the Patient Satisfaction Survey (PSS).

Patient Satisfaction Survey. The PSS was adapted from an inpatient satisfaction survey already in use at Fayette Memorial Hospital (Fayette Memorial Hospital, 1996). The original was a self-report instrument consisting of seven hospital service areas and asking patients to circle their opinions regarding the services they received. There were 28 questions in the following 7 areas: admissions/registration, patient room, food service, nursing care, other hospital personnel, treatment of visitors and family and the cashier's office. The questions in these areas asked patients to circle their opinions on a three-point scale of great, good, and poor. Additionally, there were six questions regarding pastoral care and social services with yes or no answers only. The problem with the survey was that it asked about opinions and not if expectations were met, which are necessary antecedents to satisfaction (Ericksen, 1995; Greeneich, 1993; Greeneich, et al., 1992). Another problem with the original survey was that there were only three possible answers to most of the questions: two positive answers and one negative answer.

The final version of the PSS consisted of 12 items specifically related to the patient's expectations about the health care provider and the ED. It was a single 8.5 X 11 inch sheet of paper printed on one side (Appendix A). To avoid confusion for the patients and the staff, separate surveys were used for the ENP and the MDs. The same items were used for both the ENP and the MD surveys, however, ENP was inserted as the provider on the ENP surveys and MD was inserted as the provider on the MD surveys. The PSS described the 0-6 scale used on the survey. Additionally, there was a demographic section designed to obtain a description of the sample. The demographic section included questions about age, gender, marital status, ethnic background, highest level of education and the reason the patient came to the ED. Demographic and illness information was included because these characteristics are thought to be related to patient satisfaction (Aharony & Strasser, 1993; Ware, et al., 1977). Finally, printed at the bottom were the 12 questions about the degree to which the patients' expectations were met by the ENP or MD. The SMOG readability formula (Maginnis, 1982) was used to determine that the instrument had a seventh grade reading level.

The 12 items on the PSS were designed to measure patient satisfaction by asking the patients to indicate the degree to which their expectations were met. Responses consisted of seven choices: 0 = expectations not met at all, 1 = much less than expected, 2 = a little less than expected, 3 = as expected, 4 = a little more than expected, and 5 = much more than expected, 6 = way beyond expectations. Patients were asked to circle the response that matched the degree to which their expectations were met. The degree to

which expectations are met is consistent with patient satisfaction (Eriksen, 1995). The instrument was scored by summing the responses and then obtaining a grand mean satisfaction score as well as means for each individual question.

Content and face validity of the PSS were established by a panel of two experts. The panel consisted of a doctoral prepared nurse considered an expert in instrumentation and patient satisfaction and a master's prepared ENP. Editorial revisions were made based on their recommendations. Reliability of the PSS was assessed at the completion of data collection using Cronbach's alpha. Cronbach's alpha was calculated at .98.

Procedure for Data Collection

Upon approval by the Committee for the Protection of Human Subjects (CPHS) of the University of Texas-Houston Health Science Center and permission from Fayette Memorial Hospital, the investigator made an on-site visit to the ED. The purpose of this visit was to deliver the research packets and collection box and to inservice the ED staff about the study. The inservice included verbal and written information regarding the inclusion criteria, what items to provide the participants of the study, and to distribute the research packets during discharge instructions (Appendix B). Additionally, the staff was told to distribute ENP surveys to the patients seen by the ENP and MD surveys to the patients seen by the MDs. This ensured that the investigator knew which provider, either ENP or MD, saw the patients.

Also during this visit, the investigator installed a designated, locked box near the exit of the ED for collection of the surveys. The box measured 20" X 8" X 5" with a

5" X 1/8" slot at the top. These dimensions ensured that the sealed envelopes containing the surveys could not be retrieved by anyone other than the investigator. The box was labeled "place completed surveys here".

A sign was placed in the waiting area of the ED informing patients of an ongoing patient satisfaction study and that they may be asked to participate by completing a survey prior to leaving the department (Appendix C). The ED staff was instructed to provide each patient who met the inclusion criteria with a research packet. The research packet consisted of a cover sheet, survey, and pencil as well as a plain, sealable, 4 ¼" X 9 ½" envelope. The participants were instructed by the staff to read the cover sheet carefully, complete the entire survey prior to leaving the ED, place it in the envelope, seal the envelope, and place the sealed envelope in the locked collection box near the exit of the ED. Biweekly during the data collection period of December, 1997 through March, 1998, the investigator retrieved the sealed envelopes containing the completed PSSs from the locked collection box.

Protection of Human Subjects

Prior to surveying the participants, permission to conduct the study was obtained from The University of Texas-Houston Health Science Center CPHS and Fayette Memorial Hospital. A cover sheet was developed to provide the patient with specific study information and instructions (Appendix C). The cover sheet informed the patients that they were being requested to participate in a patient satisfaction study. It also explained why participation in the study was considered important. Additionally, the

cover sheet instructed patients to return completed surveys to a specially designated locked box located within the ED. If patients chose not to participate, they were asked to place the survey in the envelope, seal it, and return it as if they had completed the survey, eliminating retribution from the staff for non-participation. Patients were told via the cover sheet that participation in the study was voluntary and anonymous, with consent being implied by completion of the survey. Also via the cover sheet, participants were asked not to place their name on the survey to maintain confidentiality. Completion of the survey entailed no obvious risks to the participants. The cover sheet further explained that participating in the study would help contribute to the body of knowledge concerning patient satisfaction with ENPs and MDs in the ED. The results of the study will be disseminated by submission to a journal for publication.

Additionally, placing the surveys in sealed envelopes prior to depositing them in the collection box helped maintain confidentiality. Only the investigator and the thesis committee had access to the returned surveys. At the completion of the study, all surveys were destroyed.

Study Design

An ex post facto design was used to identify the differences in ED patient satisfaction when cared for by ENPs vs. MDs. The study was accomplished via a self-reported completion of the PSS. Demographic characteristics were obtained from the demographic data section of the PSS. Sampling bias was introduced in the study because a convenience sample was used. It was not possible to randomly assign patients to either

the ENP or the MDs in the setting where this study occurred. The reason for this is when the ENP is on duty, he is the only provider of emergency care for that shift. External validity may have been compromised because the study was not generalizable to the population as the inclusion criteria limited the study to participants 18 years old or older, participants who could read and write English, and participants who were able to complete the survey on their own. This meant patients who were unable to complete the survey due to the severity of their illness or injury, but did have a degree of patient satisfaction, were not included in the study.

Data Analysis

Descriptive statistics such as frequency, percentage, and measures of central tendency were used to describe the demographic characteristics of the sample. A grand mean score from all twelve questions was obtained and Welch approximate t-test for independent samples was calculated to determine if a difference existed in patient satisfaction scores between an ENP and MDs. Additionally, Mann-Whitney U test was used to compare the two groups on the basis of the patients' responses to individual satisfaction questions. SPSS statistical package was used for analysis of the data.

CHAPTER IV

Analysis of Data

The purpose of this study was to identify the difference in ED patients' satisfaction when cared for by an ENP or MDs. The data were collected through the use of two satisfaction surveys, one for the patients seen by the ENP and one for the patients seen by the MDs. The surveys were identical with the exception of the heading. Each survey contained demographic information about the patient, 12 satisfaction questions, ratings of 0-6 for each question. The purpose of this chapter is to present the results of this study. Statistical analysis of the sample characteristics and results specific to each survey question are presented and discussed.

Characteristics of the Sample

A convenience sample was used for this study. The survey was distributed to 45 patients. Seven surveys were not analyzed because they did not include answers to the satisfaction questions or were completed by family members of the patients. This resulted in a final sample of 38 subjects for the study.

Table 1 summarizes the sample by age and education level, represented by highest grade finished in school. The mean age in the ENP group ($n=26$) was 42.40 years and in the MD group ($n=12$) 35.67 years. Both groups of subjects had a mean educational level of a junior in high school. Table 2 summarizes the sample by gender, marital status, and ethnicity. Fifty percent ($n=19$) of the total sample was female, with 34.2 % ($n = 13$) in the ENP group and 15.8 % ($n = 6$) in the MD group. Most of the subjects were married, with

Table 1

Demographic Information of Subjects: Age and Education Level

	ENP		MD	
	M	SD	M	SD
Age	42.40	18.60	35.67	14.47
Highest Education	11.12	2.69	11.42	4.05

31.6 % ($n = 12$) in the ENP group and 13.2 % ($n = 5$) in the MD group. The single category had 18.4 % ($n = 7$) in the ENP group and 10.5 % ($n = 4$) in the MD group. The widowed patients had 10.5 % ($n = 4$) in the ENP group and 5.3 % ($n = 2$) in the MD group. The divorced patients had 7.9 % ($n = 3$) in the ENP group and 2.6 % ($n = 1$) in the MD group.

The ethnicity of the sample was predominantly Caucasian at 73.7 % ($n = 28$), with 15.8 % ($n = 6$) Hispanic, 7.9 % ($n = 3$) African-American, and 2.6 % ($n = 1$) of “other” ethnicity. When broken down by group, 52.6 % ($n = 20$) of the Caucasians were in the ENP group while 21.1 % ($n = 8$) were in the MD group. The Hispanics were distributed evenly in the ENP and MD groups, with 7.9 % ($n = 3$) in both groups. The ENP group contained 5.3 % ($n = 2$) of the African-Americans while the MD group contained 2.6 % ($n = 1$). The 2.6 % ($n = 1$) in the “other” ethnicity were in the ENP group.

Table 2

Demographic Information of Subjects: Gender, Marital Status & Ethnicity

	ENP		MD		Total
	Frequency	%	Frequency	%	%
Gender					
Female	13	34.2	6	15.8	50
Male	13	34.2	6	15.8	50
Marital Status					
Married	12	31.6	5	13.2	44.7
Single	7	18.4	4	10.5	28.9
Widowed	4	10.5	2	5.3	15.9
Divorced	3	7.9	1	2.6	10.5
Ethnicity					
Caucasian	20	52.6	8	21.1	73.7
Hispanic	3	7.9	3	7.9	15.8
African-American	2	5.3	1	2.6	7.9
Other	1	2.6			2.6

Findings

The research question was “What is the difference in Emergency Department patients’ satisfaction when cared for by an ENP vs. MDs?” A total of 38 patients completed the ENP and MD Satisfaction Surveys (see Appendix A). The surveys were identical except for the title of ENP Satisfaction Survey and MD Satisfaction Survey. They consisted of 12 questions designed to measure satisfaction by asking the patients to indicate the degree to which their expectations were met. Responses consisted of seven choices: 0 = expectations not met at all, 1 = much less than expected, 2 = a little less than expected, 3 = as expected, 4 = a little more than expected, 5 = much more than expected, and 6 = way beyond expectations.

Due to unequal sample sizes (ENP $n = 26$, MD $n = 12$), Welch approximate t test for independent samples was used to compare the ENP and MDs on their grand mean satisfaction scores. There were no differences between the ENP ($\bar{m} = 5.12$, $SD = 1.16$) and MD ($\bar{m} = 5.29$, $SD = .86$) groups on the basis of the mean satisfaction scores [Welch approximate $t(28.593) = .49$, $p = .62$].

The Mann-Whitney U Test was used to compare the two groups on the basis of the patients’ responses to individual satisfaction questions (Polit & Hungler, 1995). The responses to the questions were treated as ordinal data. Table 3 summarizes the results of the individual satisfaction questions. Question one of the survey asked about the courtesy of the ENP or MD that cared for the patient. The mean rank for the ENP group was 17.73 with a mean score of 5.04 while the mean rank for the MD group was 22.00 with a mean

Individual Question Satisfaction Scores

	ENP		MD		z ^b
	Mean Rank	Mean ^a	Mean Rank	Mean ^a	
Question 1	17.73	5.04	22.00	5.54	1.19
Question 2	17.90	5.92	22.96	5.58	1.41
Question 3	19.21	5.19	20.13	5.33	.26
Question 4	19.50	5.15	19.50	5.16	.00
Question 5	19.31	5.12	19.92	5.16	.17
Question 6	19.74	5.23	19.21	5.33	.12
Question 7	19.02	5.07	20.54	5.33	.43
Question 8	19.21	5.07	20.13	5.33	.26
Question 9	20.31	5.31	17.75	5.08	.74
Question 10	20.02	5.19	18.38	5.25	.47
Question 11	18.54	5.23	20.09	5.45	.45
Question 12	19.87	4.96	18.71	4.92	.32

Note: ^aScaling: 0 = expectations not met at all, 1 = much less than expected, 2 = a little less than expected, 3 = as expected, 4 = a little more than expected, 5 = much more than expected, 6 = way beyond expectations. ^bNone of the differences were statistically significant at the .05 level.

score of 5.54 ($z = 1.19$). Question two asked about the promptness of the ENP or MD in responding to the patients' needs. The mean rank for the ENP group was 17.90 with a mean score of 5.92 while the mean rank for the MD group was 22.96 with a mean score of 5.57 ($z = 1.41$). Question three asked about the explanation of tests so the patient could understand. The mean rank for the ENP group was 19.21 with a mean score of 5.19 while the mean rank for the MD group was 20.13 with a mean score of 5.33 ($z = .26$). expected, 6 = way beyond expectations. ^bNone of the differences were statistically significant at the .05 level.

Question four of the survey asked about the explanation of the diagnosis so the patient could understand. The mean rank for the ENP group was 19.50 with a mean score of 5.15 while the mean rank for the ENP group was 19.50 with a mean score of 5.16 ($z = .00$). Question five asked about explanation of the treatment so the patient could understand. The mean rank for the ENP group was 19.31 with a mean score of 5.12 while the mean rank for the MD group was 19.92 with a mean score of 5.16 ($z = .17$). Question six asked about the caring attitude of the ENP or MD. The mean rank for the ENP group was 19.63 with a mean score of 5.23 while the mean rank for the MD group was 19.21 with a mean score of 5.33 ($z = .12$).

Question seven of the survey asked about the individual attention the ENP or MD gave the patients. The mean rank of the ENP group was 19.02 with a mean score of 5.07 while the mean rank of the MD group was 20.54 with a mean score of 5.33 ($z = .43$). Question eight asked about the ENP or MD keeping the patient informed about what was

happening. The mean rank for the ENP group was 19.21 with a mean score of 5.07 while the mean rank for the MD group was 20.13 with a mean score of 5.33 ($z = .26$). Question nine asked about the professional appearance of the ENP or MD. The mean rank for the ENP group was 20.31 with a mean score of 5.31 while the mean rank for the MD group was 17.75 with a mean score of 5.08 ($z = .74$).

Question ten asked about how well the ENP or MD made the patient feel secure. The mean rank for the ENP group was 20.02 with a mean score of 5.19 while the mean rank for the MD group was 18.38 with a mean score of 5.25 ($z = .47$). Question eleven asked about the courtesy with which the patients' families were treated by the ENP or MD. The mean rank for the ENP group was 18.54 with a mean score of 5.23 while the mean rank for the MD group was 20.98 with a mean score of 5.45 ($z = .45$). Finally, question twelve asked if the waiting time to be seen by the ENP or MD was reasonable. The mean rank for the ENP group was 19.87 with a mean score of 4.96 while the mean rank for the MD group was 18.71 with a mean score of 4.91 ($z = .32$). The Mann-Whitney U Test found that none of the differences in satisfaction scores was statistically significant at the .05 level.

CHAPTER V

Discussion, Conclusion, Implications, and Recommendations

Patient satisfaction as an outcome measure of the quality of health care is now a topic of great interest to health care organizations and regulators (Eriksen, 1988, 1995; Maciejewski, et al., 1997; Press, Ganey, & Malone, 1990; Ross, et al., 1995). One of the strategies to improve quality of care is to utilize NPs (Larrabee, et al., 1997). However, there has been very little research on patient satisfaction with NPs in the ED. Additionally, with the recent emergence of ENPs from a master's program that specializes in the care of patients with non-urgent, urgent and emergent conditions, there are now NPs in the ED who were specifically educated to work in that setting. There is even less research on patient satisfaction with ENPs. The purpose of this descriptive study was to identify the differences in ED patient satisfaction when the patient is cared for by an ENP or MDs. This chapter presents a discussion of the findings, strengths and limitations, conclusion, implications for nursing practice, and recommendations for further study.

Discussion of Findings

The sample for this study ($N = 38$) consisted of patients seen in the ED at a small rural hospital in south, central Texas. The majority of the subjects were married Caucasians with a mean age of 39.03 years and 11 years of education. Half of the subjects

were female. In a survey of 474 EDs, the demographics fell into a similar pattern (Hooker & McCaig, 1996). In that study, the majority (30.3 %) of the patients were in the 25 to 44 year age group. Female patients represented 51.9 % of the visits to the ED. The majority of patients (78.5 %) seen in the Hooker and McCaig study were Caucasian, while 19.1 % were African-American and 2.4 % were other. However, in another study, the majority of subjects were African-American, female, less than 40 years of age and had attended college (Powers, et al., 1984). The sample of the Powers and associates study was drawn from the ED of a major mid-western university hospital in a socioeconomically deprived, inner-city neighborhood while the sample for the Hooker & McCaig study was drawn from EDs across the country. The differences in demographics may be due to the population from which the samples were drawn.

The research question for this study was “What is the difference in Emergency Department patients’ satisfaction when cared for by an ENP vs. MDs?”. Using Welch approximate t test for independent samples, there were no statistically significant differences in the grand mean patient satisfaction scores between the two groups. Additionally, using Mann-Whitney U, a nonparametric statistical analysis, there were no statistically significant differences in the mean satisfaction scores of individual satisfaction questions between the two groups. These findings are congruent with the results reported by Powers, et al. (1984) of no significant difference in overall ED patient satisfaction between NPs and MDs.

Although no hypothesis was stated, this investigator expected to find that patients cared for by the ENP were more satisfied than those cared for by the MDs. This expectation was in part due to a study at the University of California, Davis, Medical Center that showed increased satisfaction when NPs were added to the health care team (Spisso, et al., 1990). Additionally, in a meta-analysis of nurse practitioners and nurse midwives in primary care, there was a trend that suggested that NP care is equivalent to or better than physician care (Brown & Grimes, 1995). Finally, in a study of NPs in an acute care setting, “many patients were extremely satisfied with care provided by the NP, and most believed that the health care received during their hospitalization was better than most people receive” (Knaus, et al., 1997, p. 24).

While there were no statistically significant differences in patient satisfaction between the ENP and MD groups, 42 % of the patients cared for by the ENP rated their satisfaction as way beyond expectations on all 12 of the questions. This is in contrast to only 33 % of the patients seen by the MDs who rated their satisfaction as way beyond expectations on all 12 of the questions. These results are similar to the Powers, et al. study (1984) that showed 77.4 % of the patients seen by the NP were completely satisfied with NP care while only 48.4 % of the patients rated MD care as completely satisfactory.

Despite the fact that there was no statistically significant difference in satisfaction between the two groups, based either on the grand mean or the individual question means, there were some surveys with responses of significant interest. Many patients were consistent with their responses for each question. In other words, many surveys had 12

responses in the number four, five or six category. However, three of the ENP surveys and three of the MD surveys had a consistent rating on all but three of the questions. On those six surveys, the patients rated some satisfaction attributes as either one or two levels higher or one or two levels lower than the remainder of the attributes. Does this mean there was a significant difference in the patients' minds that caused them to rate the attributes differently? A study design that allowed for contacting the patients after completion of the surveys would explore those differences.

Additionally, promptness of the provider in responding to the patients' needs and waiting time to be seen by the provider seemed to be an issue with four of the patients. Three patients seen by the ENP rated promptness or waiting time lower than the remainder of the satisfaction attributes while only one patient seen by an MD rated waiting time lower than the rest of the attributes. This could be due to several reasons. The ED may have been busy on the day those patients were seen, causing a delay. Additionally, because the ENP has less experience as a provider than the MDs, he may not work as fast as the rest of the providers. While there were no statistically significant differences between the two groups, there may be variables that account for these differences that would be of interest to future researchers.

Finally, one patient seen by the ENP rated the degree to which expectations were met as "much less than expected" on all 12 questions. What is unusual about this survey is it was completed by a female who had finished two years of college. This is in contrast with the previous research that shows females and patients with a greater level of

education are more satisfied than males and patients with less education (Ware, et al., 1977, Aharony & Strasser, 1993). There were no additional comments on the survey as to why she was dissatisfied. Again, a study design that allows for patients to be contacted after completion of the survey could explore why she was so dissatisfied.

This study was guided by a patient satisfaction theoretical framework. The framework was adapted from the Nursing Taxonomy of Patient Satisfaction (Greeneich, et al., 1992) to become the Provider Taxonomy of Patient Satisfaction. The framework has three tracts: the patient, the provider, and the organization. The patient tract has expectations as its dimension. These expectations are a critical determinant in patient satisfaction (Greeneich, et al.) and were the reason the survey was developed to measure whether expectations were met.

Within the provider tract is the dimension of personality characteristics, such as empathy, individualized attention, courtesy, and keeping the patient informed (Greeneich, et al., 1992). Additionally, provider care characteristics fall within this dimension and include attributes that promote meaningful provider-patient interactions such as communication and caring. Jackson and Kroenke (1997) found that interpersonal attributes, specifically communication skills, correlated strongly with patient satisfaction. Using the analysis of the individual satisfaction questions, the results of this study indicated there were no differences in the personality characteristics of the ENP or MDs. This was demonstrated through the survey questions on courtesy, caring attitude of the provider, individual attention, and keeping the patient informed. Therefore, because there

were no differences in the personality characteristics of the two groups of providers, in this setting there were no differences in patient satisfaction between the two groups.

Likewise, there were no differences in the provider care characteristics between the ENP and MD groups. This was demonstrated through the survey questions on explanation of tests, diagnosis, and treatment and the caring attitude of the provider. Therefore, because there were no differences in the provider care characteristics of the ENP and MDs, in this setting there were no differences in patient satisfaction between the two groups.

The organization tract of the framework has the health care milieu as its dimension. The health care milieu encompasses the organizational environment, which includes the provider staffing of the organization (Greeneich, et al., 1992). The results of this study indicated that provider staffing had no bearing on patient satisfaction because there were no differences in the grand mean satisfaction scores between the ENP and MD groups. Additionally, there were no differences in mean scores of the individual satisfaction questions between the two groups.

This study was well supported by the Provider Taxonomy of Patient Satisfaction. The ED patients' expectations of the providers' personality characteristics, care characteristics and the organizational environment lead to a measure of patient satisfaction. In this study, there was no difference in patient satisfaction between the ENP and MD groups.

Strengths and Limitations

The determination of patient satisfaction with ENPs in the ED setting is an important one. A strength of this study was this was the first time patient satisfaction with ENPs in the ED was examined. The finding suggests that there are no differences in ED patients' satisfaction when cared for by either an ENP or MD.

Additionally, this study provided support for the Provider Taxonomy of Patient Satisfaction as adapted from Greeneich, et al. (1992) by describing and explaining the findings based on the framework. The findings of the study suggest that patient expectations of provider personality characteristics, provider care characteristics, and the organizational environment lead to a level of patient satisfaction. They also point to the need for further research within ED populations.

A significant limitation of this study was the inability to generalize the findings to other ED populations because of the small sample size. Obtaining a large sample was difficult due to the reliance on the ED staff to distribute the survey to all patients who met the inclusion criteria. It is possible the instructions to the staff were not clear leading to a misunderstanding of who was to receive the surveys or why it was important to distribute them. It is also possible that the staff did understand the instructions but did not remember to distribute the surveys during discharge instructions.

Additionally, the small sample size and inclusion criteria may have contributed to limited variability, thus skewing the results. Most of the patients surveyed were married Caucasians. All of the patients were adults while patients who could not read or write

English were specifically excluded. A sample with a greater variability in marital status, ethnicity and age may produce different results.

Another limitation was the location, size, and acuity of the participating ED. This ED was a small, rural department with a daily census of 20 patients. Larger EDs in an urban setting, with a higher census or higher acuity may not obtain the same results. Furthermore, the use of a non-probability convenience sample decreased the generalizability.

A fourth limitation was failure of the study to examine differences in ENP vs. MD satisfaction scores based on demographics. In 1977, Ware, et al. reported that older persons were more satisfied with their physicians and medical care in general. They also reported that more educated persons and females tend to be more satisfied with care. These findings were confirmed by Aharony and Strasser (1993), and Ford, et al., (1997).

A fifth limitation was the failure of the study to examine differences in ENP vs. MD satisfaction scores based on the patient's health status. Aharony and Strasser (1993) found that the healthier the patient, the more satisfied he or she is with health care. Because of the inclusion criteria, the patients surveyed in this studied were fairly healthy. More variability in patient health status may lead to different results.

Finally, this study did not examine if there was a difference in satisfaction with the ENP vs. MDs when patients were first time visitors to the ED or have had multiple visits to the ED. Likewise, the study did not examine if there was a difference in

satisfaction with the ENP vs. MDs when patients were being cared for by that provider for the first time.

Conclusion

Based on the findings of this study, the following conclusion was reached:

There are no differences in ED patient satisfaction when patients are cared for by an ENP or MDs.

Implications for Practice

The investigation of patient satisfaction with ENPs in the ED is relevant to the profession and practice of nursing. Patient satisfaction surveys that are properly conducted can be used to determine the utilization of ENPs in EDs (Bowers, et al., 1994). This study has provided information about the practice of utilizing ENPs as providers in the ED. Emergency Departments and staffing groups can review the measurement of patient satisfaction with ENPs to determine the feasibility of hiring an ENP. Based on patient satisfaction alone, the study supports the utilization of ENPs in EDs.

Additionally, patient satisfaction, as an outcome measurement, can be used to document and reward performance of ENPs (Press, et al., 1990). Patient satisfaction ratings should be documented in the ENP's personnel files. This information can be used during performance evaluations to determine appropriate actions. Emergency nurse practitioners with similar or better patients satisfaction ratings than their MD counterparts should be rewarded in a similar fashion. Finally, this study has provided a beginning base of knowledge on patient satisfaction with ENPs in the ED.

Recommendations for Further Research

The findings of this study suggest areas for further investigation:

1. In order to increase the generalizability of the results, the study should be replicated using a larger, random sample.
2. The study should be replicated in an urban setting with different patient acuity levels.
3. Future research should ascertain if satisfaction with ENPs is similar in pediatric populations.
4. A study that evaluates severely ill or injured patients' satisfaction with ENPs should be undertaken.
5. A similar study that examines non-English speaking patients' satisfaction with ENPs should be explored.
6. Future research should evaluate patients' satisfaction in other areas where ENPs are employed such as acute care clinics, urgent care clinics, and fast track departments within an ED.
7. A study that evaluates the relationship with demographics and ENP or MD satisfaction scores should be undertaken.
8. Future research should analyze if there is a difference in satisfaction with ENPs vs. MDs when patients are first time visitors to the ED or have had multiple visits to the ED.

9. A study that evaluates the difference in satisfaction with ENPs vs. MDs when the patients have had prior episodes of care with that particular provider should be undertaken.

APPENDIX A

Patient Satisfaction Survey

ENP Satisfaction Survey

Please help increase what is known about satisfaction when patients are seen by Emergency Nurse Practitioners (ENPs) or Medical Doctors (MDs). Please rate your degree of satisfaction with the health care provider who saw you by circling the number that best describes how the provider met your expectations. There are no right or wrong answers. The numbers 0-6 indicate the degree to which the provider did or did not meet your expectations. Also, please tell us a little about yourself by filling out the questions about your age, marital status, race, highest grade you finished in school and the reason you came to the emergency department.

- 0 = Expectations not met at all
- 1 = Much less than expected
- 2 = A little less than expected
- 3 = As expected
- 4 = A little more than expected
- 5 = Much more than expected
- 6 = Way beyond expectations

My age is _____ I am _____ Female _____ Male _____

I am _____ Married _____ Single _____ Widowed _____ Divorced _____

I am _____ African-American _____ Hispanic _____ Caucasian _____ Other _____

Highest grade I finished in school _____

Reason I came to the emergency department _____

Emergency Nurse Practitioner (ENP) Satisfaction

Courtesy of the ENP that cared for me	0	1	2	3	4	5	6
Promptness of ENP in responding to my needs	0	1	2	3	4	5	6
Explained the tests so I could understand	0	1	2	3	4	5	6
Explained my diagnosis so I could understand	0	1	2	3	4	5	6
Explained my treatment so I could understand	0	1	2	3	4	5	6
Caring attitude of my ENP	0	1	2	3	4	5	6
The individual attention the ENP gave me	0	1	2	3	4	5	6
The ENP kept me informed about what was happening	0	1	2	3	4	5	6
Professional appearance of my ENP	0	1	2	3	4	5	6
My ENP made me feel secure	0	1	2	3	4	5	6
Courtesy with which my family was treated by the ENP	0	1	2	3	4	5	6
Waiting time to be seen by a ENP was reasonable	0	1	2	3	4	5	6

MD Satisfaction Survey

Please help increase what is known about satisfaction when patients are seen by Emergency Nurse Practitioners (ENPs) or Medical Doctors (MDs). Please rate your degree of satisfaction with the health care provider who saw you by circling the number that best describes how the provider met your expectations. There are no right or wrong answers. The numbers 0-6 indicate the degree to which the provider did or did not meet your expectations. Also, please tell us a little about yourself by filling out the questions about your age, marital status, race, highest grade you finished in school and the reason you came to the emergency department.

- 0 = Expectations not met at all
- 1 = Much less than expected
- 2 = A little less than expected
- 3 = As expected
- 4 = A little more than expected
- 5 = Much more than expected
- 6 = Way beyond expectations

My age is _____ I am _____ Female _____ Male

I am _____ Married _____ Single _____ Widowed _____ Divorced

I am _____ African-American _____ Hispanic _____ Caucasian _____ Other

Highest grade I finished in school _____

Reason I came to the emergency department _____

Medical Doctor (MD) Satisfaction

Courtesy of the MD that cared for me	0	1	2	3	4	5	6
Promptness of MD in responding to my needs	0	1	2	3	4	5	6
Explained the tests so I could understand	0	1	2	3	4	5	6
Explained my diagnosis so I could understand	0	1	2	3	4	5	6
Explained my treatment so I could understand	0	1	2	3	4	5	6
Caring attitude of my MD	0	1	2	3	4	5	6
The individual attention the MD gave me	0	1	2	3	4	5	6
The MD kept me informed about what was happening	0	1	2	3	4	5	6
Professional appearance of my MD	0	1	2	3	4	5	6
My MD made me feel secure	0	1	2	3	4	5	6
Courtesy with which my family was treated by the MD	0	1	2	3	4	5	6
Waiting time to be seen by a MD was reasonable	0	1	2	3	4	5	6

APPENDIX B

Instructions to ED Staff

Instructions for Distribution of

Patient Satisfaction Surveys

Research Project of Robin L. Schultze, RN, BSN

University of Texas-Houston Health Science Center School of Nursing

1. Please distribute research packets containing a Patient Satisfaction Survey (PSS), cover sheet with instructions to the patient, an envelope, and a pencil during discharge instructions to the patients who meet the following criteria:

A. Patients must be 18 years old or older. Please use the age indicated on the patient's chart.

B. Patients must be able to read and write English. Please ask the patients if they can read and write English.

C. Patients must be discharged to home from the ED.

D. Patients must be able to complete the survey without assistance from anyone else.

2. Please give ENP packets to the patients seen by Bob Leach and MD packets to patients seen by the physicians. They are clearly marked.

3. Please ask the patients to read the cover sheet carefully and decide whether or not they wish to participate.

4. Please inform the patients where the collection box for the surveys is located.

5. If you have any questions regarding the study, please contact me at (281) 568-2384 or e-mail at schultzetr@juno.com.

Thank you for your assistance with this research.

Sincerely,

Robin L. Schultze, RN, BSN

APPENDIX C

Waiting Area Sign

Attention Patients:

**A patient satisfaction study is
being conducted in the
Emergency Department. You
may be asked to complete a
short survey before you leave
today. Thank you in advance
for your help.**

APPENDIX D

Cover Sheet

Dear Emergency Department Patient:

I am a graduate student at the University of Texas-Houston, Health Science Center School of Nursing. I am seeking your voluntary participation in research I am conducting as part of my degree requirements.

This study will examine Emergency Department patient satisfaction when care is provided by either an Emergency Nurse Practitioner (ENP) or Medical Doctor (MD). You have been chosen to participate in the study because you have been a patient in the emergency department, you are 18 years old or older, you can read and write English, you are being discharged to your home, and you can fill the survey out without help from someone else. However, you are not required to participate in this study. Participation in the study is completely voluntary and has no effect on the care provided to you.

I am asking you to complete the attached patient satisfaction survey. The survey is designed to be filled out before you leave the emergency department and will take approximately five minutes of your time. Please answer all questions on the survey, including the personal information at the beginning. When you have completed the survey, please place it in the envelope, seal the envelope, and place it in the locked survey collection box near the exit of the emergency department. If you decide not to finish the survey after you have started, or decide not to participate at all, please fold the survey, place it in the envelope, seal it and place it in the collection box as if you had completed the survey.

By participating in this study, you will help increase the amount of knowledge we have about satisfaction in the emergency department when patients are cared for by ENPs or MDs. Prior to completing the survey, please read the following statements:

1. This study has been reviewed and approved by the University of Texas-Houston, Health Science Center Committee for the Protections of Human Subjects as number HSC-SN-97-021, and permission to conduct the study has been obtained from Fayette Memorial Hospital.
2. You may choose not to participate in the study. If you do not wish to participate, please place the survey in the envelope, seal it, and place it in the collection box.
3. Please do not write your name on the survey.
4. Confidentiality is assured in the collection and reporting of data. No identifying information or codes will be used in the study.
5. There is no risk to you that could result from participation in this study.
6. Access to the survey will be restricted to the investigator and members of the thesis committee conducting this study.
7. Return of completed surveys will mean you have been informed about the study and agree to participate.
8. You may keep the pencil.

If you have any questions about this study, you may call me collect at (281) 568-2384. I appreciate your participation in this study.

Sincerely,

Robin L. Schultze, RN, BSN

APPENDIX E

Approval Letter from Medical Director of ED



FAYETTE MEMORIAL HOSPITAL

October 11, 1997

Robin L. Schultze
12111 Valencia Street
Stafford, Texas 77477-1646

Dear Ms. Schultze:

This letter is to inform you that your request to collect data at Fayette Memorial Hospital for your Master's thesis has been approved. We are pleased you have chosen FMH and look forward to working with you.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,

David J. Jacoby, M.D.
Medical Director
Emergency Department

References

- Aharony, L. & Strasser, S. (1993). Patient satisfaction: What we know about and what we need to explore. Medical Care Review, 50, 49-79.
- Bowers, M. R., Koehler, W. F., & Swan, J. E. (1994). What attributes determine quality and satisfaction with health care delivery? Health Care Management Review, 19(4), 49-55.
- Brodie, B., Bancroft, B., Rowell, P., & Wolf, W. (1982). A comparison of nurse practitioner and physician costs in a military outpatient facility. Military Medicine, 147, 1051-1053.
- Brown, S. A., & Grimes, D. E. (1995). A meta-analysis of nurse practitioners and nurse midwives in primary care. Nursing Research, 44, 332-339.
- Brush, B. L., & Capezuti, E. A. (1996). Revisiting "a nurse for all settings": The nurse practitioner movement, 1965-1995. Journal of the American Academy of Nurse Practitioners, 8, 5-10.
- Buchanan, L., & Powers, R. D. (1996). Establishing an NP-staffed minor emergency area. Nursing Management, 27(2), 25-31.
- Cairo, M. J. (1996). Emergency physicians attitudes toward the emergency nurse practitioner role: Validation vs. rejection. Journal of the American Academy of Nurse Practitioners, 8, 411-417.
- Cole, F. L. & Ramirez, E. (1997). The emergency nurse practitioner: An educational model. Journal of Emergency Nursing, 23, 112-115.

Donabedian, A. (1980). Basic approaches to measurement: Structure, Process, and outcome. Explorations in quality assessment and monitoring: Vol. 1. The definition of quality and approaches to its assessment (pp. 79-128). Ann Arbor, MI: Health Administration Press.

Eriksen, L. (1988). Measuring patient satisfaction with nursing care: A magnitude estimation approach. In C. F. Waltz, & O. L. Strickland (Eds.), Measurement of nursing outcomes: Vol. 1. Measuring client outcomes (pp. 523-537). New York: Springer Publishing.

Eriksen, L. R. (1995). Patient satisfaction with nursing care: Concept clarification. Journal of Nursing Measurement, 3(4), 59-76.

Fayette Memorial Hospital. (1996). Patient Satisfaction Survey. [Brochure].
LaGrange, TX: Author

Ford, R. C., Bach, S. A., & Fottler, M. D. (1997). Methods of measuring patient satisfaction in healthcare organizations. Health Care Management Review, 22(2), 74-89.

Greeneich, D. (1993). The link between new and return business and quality of care: Patient satisfaction. Advances in Nursing Science, 16, 62-72.

Greeneich, D. S., Long, C. O., & Miller, B. K. (1992). Patient satisfaction update: Research applied to practice. Applied Nursing Research, 5, 43-48.

Hayden, M. L., Clore, E. R., & Davies, L. R. (1982). Facilitators and inhibitors of the emergency nurse practitioner role. Nursing Research, 31, 294-299.

Hooker, R. S., & McCaig, L. (1996). Emergency department uses of physician assistants and nurse practitioner: A national survey. American Journal of Emergency Medicine, 14, 245-249.

- Jackson, J. L., & Kroenke, K. (1997). Patient satisfaction and quality of care. Military Medicine, 162, 273-277.
- Knaus, V. L., Burton, S., Davis, K., Felten, S., & Fobes, P. (1997). The use of nurse practitioners in the acute care setting. Journal of Nursing Administrations, 27(2), 20-27.
- Larrabee, J. H., Ferri, J. A., & Hartig, M. T. (1997). Patient satisfaction with nurse practitioner care in primary care. Journal of Nursing Care Quality, 11, 9-14.
- Maciejewski, M., Kawiecki, J., & Rockwood, T. (1997). Satisfaction. In R. L. Kane (Ed.), Understanding Health Care Outcomes Research (pp. 67-89). Gaithersburg, MD: Aspen Publishers, Inc.
- Maginnis, G.H. (1982). Easier, faster, more reliable readability ratings. Journal of Reading, 25, 598-599.
- McGrath, S. (1990). The cost effectiveness of nurse practitioners. Nurse Practitioner, 15,(7), 40-42.
- Mundinger, M. O. (1994). Advanced-practice nursing-Good medicine for physicians? New England Journal of Medicine, 330, 221-214.
- Polit, D. F. (1996). Data analysis and statistics for nursing research. Stamford, CT: Appleton and Lange.
- Polit, D. F. & Hungler, B. P. (1995). Nursing research: Principles and methods (5th ed.). Philadelphia: J. B. Lippincott.
- Powers, M. J., Jalowiec, A., & Reichelt, A. (1984). Nurse practitioner and physician care compared for nonurgent emergency room patients. Nurse Practitioner, 39-49.
- Press, I., Ganey, R. F., & Malone, M. P. (1990). Satisfied patients can spell financial well being. Healthcare Financial Management, 45(2), 34-42.

Ramirez, E. (1996). A personal perspective: Nurse practitioner in the emergency department. Journal of Emergency Nursing, 22, 548-540.

Ramler, C. (1990). Triage. In S. Kitt, & J. Kaiser (Eds.), Emergency nursing: A physiologic and clinical perspective (pp. 23-31). Philadelphia: W.B. Saunders.

Ross, C. K., Sinacore, J. M., & Steward, C. A. (1995). A comparative study of seven measures of patient satisfaction. Medical Care, 33, 393-406.

Selfridge-Thomas, J., & Shea, S. S. (1997). The ED nurse practitioner: Pearls and pitfalls of role transitions and development. Journal of Emergency Nursing, 23, 235-237.

Spisso, J., Holcroft, J. W., McKennan, M., & O'Callaghan, C. (1990). Improved quality of care and reduction of housestaff workload using trauma nurse practitioners. The Journal of Trauma, 30, 660-665.

Strasser, S., Aharony, L., & Greenberger, D. (1993). The patient satisfaction process: Moving toward a comprehensive model. Medical Care Review, 50, 219-248.

The University of Texas Houston Health Science Center School of Nursing. (1997). Emergency/ambulatory care nurse practitioner degree program. [Brochure]. Houston, TX:

Author.

Ware, J. E., Davies-Avery, A., & Stewart, A. L. (1977). The measurement and meaning of patient satisfaction: A review of the literature. Santa Monica, CA: The Rand Corporation.

VITA

Robin L. Schultze was born in Freeport, Illinois, on December 10, 1957. She is the daughter of Bob D. and Ramona J. Kittle. She graduated from J. J. Pearce High School, Richardson, Texas, in 1976. After graduation from high school, she received her Bachelor of Science in Biology in 1980 from the University of Missouri at Kansas City. In 1988 she received her Bachelor of Science in Nursing from Texas Woman's University, Houston, Texas. She was commissioned as Second Lieutenant in the United States Air Force in 1988 and has worked in medical surgical nursing, dialysis, telemetry, the emergency department and as a flight nurse, all at Scott Air Force Base, Illinois. Selected by the Air Force Institute of Technology for an Air Force sponsored master's education, she began graduate school in 1996. She attended the University of Texas Houston Health Science Center. Her specialty was in emergency nursing as a Clinical Nurse Specialist and Emergency Nurse Practitioner. After graduating in May, 1998, with a Master of Science in Nursing, she will be assigned as a clinical nurse in the Emergency Department at Landstuhl, Germany.