PATIENT SATISFACTION WITH NURSE PRACTITIONER CARE IN RETAIL HEALTH CLINICS

by

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ABSTRACT

The purposes of this study were to determine if patients treated in retail health clinics reported satisfaction with nurse practitioner care measured with the Nurse Practitioner Satisfaction Survey Retail Health Care (NPSS-RHC), if there was a correlation between demographic characteristics or brand of retail health clinic system and level of satisfaction reported, and if the NPSS-RHC is a reliable and valid measure of patient satisfaction. Three-hundred and sixty participants were recruited in a Midwestern metropolitan area through advertisement in community newspapers or Survey Monkey Target Audience research panel. Each participant completed the 28-item questionnaire and a demographic data form. All scales had a maximum value of five. The mean total satisfaction score was 4.04 (SD = 0.58), subscale scores were 4.00 (SD = 0.63) for satisfaction, 4.11 (SD = 0.62) for scheduling, and 4.10 (SD = 0.60) for communication. There was no correlation between total satisfaction score and demographic characteristics ($R^2 = 0.061$) or brand of retail health clinic system ($R^2 = 0.007$). The NPSS-RHC demonstrated internal consistency reliability in the pilot ($\alpha = 0.57$ scheduling, $\alpha = 0.83$ communication, $\alpha = 0.96$ satisfaction) and primary study ($\alpha = 0.80$ scheduling, $\alpha = 0.96$ communication, $\alpha = 0.85$ satisfaction). Evaluation of validity indicated the NPSS-RHC is valid for measuring patient satisfaction with NP care. The NPSS-RHC reliably measured patient satisfaction with NP care in retail health clinics. The tool is suitable for use in clinical practice as well as in research and provides the NP the opportunity to measure one outcome of nurse practitioner care.
DEDICATION

I dedicate this dissertation project to nurse practitioners around the world who care for and work with patients daily in the pursuit of better health outcomes. Thank you to the patients who seek care from nurse practitioners and have realized the value in nurse practitioner delivered care. You both inspire me daily and this dissertation has been possible because of you.
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Chapter One

Introduction

Retail clinics are a new and evolving health care delivery model. Nurse practitioners (NPs) provide care in retail health clinics and are tasked with reporting outcomes of care. There is a dearth of literature describing outcomes of care in retail clinics. Patient satisfaction, one frequently measured outcome of care, requires an appropriate survey tool. One measurement tool was identified that would be appropriate for measuring patient satisfaction with care provided by nurse practitioners in an outpatient setting (Agosta, 2009). One objective of this study was to measure patient satisfaction with nurse practitioner care in retail health clinics. The second objective was to evaluate if a modified patient satisfaction instrument was appropriate for measuring patient satisfaction with nurse practitioner care in retail health clinics.

Chapter One of this study describes the background and problem statement, significance of the problem and the study, the nature of the study and research questions. Hypotheses of this study are outlined. The structure of the theoretical and conceptual framework, variables, and limitations are discussed.

Background

It is essential to assess and report outcomes of care provided by advanced practice nurses (Kleinpell-Nowell & Weiner, 1999; Kleinpell, 2009). A nurse practitioner is an advanced practice nurse (APN) and licensed independent practitioner, providing “nursing and medical services to individuals, families, and groups” in a variety of settings (American Academy of Nurse Practitioners [AANP] (2010b, para. 1). One NP sensitive outcome of care is patient satisfaction.
The consumer movement in health care has fostered the concern about patient satisfaction with services (Linder-Pelz, 1982) and health care quality. The competition between health care facilities has contributed to the interest in patient satisfaction with services. Patient satisfaction, and quality are distinct constructs (Gill & White, 2009). Patient satisfaction is one dimension of health care quality even though the constructs are often used interchangeably.

In the early 1980s, patient satisfaction as an outcome measure began to be studied (Guzik, Menzel, Fitzpatrick, & McNulty, 2009). Researchers have evaluated components or determinants of satisfaction utilizing a variety of measurement tools, considered satisfaction with care delivered in diverse practice settings, and care provided by different types of health care providers. Research measuring patient satisfaction continues today. One study identified investigated patient satisfaction with NP care provided in retail health clinics (Hunter, Weber, Morreale, & Wall, 2009).

Retail health care evolved in the 21st century because of consumer demand for accessible, convenient, and affordable health care (Evans, 2010). MinuteClinic opened its doors in 2000, the first retail health clinic system in the United States (MinuteClinic, n.d.). Other clinics have followed since that time, including Walgreen’s (Take Care Health), Target Clinics, and other regional retail health clinic systems. National retail health clinic systems are affiliated with large pharmacy corporations (Cassel, 2012). Primarily nurse practitioners (NPs) and physician assistants’ staff retail health clinics (Ahmed & Fincham, 2011).

Standards for retail health clinics include monitoring quality on an ongoing basis (Evans, 2010). Monitoring activities include peer and collaborating physician chart review, evidence-based practice guidelines, data collection on safety and quality outcomes as well as patient satisfaction data. The business in retail health clinics is directly dependent on satisfied patients
leaving the clinic and recommending the clinic to their family, friends, coworkers, and acquaintances (Garman, Garcia, & Hargreaves, 2004). A need for a data collection tool and system for measuring patient satisfaction with nurse practitioner care in retail health clinics exists. To measure one aspect of quality, patient satisfaction, one can use an existing instrument or a commercially available patient satisfaction measurement system, or create a patient satisfaction instrument.

Health care organizations often use commercially available tools to measure patient satisfaction (Dawn & Lee, 2003). At least one item on these tools is a net promoter score (NPS); a NPS is not a patient satisfaction measure, but simply an indicator of the likelihood the individual will return to seek services in the clinic again (Grisaffe, 2007). Commercially available tools do not necessarily include indicators meaningful to the NP, and include measurement of aspects of the visit experience such as accessibility and convenience, which are not under the direct control of the NP (Burns, 2009).

Patient-centered care is essential in health care today and contributes to patient satisfaction with care (Cliff, 2012). Patient-centered care “is defined as the array of communicative behaviors that can enhance the quality of the relationship between the health care provider and patient, or the patient’s family” (Wanzer, Booth-Butterfield, & Gruber, 2004, p. 364). A patient satisfaction measure should assess aspects of the care experience, which are patient-centered and contribute to satisfaction.

Using a valid and reliable NP sensitive patient-centered satisfaction tool is an alternative to using a commercially available tool. No tools in the literature are designed to measure patient satisfaction with care provided by NPs in retail health clinics. Many aspects of receiving care in a retail health clinic compares to other types of outpatient services staffed by nurse practitioners.
Modifying and testing an existing tool may result in a valid and reliable NP patient satisfaction focused tool.

Created by a nurse practitioner, one patient satisfaction tool identified measures satisfaction with NP care in an outpatient setting. Agosta (2005) initially established the reliability and validity of the Nurse Practitioner Satisfaction Survey [NPSS] for use in an occupational health clinic, and urged others to test the NPSS in other outpatient settings where NPs provide services. Because of the similarities between NP staffed occupational health and retail health clinics, only minor modifications to the NPSS were needed to incorporate specific aspects of the retail health care clinic experience that make it unique from other outpatient care settings.

**Problem Statement**

The general problem is NPs are challenged with conducting research and reporting outcomes of care. Research is part of the NP role (American Academy of Nurse Practitioners [AANP], 2010c), and considered essential to document role effectiveness (Institute of Medicine, 2011). One nurse-sensitive outcome of care is patient satisfaction (Kleinpell, 2009).

Retail health care clinics are a recent innovation (Rand Corporation, 2010) and primarily employ NPs (Evans, 2010). Patient satisfaction is emphasized in retail health care systems (Convenient Care Association [CCA], n.d.b). Only one original research study identified reports on patient satisfaction with NP care in a retail health clinic system (Hunter, Weber, Morreale, & Wall, 2009). No reliability and validity are reported for the instrument used to measure patient satisfaction with NP care in that study. Questions on the survey tool asked individuals to assess specific features of three privately owned retail health clinics, which would not make the tool appropriate for use when assessing patient satisfaction with care in other retail clinic systems.
The specific problem is only one research study reports on patient satisfaction with NP care in retail health clinics and no instrument was found that could be used for this purpose. Patient-centered interactions and communication with the health care provider is a major influence on patient satisfaction and should be assessed. Obtaining meaningful feedback from patients treated in retail health clinics, will allow the NP to modify aspects of care and communication that influence patient satisfaction. Findings from the study will add to the literature on NP practice outcomes.

The focus of this quantitative study was to test a modified patient satisfaction instrument and report satisfaction with care provided by NPs in retail health clinics. Patients treated in retail health clinics are the general population of this study. The target population are patients treated in retail health clinic systems in a Midwestern metropolitan area of the United States.

**Purpose**

The purpose of this quantitative, cross-sectional, descriptive-correlational study was to test if a modified version of the Nurse Practitioner Satisfaction Survey [NPSS] renamed the Nurse Practitioner Satisfaction Survey Retail Health Care [NPSS-RHC] measures patient satisfaction with care provided by NPs in retail health clinics. The second purpose of this study was to establish if the NPSS-RHC is a valid tool for measuring patient satisfaction with care by NPs in retail health clinics. The third purpose was to determine if the NPSS-RHC is a reliable tool for measuring patient satisfaction with NP care in a sample of individuals treated in retail health clinics in a Midwestern metropolitan area. The fourth purpose was to determine if differences in patient satisfaction are attributable to demographic characteristics of individuals treated by NPs in retail health clinics in a Midwestern metropolitan area or the clinic system where treatment was sought.
Significance of the Problem

Renewed interest in patient satisfaction with health care as a research focus has occurred (Koch & Rumrill, 2008). Measurement of patient satisfaction with in-patient nursing care, or care provided by physicians is typically studied. Studies investigating patient satisfaction with care provided by NPs began to appear in the literature in the 1990s (Green & Davis, 2006).

More than 155,000 NPs are practicing in the United States (American Academy of Nurse Practitioners, n.d.) despite the report of a primary health care provider shortage (Fairman, Rowe, Hassmiller, & Shalala, 2011). Auerbach (2012) projects the NP workforce will grow to 244,000 by 2025. Nurse practitioners provide acute illness care, wellness services, and chronic disease management. Recently adopted health care reform goals in the United States can be accomplished by allowing NPs to practice to the extent of their education and licensure (Bauer, 2010). Nurse practitioners value quality in health care and patient satisfaction with the services they provide. The increasing utilization of NPs as health care providers requires valid and reliable tools to measure satisfaction with the services they provide in diverse practice settings.

Retail health clinics have evolved to meet the need for accessible, affordable health care as well as to provide available primary care throughout the United States (Wilson et al., 2010; Ahmed & Fincham, 2011). An estimated six million patients seek care in retail health clinics annually in the United States following a doubling in visit numbers from 2007 to 2009 (Mehrotra & Lave, 2012). If dissatisfied with the care provided, the customer will not return (Kleinpell, 2009) thus adversely affecting the utilization of retail clinics and clinic income, and ultimately the viability of a retail clinic and potentially others within its system.

Retail health clinic systems like other health care organizations ask patients to rate their satisfaction with services and settings. Measuring patient satisfaction with care provided by NPs
in retail health clinics is important. A valid and reliable tool to measure patient satisfaction with the care received is an alternative to a commercially available tool and could be valuable to NPs in other practice settings.

**Significance of the Study**

Research results should further the understanding of patient satisfaction with care provided by NPs, especially in retail health clinics run and managed by nurse practitioners. The future of health care and the NP profession requires the commitment of leaders and scholars to conduct research about the NP role, the outcomes of NP care and the impact on patients and health care systems (Newhouse et al., 2011).

One study evaluated patient satisfaction with retail health clinics (Hunter et al., 2009). The tool measuring patient satisfaction in the study, similar to commercial tools, asked one of eight questions about patients’ level of satisfaction with care. The authors owned stock or were employed in senior roles within that system. No other original published studies were found that evaluated patient satisfaction with the retail health clinic experience. The existence of this one study evaluating patient satisfaction, and no others found, provided an impetus for this research.

Agosta (2009b) conducted a study of patient satisfaction with NP delivered care in an occupational setting. She indicated the NPSS may be suitable for use in other settings staffed by NPs, and tested in patient populations in other regions of the country. This researcher validated a modified version of the NPSS as a measure of patient satisfaction with NP delivered care in retail health clinics.

The integrity of study findings are ensured when a researcher uses valid and reliable measurement tools (DeVon et al., 2007). Establishing the reliability and validity of a tool to measure patient satisfaction with care delivered by NPs in retail health clinics are two potential
outcomes of the study proposed. This tool, the NPSS-Retail Health, is an alternative to commercially available tools commonly used by health care businesses and organizations. The study has the potential to link theory, research, and practice. The study will contribute to the body of knowledge on patient satisfaction with nurse practitioner care and retail health care.

Nature of the Study

Quantitative method. Knowledge about patient satisfaction with NP care in various outpatient settings arose from research conducted to determine outcomes of NP care. Participants in these studies were the patients treated by NPs in different outpatient settings. Ramsey et al. (1993) and Knudtson (2000) reported patient satisfaction with NP care in rural health clinics. Guzik et al. (2009) and Agosta (2005) evaluated patient satisfaction with NP care in occupational medicine clinics. Other researchers evaluated satisfaction with NP care in university health clinics (Cole, Mackey & Lindenberg, 2001), nurse-managed centers (Benkert et al., 2002), school-based health centers (Benkert et al., 2007), and retail health clinics (Hunter et al., 2009).

All identified studies on patient satisfaction with NP care use a quantitative method. Quantitative research designs use statistical analysis of data obtained through systematic measurement (Marczyk, DeMatteo, & Festinger, 2005). Data collected in correlational research studies answers research questions. Correlational research is a quantitative method that examines the relationship between variables.

Researchers commonly use instruments in quantitative correlational studies to collect data about variable(s) of interest (Marczyk, DeMatteo, & Festinger, 2005). A researcher can use an existing instrument that has reliability and validity reported or create a new instrument. Marczyk, DeMatteo and Festinger (2005) recommend using an established instrument if one is
available to measure the variable(s) of interest. Agosta (2005) developed the Nurse Practitioner Satisfaction Survey to measure patient satisfaction with NP care in an outpatient setting; she recommended testing the instrument with other outpatient populations. In this study, the researcher chose the Nurse Practitioner Satisfaction Survey because it measures the variable of interest and only required minor modifications to make it appropriate for measuring patient satisfaction in a retail health clinic setting. Measuring patient satisfaction in another group of individuals allows the researcher to generalize findings to another population of patients (Marczyk, DeMatteo and Festinger, 2005).

In quantitative studies, data and inferential statistical procedures allow a researcher to draw conclusions about a population of interest based on findings drawn from a sample of the population (Marczyk, DeMatteo, & Festinger, 2005). The Nurse Practitioner Satisfaction Survey is composed of Likert-type questions that collect ordinal level data. Other questions on the survey (i.e. demographic questions) provide nominal level data. Scoring the three subscales of the instrument results in interval level data.

Green (2002) and Agosta (2005) recommended a qualitative study may be valuable to consider individual perceptions of what contributes to patient satisfaction with services provided by NPs, patterns of perceptions, and to make sure what contributes to patient satisfaction is understood. When developing the dissertation study, the researcher considered quantitative and qualitative methods. One open-ended question added to the survey instrument allows participants to provide information about additional factors that may contribute to satisfaction and not assessed by the Likert-type questions that compose the instrument.

**Design appropriateness.** A survey research design is a quantitative method of data collection and indicated when there is a desire to understand individual’s characteristics,
opinions, or attitudes (Marczyk et al., 2005). The researcher identified an instrument appropriate for the purpose of measuring patient satisfaction with NP care in retail health clinics. Statistical analysis of the data collected through completion of the instrument by a sample of individuals’ tests two study hypotheses. In correlational research, surveys conducted aid in determining the relationship between variables (Marczyk et al., 2005).

Reliability analysis conducted on the three subscale scores of the NPSS-RHC measures the internal consistency of the instrument. Internal consistency is the degree to which an instrument measures the concept of interest on repeated uses of the instrument (Carmines & Zeller, 1979). Consideration of whether the instrument measures the concept of interest refers to the validity of the instrument. Reliability analysis and consideration of the validity of the NPSS-RHC addresses two study hypotheses.

Implementing the survey electronically allows access to a sample in a large geographic area in the most time efficient and economic manner. Electronic distribution and completion of the survey promotes anonymity of the respondent and promotes confidential participation. Dillman, Smyth, and Christian (2009) recommend using more than one method to obtain a sample. Participants were solicited through advertisements in community newspapers and through invitations sent to members of an existing survey research panel.

**Research Questions**

RQ 1: What is the level of satisfaction reported by individuals treated in retail health clinics?

RQ 2: What is the correlation if any between level of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care?
RQ 3: What does the calculated Cronbach’s alpha statistic indicate about the reliability of the NPSS-RHC for measuring patient satisfaction with nurse practitioner care in retail health clinics?

RQ 4: What does analysis of the NPSS-RHC indicate about the validity of the tool for measuring patient satisfaction with nurse practitioner care in retail health clinics?

**Hypotheses**

H10: Individuals treated in retail health clinics report no satisfaction with the care provided by nurse practitioners when measured with the NPSS-RHC.

H1A: Individuals treated in retail health clinics report satisfaction with the care provided by nurse practitioners when measured with the NPSS-RHC.

H20: There is no correlation between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care.

H2A: There is a correlation between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care.

H30: The NPSS-RHC is not a reliable tool for measuring patient satisfaction with NP care in retail health clinics.

H3A: The NPSS-RHC is a reliable tool for measuring patient satisfaction with NP care in retail health clinics.

H40: The NPSS-RHC is not a valid tool for measuring patient satisfaction with NP care in retail health clinics.
H4A: The NPSS-RHC is a valid tool for measuring patient satisfaction with NP care in retail health clinics.

Theoretical & Conceptual Framework

The Primary Provider Theory (PPT) of patient satisfaction proposed by Aragon (2003) and the Shuler Nurse Practitioner Conceptual Model (Shuler, 1991) provide the theoretical and conceptual framework for this study. The Shuler Model depicts the components, process, and outcomes of NP delivered care. Aragon theorizes the patient centeredness of health care providers influences the clinician’s behavior during encounters with patients and subsequently patient outcomes (Aragon, n.d.b).

Primary Provider Theory. Stephen Aragon created the PPT based on his experience as a hospital administrator (Aragon, n.d.a). Nine principles form the basis for the Primary Provider Theory. A clinically competent health care provider is necessary as well as effective communication and interaction with patients to achieve patient-centered care and desired patient outcomes. Patient-centeredness of the provider influences the provider’s interactions during the health care interaction. The patient values the patient-centered provider more than the financial objectives of the patient visit. Patients judge provider patient-centeredness best (Aragon, Flack, Holland, Ingram, & Clements, 2006).

Shuler Nurse Practitioner Conceptual Model. Dr. Pam Shuler, a practicing NP and scholar, developed the Shuler Nurse Practitioner Conceptual Model (Dr. Pam Shuler Website, 2012) because no other nursing model encompassed the medical and nursing aspects of the NP role. This model guides NP education, practice, and research (Shuler & Davis, 1993), and exemplifies the rich theoretical foundation of NP practice (Fawcett, Newman, & McAllister, 2004).
Shuler (1991) recommended further research to uncover the unique contributions NPs make as health care providers. The completed investigation using the Shuler Nurse Practitioner Conceptual Model will add to the body of knowledge of NPs as health care providers. Aragon and Gesell (2003) recommended an examination of the PPT’s applicability in settings other than emergency departments. The researcher will examine the applicability of the PPT in retail health clinics.

**Variables**

The major variables in this study are NP care, patient satisfaction, and retail health clinics. Demographic information about participants collected on a separate form includes gender, age, race, and zip code of the patient treated at the retail health clinic. Questions 42 through 44 ask the highest level of education completed by the person completing the survey, their employment status, and yearly household income.

Definitions for the major variables in the study are as follows:

**Nurse practitioner:** A nurse practitioner “is a licensed independent practitioner who practices in ambulatory, acute or long-term care as a primary or specialty care provider of nursing and medical services to individuals, families, and groups” (AANP, 2010a).

Operationally defined, a NP is the clinician who provides care in retail health clinics.

**Nurse practitioner care:** The NP uses “the diagnostic process and national standards of care as a framework for managing patient care with priorities including patient, and family education, facilitation of patient participation in self-care, promotion of optimal health and a safe environment, and facilitation of entry into the health care system” (AANP, 2010b, p. 2-3).
Operationally defined NP care encompasses diagnosis, testing, treatment of minor illnesses and injuries, preventative care and wellness services, and chronic disease monitoring to children and adults in retail health clinics.

Patient satisfaction: Patient satisfaction is an evaluation of distinct dimensions of the health care experience (Linder-Pelz, 1982) as measured operationally by the revised Nurse Practitioner Satisfaction Survey (NPSS) (Agosta, 2005), renamed the Nurse Practitioner Satisfaction Survey Retail Health Care (NPSS-RHC).

Retail health clinics are convenient care clinics located in retail stores, supermarkets and pharmacies where individuals may seek treatment for uncomplicated illnesses and receive preventative health care services. For the purpose of this study, these clinics (MinuteClinic, Take Care Health, & Target Clinics) are located in or near a Midwestern U.S. city.

Limitations

Anticipated limitations of this study were the convenience sampling strategy and accepting participants who report they received care or accompanied a child or dependent adult who received care, although they may have, could yield a sample that may not represent the population. This may limit the generalizability of study findings. The cross-sectional method used in the study limits external validity of study findings as well.

Maturation is the most likely potential threat to internal validity in the study. Maturation refers to changes in the participant over time (Marczyk et al., 2005). The passage of time after a clinic visit may influence a participant’s memory of a retail clinic experience. Whether a participant experienced improvement in their illness or not is another example of maturation effect. An individual may report different levels of satisfaction with care depending on when a
survey is completed in relation to the visit; patient outcome may also influence reported satisfaction levels.

Measuring patient satisfaction with NP care once may not accurately reflect patient satisfaction with care in retail health clinics. Generalizability of study findings are limited to patient satisfaction with care in retail health clinics employing nurse practitioners.

**Summary**

Nurse practitioners want to deliver patient-centered quality care. Patient satisfaction is one outcome of NP practice, which health care organizations often measure using prescribed determinants. Commercially available tools measure satisfaction with services, but do not contain primarily NP care sensitive outcome indicators. The tools do not focus on the patient-centered nature of interactions with the NP that contribute to patient satisfaction. A valid and reliable tool to measure satisfaction with NP care is an alternative to commercially available tools. The Nurse Practitioner Satisfaction Survey (NPSS), a tool developed by a NP may be an appropriate alternative. This study explored patient satisfaction with nurse practitioner care in retail health clinics using a modified version of the NPSS, renamed the NPSS-RHC (retail health care).
Leadership competency of NPs is exemplified by the highest level of professionalism, which includes the use of nursing conceptual models (Fawcett, Newman, & McAllister, 2004). By using nursing conceptual models, nurse practitioners (NPs) serve as an exemplar for other health care professionals, students, and society at large. Practice and research guided by nursing conceptual models are more appropriate for NPs than the medical model, focused on disease treatment. This researcher identified an advanced practice nursing (APN) framework for the dissertation study that exemplifies the relationship between the NP and the patient, highlights the contextual aspects of care and identifies the medical and nursing functions inherent in the NP role.

This researcher identified several APN models, two pertinent to NPs practicing in any specialty in the United States. Dontje et al. (2004) developed the MSU (Michigan State University) Sustained Partnership Model of Nurse Practitioner Primary Care as a teaching tool to use with APN students; this model has not been tested or validated to date. The Canadian Nurse Practitioner Initiative (CNPI) developed the Conceptual Model for Nurse Practitioner Practice in Canada (CNPI) (December 2005). The model reflects unique aspects of practice in the Canadian national health care system, which is not relevant to NP practice in the United States. The Shuler Nurse Practitioner Practice Model (Shuler & Davis, 1993a) is a comprehensive model of NP practice, which has been validated and tested in several studies. Dr. Shuler renamed the model the Shuler Nurse Practitioner Conceptual Model (Dr. Pam Shuler Website, 2012). This researcher chose this model for the conceptual framework for this study.
The theoretical and conceptual framework of the dissertation study is discussed in this chapter. Major study variables are NP care, retail health clinics, and patient satisfaction. Nurse practitioners and retail health clinics are defined; a brief history of each is presented, as well as a description of the NP role and its impact on health care in the United States. Patient satisfaction as an outcome of NP care, and patient-centered care are discussed. Instruments to measure patient satisfaction with NP care are described.

**Literature Search**

The researcher identified literature by multiple mechanisms for the review of literature. Keywords such as patient satisfaction, nurse practitioners, retail health clinics, patient satisfaction instruments, Nurse Practitioner Satisfaction Survey, Shuler Nurse Practitioner Practice Model, Primary Provider Theory, patient-centered care, and patient outcomes were used to locate relevant literature. Online databases EBSCO host, Cumulative Index to Nursing and Allied Health Literature (CINAHL), OVID, and ProQuest were the most commonly searched.

The National Academies Press, Robert Wood Johnson Foundation, The Convenient Care Association, American Nurses Credentialing Center, retail health clinic system websites, and personal websites of Drs. Stephen Aragon and Pamela Shuler were searched to obtain literature. Professional journals, books the researcher has purchased, and resources from professional organizations (i.e. American Association of Nurse Practitioners) were also sources of relevant literature.

The literature review process began in 2010, and was on-going through dissertation course work and development of the final version of the dissertation proposal. Approximately
200 pieces of literature were assessed for relevancy to topics in the dissertation. Seminal works and the most recent literature were selected for inclusion in the review.

**Theoretical and Conceptual Framework**

The Primary Provider Theory (PPT) (Aragon & Gesell, 2003) and the Shuler Nurse Practitioner Conceptual Model (Shuler, 1991) form the theoretical and conceptual frameworks for the study. The PPT is a patient satisfaction theory that can inform patient-centered care, and “offers an alternative paradigm for the measurement and realization of patient satisfaction” (Aragon, 2003, p. 225). The Shuler Model is a conceptual model of care proposed by a nurse practitioner; this model defines the practice of the NP, identifies the role and explains the diagnostic process. The theory and model are described in this section.

**Primary Provider Theory.** The Primary Provider theory is generalizable and based on nine principles that support the scientific method and Hippocratic Oath (Aragon, n.d.) (See Figure 1). Permission was obtained from Dr. Stephen Aragon to use the model (See Appendix A). The theory highlights how the patient-centeredness of the health care provider influences care delivered by the provider and patients’ satisfaction with care. Aragon found no generally accepted theory of patient satisfaction existed (Aragon, 2003); he developed the theory based on his experiences as a hospital administrator. The database used in Aragon’s study contained surveys returned by patients treated in hospitals that contract with Press Ganey for patient satisfaction measurement.

The Primary Provider Theory has several principles. Competent clinicians are necessary, but this alone does not ensure patients will experience satisfaction with care they receive (Aragon, n.d.). The provider must communicate effectively and interact with the patient if satisfaction with care is to occur. The patient-centeredness of the provider influences
interactions with the patient, and patient outcomes. Providers are responsible for quality in the care they deliver. Clinically competent and patient-centered health care providers are more likely to achieve desired patient outcomes. Patients and families recognize patient-centered behaviors. The patient-centeredness of the provider is the most important aspect of the clinical encounter. Patients judge patient-centeredness better than anyone (Aragon, n.d.).

Aragon initially tested the PPT in random samples of individuals treated in emergency departments (EDs) (Aragon & Gesell, 2003). The primary aim of the study was to test the relationships in the developed model and compare male and female patient samples. Researchers selected samples from a 1997 Press Ganey database (584,208 patient visits to 459 EDs); patients treated in an ED and not admitted to the hospital received surveys. The survey scored patients on a five-point Likert-type scale. Previous research reported the internal consistency reliability of the questionnaire (alpha .92) (Aragon & Gesell, 2003).
Aragon found that physician provider, waiting time, and nursing care were the three primary factors contributing to patient satisfaction (Aragon & Gesell, 2003); male and female patients expressed over 90% satisfaction with their emergency department experience. Aragon explicated and tested a new model of patient satisfaction, which is the major strength of this study.

Guarisco and Bavin (2008) investigated patient satisfaction and global patient satisfaction scores for ED visits over an eight quarter period. This study took place in a hospital that implemented a physician incentive program, which tied the physician incentive to patient satisfaction scores measured on the Press Ganey 40-item patient satisfaction tool used by the hospital. The PPT was the theoretical framework for this study.

Guarisco and Bavin (2008) found the physician pay-for-performance incentive program implemented in a hospital emergency department motivated physicians to change their behavior and improve interactions with patients, which in turn improved patient satisfaction scores. From the first quarter of 2003 through the fourth quarter of 2004, physician’s mean satisfaction scores increased from 84.5 to 95 on a 100 point scale. Improvement in patient satisfaction scores seemed to reinforce behavior changes and convinced those in the group who doubted the impact a change in behavior could have. This study provided further evidence to validate the major premises of the Primary Provider Theory of patient satisfaction as proposed by Aragon (2003).

The relationship between provider patient-centeredness and patients’ trust in their physicians was investigated in two studies (Aragon, Flack, Holland, Ingram, & Clements, 2006; Aragon, McGuinn, Bavin, & Gesell, 2010). Samples were drawn from Medicaid obstetrical patients or pediatric patients’ satisfaction survey data collected from the respective population between 2001 and 2004. Both studies used structural equation modeling to test an extension of
the Primary Provider Theory. The authors hypothesized that two variables, provider patient centeredness and patient trust in the provider, were related. Both studies validated that patient-centeredness of the provider had a causal effect on patient trust in the provider; both studies provide further validation for the Primary Provider Theory.

Aragon et al. (2012) again evaluated the relationship between patient-centeredness and satisfaction of African American female patients insured by Medicaid. In this study, the patient-centeredness of both physician and nursing staff were important variables. As in other studies testing the relationship between concepts in the PPT, survey data from Press Ganey patient satisfaction surveys was analyzed. This study contributes further evidence that provider patient-centeredness directly influences patient satisfaction with health care. Both nursing and physician staff patient-centeredness attitude and behavior influence the patient outcome.

**Shuler Nurse Practitioner Conceptual Model.** This conceptual model (See Appendix B) guides NP education, practice, and research (Shuler & Davis, 1993), and exemplifies the rich theoretical foundation of NP practice (Fawcett, Newman, & McAllister, 2004). The nursing process (diagnostic process), nursing wellness theory and systems theory combine to form the theoretical basis for this model (Shuler, 2010). Permission was obtained to use this model (See Appendix C).

The model can guide the NP through the clinical visit with the patient. Interactions with patients and thorough data gathering and care occur in all types of visits, episodic, acute, chronic, wellness, and comprehensive. Nurse practitioners practice holistically, focusing on prevention, patient teaching, and wellness. The NP partners with the patient to achieve the desired goal(s) (Shuler, 2010).
Twelve assumptions form the basis of the Shuler Nurse Practitioner Conceptual Model (Shuler & Davis, 1993). The model recognizes people are multidimensional encompassing physiologic, psychologic, social, cultural, environmental, and spiritual components. Individuals should take an active role in their health and wellness, and have the right to reject health care. Health and wellness are dynamic processes, multidimensional like people. Nurse practitioners are role models during interactions with patients. Nurse practitioners can assist patients with health, illness, and prevention activities and can influence patients’ choices. Individuals can attain higher levels of wellness when assisted by nurse practitioners. Families are a major influence on the health of the individual. The NP functions as a health educator; health education can assist the patient in times of health and illness. The NP involves the patient as an active participant in teaching and learning. An individual’s learning abilities change throughout life as their developmental needs do. Many things affect a patient’s learning; individuals learn best by different methods.

Shuler tested the Nurse Practitioner Practice Model (1991) in a study of homeless women’s health and wellness care needs. Shuler’s study (1991) had two phases. The objective of the first and descriptive phase was to determine the health care needs of 50 homeless women who attended a health clinic for homeless women in downtown Los Angeles. A chart review of these women’s medical records identified three groups of women: those who used birth control, those who did not but desired to use it, and those who did not use birth control and did not desire to use it.

The experimental phase of Shuler’s study (1991) tested the diagnostic decision making process and referral components of the Shuler model. Shuler randomly assigned NP participants to one of two groups. One group used the model-based tool, and the other used a non-model-
based tool while viewing a simulated family planning visit. The NPs were asked to determine the number of health problems, the types of health problems, diagnoses, and referral needs of the patient in the simulated visit. Shuler found that the NPs who used the model based tool appropriately identified patient problems, patient referral needs related to health deficits, substance use, and inadequate nutrition slightly better than the control group.

At a probability level of .05, Shuler (1991) found no significant difference in the number or types of health problems and health-related problems identified by the two groups of NPs. The mean number of diagnoses made by each NP group did not significantly differ; neither did the proportion of NPs in either group who identified health related referral needs. The groups differed significantly in the number of health referral needs identified (2.1 experimental group vs. 2.8 control group). This supported four out of five hypotheses in the study.

Shuler (1991) developed and validated the Shuler Nurse Practitioner Practice Model in her dissertation study. The model has been used to evaluate care provided in school-based health centers (Shuler, 2000), and the provision of health care to the elderly (Shuler, Huebscher, & Hallock, 2001). In both examples, the NPs used the model to guide all phases in the diagnostic process while providing care to the individual. These applications of the model demonstrate the clinical utility of the model (Shuler & Davis, 1993b) with different populations.

**Patient-centered Care**

Depending on the perspective, definitions of patient-centered care (PCC) vary (Robinson, Callister, Berry, & Dearing, 2008). Wanzer, Booth-Butterfield and Gruber (2004) indicate PCC is a communication style that enhances the provider patient relationship. The communication style used by the health care provider as well as the relationship between the provider and the patient are what influences patient outcomes (Charlton, Dearing, Berry, & Johnson, 2008). The
biopsychosocial communication style engages patients in discussion and involves them in decision-making related to their care.

Patient centeredness must be part of organizational culture (Wanzer et al., 2004). Patient-centered care is typically measured with questionnaires that assess the patient’s perception of and satisfaction with interactions with the provider (Robinson et al., 2008). Using a satisfaction questionnaire that measures patient-centered communication provides valuable feedback to the organization and the individual provider. Organizations must assess outcomes of care and provide incentives to providers who deliver patient-centered care. Feedback to the provider may encourage self-reflection, and promote behavior change if needed or reinforce patient-centered communication behaviors.

**Nurse Practitioners**

The APN role has emerged and grown over the last 100 years (Joel, 2004). Certified nurse midwives (CNM), clinical nurse specialists (CNS), certified registered nurse anesthetists (CRNA), and nurse practitioners (NP) are advanced practice nurses. This section includes a definition of a nurse practitioner, a brief history of the NP profession, and the impact the NP role has on health care in the United States.

**Definition.** “A nurse practitioner (NP) is a registered nurse (RN) with advanced education and training, and a licensed independent practitioner who provides primary or specialty nursing and medical care in ambulatory, acute, and long-term care settings” (AANP, 2010c, p. 2). A registered nurse must complete a master’s, post-masters or doctoral degree program in a nurse practitioner specialty (AANP, 2010b) and pass a national specialty certification exam (APRN Consensus Work Group, July 7, 2008) to be eligible for licensure.
The NP must have an advanced practice license in addition to the RN license to be eligible to practice.

**Role description.** A NP provides nursing and medical care to individuals, families, and groups in primary and specialty practice settings (AANP, 2010b). Care provided by a NP includes assessment, diagnosis, developing a treatment plan, implementing the plan, and follow-up and evaluation of patient status (AANP, 2010c; APRN Consensus Work Group & the National Council of State Boards of Nursing APRN Advisory Committee, July 7, 2008). Evidence based practice guides clinical care. Nurse practitioner practice focuses on patient and family education, encourages patients to participate in the plan of care, promotes optimal health and a safe environment, provides competent care, and facilitates entry into the health care system (AANP, 2010b). Additional aspects of the NP role are interdisciplinary and collaborative responsibilities, documentation of assessment and care, patient advocacy, participation in quality assurance activities, and maintaining competence to practice. The NP role is multifaceted including provider, mentor, educator, researcher, manager, and consultant. The NP is also an advocate for the NP role and interprets that role to others (AANP, 2010b).

**History of the profession.** Milestones in the evolution of the nurse practitioner profession are presented in Table 1. Since the 1950s when the advanced registered nurse role was envisioned, programs to educate NPs have opened throughout the United States. Graduates from NP programs have increased each decade. Since the 1970s, organizations have formed to support the evolving NP profession (Gerchufsky, 2011). While the NP profession has grown and evolved over the last 50 years, there were notable struggles taking place throughout this time.
Table 1: Milestones in the development of the nurse practitioner profession

<table>
<thead>
<tr>
<th>Decade</th>
<th>Milestone</th>
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<tr>
<td>1950s</td>
<td>Dr. Eugene Stead and Thelma Ingles developed the 1st master’s program to prepare NPs at Duke. The program closed due to lack of accreditation (Dunphy, Youngkin, &amp; Smith, 2004).</td>
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<td>1960s</td>
<td>Loretta Ford and Dr. Henry Silver at the University of Colorado designed and opened the first pediatric NP program (Marchione &amp; Garland, 1980). More NP programs opened in Massachusetts (AANP, 2012a).</td>
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<td>1970s</td>
<td>Case Western started the first clinical doctorate program (ND) (Gerchufsky, 2011). Nurse practitioner associations opened to provide support for the developing profession. The University of Colorado held the first continuing education event.</td>
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<tr>
<td>1980s</td>
<td>American Academy of Nurse Practitioners (AANP) began efforts to affect legislation impacting health care and NP practice. Additional nursing associations supporting NP practice opened (Gerchufsky, 2011).</td>
</tr>
<tr>
<td>2000s</td>
<td>Cooper, Laud, and Dietrich (1998) predict more than 170,000 NPs will be practicing in the U.S. by 2015.</td>
</tr>
<tr>
<td>2011</td>
<td>Ninety-five hundred NPs graduated from 350 programs in the U.S. (Gerchufsky, 2011).</td>
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<tr>
<td>2013</td>
<td>Merger of AANP with American College of Nurse Practitioners (ACNP) complete (AANP, 2013); largest professional organization in the U.S. representing all NPs. Over 155,000 NPs practicing in the U.S. (AANP, 2012a).</td>
</tr>
<tr>
<td>2015</td>
<td>Projected completion date of APRN Consensus Model implementation (American Nurses Credentialing Center [ANCC], 2013).</td>
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In 2004, members of the American Association of Colleges of Nursing (AACN) impacted NP practice when they endorsed the position statement requiring a doctorate as the minimum academic degree necessary to practice as an advanced practice nurse (AACN, May 29,
A suggested target date for conversion to doctoral level preparation is 2015. This decision remains controversial and not all constituents support it (Sullivan-Marx, 2010).

In 2008, a work group of major nursing and APN organizations issued the *Consensus model for APRN Regulation: Licensure, Accreditation, Certification & Education* (Gerchufsky, 2011). This document defined advanced practice, described the regulatory model, identified appropriate professional titles, listed specialties, described emerging new roles and population foci, and presented strategies for role implementation. The production of this document established uniform standards for the APN profession.

Since the NP profession was founded, activities to promote, advocate for, and support the profession have developed. In July 2012, the American College and Academy of Nurse Practitioners announced the intent to consolidate (AANP, July 3, 2012). The union of the two largest NP organizations in the U.S. came at a time when increased demand for NPs is expected (HealthLeadersMedia, July 16, 2012). The consolidated organization, the American Association of Nurse Practitioners, is a major advocate and resource for this growing and in-demand profession.

Outlining milestones in the NP profession does not depict all issues that have affected this developing profession. In the beginning, there was a struggle for identity and acceptance (Berg & Roberts, 2012). Over time issues related to reimbursement, licensure, certification, prescriptive authority, and supervision by physicians have affected the profession. The NP profession remains the largest of the APN specialties (Sullivan-Marx, 2010). In 2013, the issues affecting the profession continue to have an impact.

**Role impact.** In 1974, the Burlington trial highlighted the impact of the NP role (Sackett et al., 1974). The NP profession was less than 10 years old when the study was done. At that
time, there was a demand for accessible and quality primary care services (Pickard, 1974). It was unclear what the NP could contribute to primary care, and what outcomes to expect from NP care. Findings from the Burlington trial clarified this.

In the Burlington trial, families were randomized to routine care by physicians or care provided by a group of NPs (Sackett et al., 1974). Mortality, physical, social and emotional functions were outcomes measured. The researchers found the two study groups had comparable characteristics, and similar outcomes. The researchers concluded that NPs provided safe and effective care. Type of health care provider is not likely to be the sole influence on the outcome measures; despite this methodological concern, this is the first study to evaluate care provided by NPs and compare this to care provided by physicians. This study was the first of many studies to report care provided by an NP is safe, effective, and similar to care provided by physicians.

Mundinger et al. (2000) and Lenz, et al. (2004) compared the outcomes of patients randomized to physician and NP practices; the same sample of patients was in both studies. Measurements were taken at six months and one year in the first study and again at two years in the second study. The four outcome measures included health status, patient satisfaction, physiologic measures and health care utilization. There was significant attrition in this study; of the 1,981 patients initially randomized in the first phase of the study, 406 patients completed the second phase of the study. Patients treated by NPs and physicians in outpatient primary care settings had similar outcomes. Two years after an initial primary care visit, patients again reported similar outcomes whether treated by a NP or physician.

Newhouse et al. (2011) completed a systematic review of APN care outcomes reported in studies conducted between 1990 and 2008. Fourteen randomized controlled trials and 23
observational studies met inclusion criteria for the review. On all 11 outcome measures reported, nurse practitioner and physician care outcomes were similar.

The impact of the NP profession on health care in the United States continues today 50 years after the inaugural NP program opened at the University of Colorado. Currently more than 155,000 NPs practice in the U.S. (AANP, 2012b). Nearly 350 NP programs are currently educating nurses in the United States (Gerchufsky, 2011). The current number of NPs and educational programs indicates there is continuing need for NP providers. The future of health care in the U.S. points to an increased demand for nurse practitioners.

The Institute of Medicine published a notable report that highlighted the critical nature of the NP role in the United States health care system (Institute of Medicine, 2011). The report states: “The committee believes nurses have the potential to play a vital role in improving the quality, accessibility, and value of health care, and ultimately health in the community, beyond their contributions in acute care” (p. 272). The report notes the shortage of primary care providers in the United States and increasing need for providers due to passage of the Affordable Care Act. Nurse practitioners can meet the primary care need in the United States. Utilizing NPs to the full extent of their educational preparation and training throughout the United States could result in significant cost savings (Bauer, 2010).

Retail Health Clinics

Located in retail settings across the United States, retail health or convenient care clinics are a recent innovation in health care (Ahmed & Fincham, 2011). This section defines a retail health clinic, describes the history of retail health care in the U.S., and discusses the features of retail health clinics.
**Definition.** A retail clinic is a health clinic located in a retail store, staffed by NPs or physician assistants and offers a defined list of services with fixed and advertised prices for those services (Rudavsky, Pollack, & Mehrotra, 2009). The Deloitte Center for Health Solutions (2008) describes retail health clinics as a “disruptive innovation” that is here to stay (p. 2). A disruptive innovation challenges the norm of traditional outpatient medical care and other walk-in models (Deloitte Center for Health Solutions, 2008).

**History in the United States.** A summary highlighting developments of retail health care in the United States is presented in Table 2. This is the fifteenth year of the retail clinic movement, which shows no signs of abating. Sixty-five percent growth occurred in retail health care between 2000 and 2007, forecasted growth between 10-15% through 2012 is predicted, and 30% from 2013 to 2014 (Deloitte Center for Health Solutions, 2009).

Innovation and constant change are primary features of the sustainable business model in retail health care systems (Sage, 2007). Ashwood et al. (2011) summarized current trends in retail clinic use among those with health insurance. Those most likely to use a retail clinic live close to a clinic, live in higher income zip codes, are healthier young adults, and often do not have a primary care provider. Mehrotra and Lave (2012) found after hours (beyond 5:00 p.m.) accessibility and cost-effectiveness are also factors that have contributed to the continued demand for retail clinic care.

One estimate projects about 30 million people in the U.S. live a five-minute drive from a retail clinic, and 81 million a ten-minute drive (Rudavsky et al., 2009). The Midwest has the largest number of retail clinics after the Southern United States. Five states together have almost half of the operating retail health clinics in the U.S., Illinois is one of the five states. In Chicago,
35% of the population lives within five minutes, and 81% live within 10 minutes’ drive from a retail health clinic (Rudavsky et al., 2009).

Table 2: Developments in RHC in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>Development of Retail Health Care</th>
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<tbody>
<tr>
<td>2000</td>
<td>Rick Krieger opened QuickMedx with two business partners (Williams, Khanfar, &amp; Harrington, 2011); clinics located in Cub Foods stores in Minneapolis-St. Paul, MN.</td>
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<td>2002</td>
<td>QuickMedX became MinuteClinic (MinuteClinic, n.d.).</td>
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<td>2003</td>
<td>Little Clinic opened in Louisville, Kentucky (The Little Clinic, n.d.).</td>
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<tr>
<td>2005</td>
<td>CVS Caremark Corporation purchased MinuteClinic (Convenient Care Association [CCA], n.d.b).</td>
</tr>
<tr>
<td>2006</td>
<td>Convenient Care Association established; 95% of retail health care corporations that operate clinics are members and set standards for the industry (Williams et al., 2011).</td>
</tr>
<tr>
<td>2007</td>
<td>Walgreens acquired Take Care Health (Deloitte Center for Health Solutions, 2008).</td>
</tr>
<tr>
<td>2008</td>
<td>971 retail health clinics operating in the U.S. (Deloitte Center for Health Solutions, 2008). Smaller retail operators like SmartCare Health, Corner Care Clinic, and Checkups USA closed.</td>
</tr>
<tr>
<td>2009</td>
<td>MinuteClinic and Take Care Health operated 72% of RHCs in the U.S. (Deloitte Center for Health Solutions, 2009); The Little Clinic, Target, RediClinic, Wal-Mart and others (2%) operate the remaining 28% of clinics.</td>
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**Features of Retail Health Clinics.** The emphasis in retail health care is providing quality service; both quality and safety outcomes are measured (Convenient Care Association [CCA], n.d.a). Board certified physician assistants and nurse practitioners (NPs) staff these clinics. Evidence-based practice guidelines support treatment in retail health clinics (Convenient Care Association [CCA], n.d.a). Collaboration with local physicians, peer and physician chart
review, collecting and reporting data on outcomes, and monitoring patient satisfaction are other features of the quality focused service. Two retail clinic systems have achieved Joint Commission Accreditation. MinuteClinic was the first and remains accredited today (MinuteClinic, n.d.), and The Little Clinic also reports being accredited (The Little Clinic, n.d.).

The original clinic model focused on a limited list of services (Ratner, 2011). A core list of services common to retail clinic providers include treatment of upper respiratory illnesses, skin conditions, immunizations, routine preventive health examinations and screenings, pregnancy testing, and allergy management (Rudavsky, Pollack, & Mehrotra, 2009). Other services offered by some providers include smoking cessation counseling, travel-related vaccines, HIV and sexually transmitted disease testing or counseling, prescription medication refills, and weight loss monitoring and counseling. Retail clinics are expanding the model of care into chronic care services (Ratner, 2011). Retail health clinics treat those 18 to 24 months of age and above.

Retail clinics are open daily, including weekends, and holidays (Williams et al., 2011). Visits are on a walk-in first come, first serve basis. Clinic hours extend into early evening, which increases accessibility for those with day time working hours or children who attend school (Williams et al., 2011). Rudavsky, Pollack, and Mehrotra (2009) found in one sample (98 clinics) that 97% of the clinics accepted private insurance and 93% Medicare fee-for-service, and 60% accepted some Medicaid.

Mehrotra et al. (2009) conducted a study to evaluate cost and quality of care for three illnesses, urinary tract infection (UTI), pharyngitis, and otitis media. The researchers matched episodes of care for the same three common illnesses treated in private physician offices, urgent care clinics, emergency departments and retail health clinics. The researchers developed a list of
quality indicators based on national guidelines. An aggregate quality score based on the list of quality indicators was produced for each illness in each setting. This score was divided by all instances in which a single diagnosis of UTI, pharyngitis and otitis media was listed on an evaluation and management (E & M) claim.

Mehrotra et al. (2009) evaluated 15,170 episodes of care. Results revealed a significant mean difference in costs between facilities: retail clinics ($66), private physician offices ($106), urgent care clinics ($103), and emergency departments ($358). Aggregate quality scores were 63.6% in retail clinics, 61.0% in physician offices, 62.6% in urgent care clinics, and 55.1% in emergency departments.

**Patient Satisfaction**


Researchers have used theories other than patient satisfaction theories to form the theoretical framework for studies. Marketing researchers used various theories of customer satisfaction to form the framework of their studies on consumer satisfaction, but these theories do not have relevance in an outpatient health care practice (Aragon, 2003).

Nurse researchers employ various theories except patient satisfaction theories as the theoretical framework in studies of patient satisfaction with NP care. Green’s conceptual model (2002) of patient satisfaction with NP care combined components of Dunphy’s transformative model of advanced practice nursing, Watson’s theory of caring, and Linder-Pelz’s social-psychological determinants of patient satisfaction to form the conceptual framework for her

**Multiple-variable model.** Researchers tested a theory of patient satisfaction with treatment outcome and compared it to multiple other theories (Hudak, Hogg-Johnson, Bombardier, McKeever and Wright, 2004). The researchers proposed and tested seven hypotheses from performance theory, disjunctive model, fulfillment theory, discrepancy theory, and expectancy-disconfirmation theory. These theories commonly form the theoretical framework of marketing research studies on consumer satisfaction.

Researchers interviewed participants one month before surgery and four months after surgery (Hudak et al., 2004). One hundred and twenty-two patients undergoing hand surgery participated in the study. Patients completed multiple instruments including: qkDASH (disease specific health status), self-reported clinical outcome scale, embodiment profile, 9-item satisfaction with treatment outcome measure, Multidimensional Health Locus of Control Scale, Life Orientation Test, Self-Consciousness scale, and Current Health Assessment (depression scale).

Findings supported five of seven hypotheses in the study by Hudak et al. (2004). Clinical outcomes were all significantly correlated ($p \leq 0.01$). Global satisfaction correlated with a patient’s most important reason for having surgery ($r = 0.81$) and second most important reason
A fulfillment variable was defined as outcome minus expectation. Global satisfaction correlated with fulfillment variables for the most \((r = 0.69)\) and second most \((r = 0.64)\) important reasons. Findings revealed significant differences on global satisfaction scores among the three groups in the study: “positive disconfirmation (“better than expected”) \((\text{mean} = 1.67, \text{standard deviation } [\text{SD}] = 0.79)\), simple confirmation (“as expected”) \((\text{mean} = 2.29, \text{SD} = 0.94)\), and negative disconfirmation (“worse than expected”) \((\text{mean} = 4.29, \text{SD} = 1.67)\)” (p. 732).

Researchers found no statistically significant relationship between satisfaction and all measures of psychological state; internal health locus of control (IHLC) was significant in the midrange with global outcome \((\text{IHLC}; p = 0.02)\) score. Patients were most satisfied with the lived body \((97\%)\), for cultivated immediacy (“harmony between body and self”) \((83\%)\), those in transition from object body state to cultivated immediacy \((63\%)\), and for the object body (“disunity between body and self”) \((36\%)\) (p. 734).

Researchers concluded that patient outcome definitely affected satisfaction with treatment experience (Hudak, Hogg-Johnson, Bombardier, McKeever, & Wright, 2004). An association existed between satisfaction with treatment and embodiment. Three significant confounding variables in the final model were patient’s expectation for surgery, hindsight expectations, and workers’ compensation. Together patient satisfaction with their hand repair and treatment outcome accounted for 84% of variance in the final model.

**Outcome of Care.** Patient satisfaction with care is essential for patients cared for by nurse practitioners. The Institute of Medicine (2011) lists quality outcomes such as patient satisfaction as a research priority. Patient satisfaction is one quality outcome indicator.

In Ingersoll, McIntosh and Williams’ (2000) modified Delphi survey of APNs conducted between May 1997 and December 1998, they asked APNs to identify APN sensitive patient care
outcome indicators future research should target. Of the 27 outcome indicators identified initially in a pilot study, 92% of the APN participants ranked patient satisfaction with care as a major concern needing more research. The American Academy of Nurse Practitioners (AANP) (2010c) concurs and designated patient satisfaction, a priority for the profession (AANP, 2010a).

Nurse practitioner care outcomes research typically has compared NP care to physician care (Hughes, Clarke, Sampson, Fairman, & Sullivan-Marx, 2010). Findings from these studies indicate patient ratings of outcomes of NP care are similar to or exceed those of physicians. A systematic review of APN outcome research conducted between 2004 and 2006 examined several outcomes of NP practice including self-reported perceived health, functional status (ADL/IADL), glucose control, lipid control, blood pressure, ED or urgent care visits, hospitalization, length of ventilation, duration of hospital stay, mortality and patient satisfaction (Newhouse et al., 2011). Four of the six studies of patient satisfaction with NP care had randomized controlled designs. A high level of evidence was present in these studies to support patient satisfaction with NP care is equivalent to satisfaction with physician care (Newhouse et al., 2011).

**Satisfaction with NP Care.** Studies evaluating patient satisfaction with NP care have been carried out in various outpatient practice settings (see Table 3). Ramsey et al. (1993) and Knudtson (2000) evaluated patient satisfaction with NP care in rural health care facilities. Guzik et al. (2009) and Agosta (2009b) considered patient satisfaction with care provided by NPs in occupational health clinics. Benkert et al. (2002), Cole, Mackey, and Lindenberg (2001), and Benkert et al. (2007) evaluated satisfaction with NP care provided in nurse managed centers. Hunter, Weber, Morreale, and Wall (2009) analyzed patient satisfaction with NP care in retail
Table 3: Studies of patient satisfaction with nurse practitioner care in outpatient settings

<table>
<thead>
<tr>
<th>Study</th>
<th>Setting</th>
<th>Instrument</th>
<th>Sample &amp; Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramsey et al. (1993)</td>
<td>Rural nurse-managed health center</td>
<td>6-items; Likert type satisfaction scale</td>
<td>N=101; Rural health clinic, NP care, satisfaction</td>
</tr>
<tr>
<td>Cole, Mackey &amp; Lindenberg (2001)</td>
<td>University health clinic</td>
<td>30-item 6-point Likert type scale, 15 items measure satisfaction</td>
<td>N=47; Urban health clinic, NP care, wait time, patient satisfaction.</td>
</tr>
<tr>
<td>Benkert et al. (2002)</td>
<td>Seven nurse-managed centers (NMCs)</td>
<td>17-item Patient Satisfaction Tool</td>
<td>N=907; Nurse managed center, NP care, patient satisfaction.</td>
</tr>
<tr>
<td>Benkert et al. (2007)</td>
<td>School-Based Health Center (SBHC)</td>
<td>15-item satisfaction survey</td>
<td>N=190; Teen health center, NP care, patient satisfaction.</td>
</tr>
<tr>
<td>Guzik et al. (2009)</td>
<td>Seven community based occupational medicine clinics</td>
<td>Visual Analog Scale (VAS) and 9-item Visit Specific Questionnaire (VSQ-9)</td>
<td>N=129; Occupational health clinic, NP care, patient satisfaction.</td>
</tr>
<tr>
<td>Hunter et al. (2009)</td>
<td>Two retail health clinics</td>
<td>8 multiple choice questions &amp; 1 open-ended question</td>
<td>N=684; Retail health clinic, NP &amp; PA care, patient satisfaction.</td>
</tr>
</tbody>
</table>

health clinics. Researchers found a high level of satisfaction reported by patients treated by NPs in multiple practice settings.

**Satisfaction instruments**

Many patient satisfaction instruments exist in the literature. Researchers have not used the same instrument(s) consistently to measure satisfaction with care across studies. Private companies specializing in measuring, analyzing, and reporting patient satisfaction have developed instruments; Dawn and Lee (2003) report many of these instruments have little
evidence of reliability and validity. The companies do not make reliability and validity data public. It is poor research practice not to assess the reliability and validity of instruments and make this information available (DeVon et al., 2007).

In Table 4 a summary of some of the instruments used to measure patient satisfaction with NP care is presented. Instruments vary in length. Some researchers report reliability data and discuss instrument validity; high levels of reliability are reported. Cronbach’s alpha is a commonly used statistic for reliability evaluation (Polit, 2010).

**Nurse Practitioner Satisfaction Survey (NPSS).** Agosta (2005) developed the NPSS (See Appendix D) and conducted the initial validation study. The NPSS is a 28-item, Likert-type scale with possible responses of strongly disagree (SD), disagree (D), strongly agree (SA), agree (A) or undecided (U). Eighteen multiple-choice items follow the Likert-type scale questions; these questions collect demographic information and ask the patient to indicate how ill and injured they were at the time of the clinic visit. Permission was obtained to use and adapt the instrument (See Appendix E).

Agosta (2005) used exploratory factor analysis to determine a three-factor model accounting for most of the variance in the Nurse Practitioner Satisfaction Survey. General satisfaction (18-items), communication (6-items) and convenience and accessibility (4-items) explained 70.8% of the variance. This psychometric study established and reported initial indications of validity, meeting a study objective. Cronbach’s alpha for general satisfaction was .98, communication was .83, and accessibility and convenience was .76.

A panel of nursing faculty and practitioners with doctorates assessed the NPSS for content validity. The panelists agreed 100% for content validity to signify that all items on the NPSS were pertinent and important dimensions of patient satisfaction. The NPSS was edited
<table>
<thead>
<tr>
<th>Study</th>
<th>Instrument</th>
<th>Characteristics of the Tool</th>
<th>Reliability and Validity Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knudtson, (2000)</td>
<td>Nurse Practitioner Satisfaction Instrument</td>
<td>15-item Likert scale of modified Home Care Client Satisfaction Instrument-Revised</td>
<td>Cronbach’s alpha were .90, .88 &amp; .91 for three subscales</td>
</tr>
<tr>
<td>Bryant &amp; Graham, (2002)</td>
<td>Client Satisfaction Tool</td>
<td>12-item Likert scale; modifications to original CST made for use in this study</td>
<td>Content validity consistent with Cox’s Interactional Model of Client Health Behavior; no reliability findings reported for modified CST used in this study</td>
</tr>
<tr>
<td>Benkert et al. (2002)</td>
<td>Patient Satisfaction Tool</td>
<td>17-item instrument developed specifically for this practice setting</td>
<td>No reliability or validity of instrument reported</td>
</tr>
<tr>
<td>Green &amp; Davis, (2005)</td>
<td>Di’Tomasso-Willard Patient Satisfaction Questionnaire (DWPSQ)</td>
<td>46-item Likert scale; modifications to original DWPSQ made for use in this study</td>
<td>Cronbach’s alpha for internal consistency was .96</td>
</tr>
<tr>
<td>Agosta, (2009)</td>
<td>Nurse Practitioner Satisfaction Survey</td>
<td>28-item Likert scale, additional questions not included in satisfaction scoring</td>
<td>Cronbach’s alphas were .98, .83, and .76 for the three subscale scores.</td>
</tr>
<tr>
<td>Guzik et al., 2009</td>
<td>Visit Specific Questionnaire (VSQ-9)</td>
<td>9-item Likert scale</td>
<td>Cronbach’s alpha was .94</td>
</tr>
<tr>
<td>Hunter, Weber, Morreale, &amp; Wall, (2009)</td>
<td>Developed for use in two retail clinics</td>
<td>Eight multiple-choice questions, one open-ended question</td>
<td>No reliability or validity of instrument presented</td>
</tr>
</tbody>
</table>

minimally to improve comprehension in concordance with the pilot study recommendations (Agosta, 2005).

The scoring on the five point Likert style scale ranged from strongly disagree=1 to strongly agree=5 (Agosta, 2005). For each subscale, the numbers assigned to each response are added. Items 1-5, 10-20, 22, and 24 measure general satisfaction, items 21, 23, 25, and 26-28 measure communication, and items 6 through 9 measure convenience and accessibility.
Maximum scores for each subscale equaled 90 with a mean of 86.9, 30 with a mean of 28.2, and 20 with a mean of 19.3 respectively.

Houseworth (2008) reported patient satisfaction with NP care in rural clinics as well as barriers for patients seeking NP care in her descriptive quantitative study (n=60). Participants completed a modified version of the NPSS developed by Agosta (2005). Houseworth found that 91% of patients reported overall satisfaction with NP primary care, and referred others to the nurse practitioner. Participants identified two additional barriers to NP care as “the doctor gives better care” (15%) and “not sure what the NP does” (15%). No significant association between the variables satisfaction, location, demographics or barriers to care was found.

Agosta (2005) and Houseworth (2008) have studied patient satisfaction with NP care in two different settings, an occupational health clinic at a Southern U.S. hospital and rural primary care clinics in Kentucky. Both researchers recommend further evaluation of patient satisfaction with care provided by NPs; Agosta (2005) concluded patient satisfaction studies be replicated in different regions of the country and in different specialty practice areas. Likewise, Houseworth (2008) suggested using a larger diverse population in future studies of patient satisfaction with NP care.

**Nurse Practitioner Satisfaction Survey-Retail Health Care.** For the dissertation study the modified NPSS was renamed the Nurse Practitioner Satisfaction Survey-Retail Health Care (NPSS-RHC) (See Appendix F). The NPSS’s demographic form was adapted to make it more appropriate for the retail clinic population. When modified, Agosta’s (2005) NPSS becomes more appropriate to assess patient satisfaction with NP care in retail health clinics.

Four changes were made to Agosta’s (2005) 28-item satisfaction instrument. Questions three and six ask about scheduling appointments with the nurse practitioner in the clinic. The
retail health clinic model is on a walk-in first-come, first-serve basis. Question three now states *I am likely to visit a retail clinic staffed by an NP in the future*; question six states *I was able to see the NP in the clinic at a time convenient for me*. Question eight and nine of the NPSS refer to access to care at the clinic where Agosta’s (2005) study was conducted. Again, minor changes make these questions relevant to a retail clinic encounter. Question eight states *the retail health clinic is easy to find*; question nine states *seeing the NP in the retail clinic is easier than seeing a doctor in an office or clinic*.

Questions 29 through 36 on the NPSS-RHC are similar to the original questions on the NPSS. The objective for asking questions 32 through 34 is to determine the participants’ experience with seeing health care providers; what retail clinic system the patient went to seek treatment (question 31), when treatment was sought (question 30), who was treated (question 29), what services the patient needed at the retail health clinic (question 35), and type of health insurance coverage the patient had (question 36). Questions 29 through 44 are not scored.

The demographic data form developed for the dissertation study includes demographic questions removed from the NPSS; these questions ask the age, race, gender, marital status, and home zip code of the patient. Question 38 requests the zip code of the patient. This may be an indication of the location of the retail health clinic where treatment was sought. Patients seeking treatment in retail health clinics commonly do so at clinics near their home; question 38 will provide information about the geographic distribution of retail health clinics used by study participants. Question 42 through 44 asks the educational level, employment status and yearly household income of the person completing the survey.

Participants first completed the NPSS-RHC followed by a free text question allowing the participant to *provide any additional comments that you have about your experience receiving*
care provided by a nurse practitioner in a retail health clinic. This question allows participants the opportunity to comment on other aspects of the retail health clinic experience that may not be assessed by other questions on the NPSS-RHC. This information may provide clues to other factors that contribute to patient satisfaction with nurse practitioner care in retail health clinics. The demographic questionnaire collects information about the participant and the patient treated in the retail clinic if different than the participant.

**Online Survey Method**

Methods to obtain research participants have changed as survey research methods have evolved (Dillman et al., 2009). Telephone sampling and participant recruitment was the norm at one time. The Internet is especially helpful when recruiting very specialized populations or recruiting from geographically dispersed populations; demographics of participants recruited through different methods vary. Dillman et al. (2009) recommends using more than one recruitment method to ensure a wider demographic of participants.

Temple and Brown (2011) conducted a study comparing three different participant recruitment strategies, email, website, and Internet advertising. The researchers recommended the more tailored the recruitment strategy a researcher uses, the more likely desired participants are recruited. Internet recruitment strategies are also more economical and facilitate accessing difficult to reach and unknown members of a population.

Survey Monkey is an online survey hosting site available to businesses, professionals, and researchers (McAndrews, 2009); the site will host a survey without cost for surveys of ten questions or less. For surveys greater than 10 questions, a researcher must purchase a professional membership. There are ample instructions and resources available on the site to aid developing and implementing a survey including email support from staff for those purchasing a
professional membership. Survey Monkey surveys can accommodate all types of questions including Likert-type, open-ended questions and demographic data questions (Massat, McKay, & Moses, 2009).

The ability to incorporate question logic (i.e. requiring a response) for each question is one advantage of using Survey Monkey (Hurdle, 2010). From implementation through data collection and analysis, features can be added to the online questionnaire. For example, there is real-time summary of collected responses and a researcher can choose to download data in Microsoft Excel or Statistical Package for Social Sciences (SPSS) to facilitate analysis (Abel, Sardone, & Brock, 2005). The IP and email address of respondents can be collected to assure that only one survey is submitted from that computer and email address.

Survey Monkey can assist a researcher in other ways; a targeted audience feature is available and allows a researcher to recruit participants from the Survey Monkey research panel (Survey Monkey, 2012). This panel of individuals reflects the demographics of individuals residing in the United States who have Internet access.

Summary

Based on this literature review, the following findings about patient satisfaction have been supported. The Primary Provider Theory proposed by Aragon (2003) stipulates three primary factors contribute to patient satisfaction including the provider, waiting time and nursing care received. The provider is responsible for the quality of care they deliver. In addition, studies indicate the patient-centeredness of the provider directly influences patient satisfaction with care (Aragon, 2012). Patient-centered care is created by the communication style of the provider, and the relationship between the patient and provider (Charlton, Dearing, Berry, & Johnson, 2008).
Patient satisfaction is measured with questionnaires (Robinson, et al., 2008). To support patient-centered care, an organization needs to utilize satisfaction questionnaires that focus on assessing patient-centered aspects of communication and behavior of the provider. This provides valuable feedback to the provider, and allows the provider to make changes, which enhance the relationship with patients and affects patient satisfaction.

Patient satisfaction remains a quality indicator and outcome of care that should be assessed and reported (Kleinpell, 2009; Institute of Medicine, 2011). Researchers have reported patient satisfaction with NP care in different outpatient settings (see Table 3). Various satisfaction instruments have been used to measure satisfaction in these studies. Only one study identified in the literature review assessed patient satisfaction with NP care in retail health clinics (Hunter, Weber, Morreale, & Wall, 2009). In the retail health study, the researchers measured satisfaction with a questionnaire created specifically for their clinic system and do not report reliability and validity for the instrument. Agosta (2005) created an instrument and measured satisfaction with NP care in an occupational health clinic. She recommends further testing of the instrument in other patient populations and in other regions of the United States. The study addressed a gap in the literature and research.
Chapter Three

Methodology

Introduction

The purpose of this quantitative, cross-sectional, descriptive-correlational study was to report the level of satisfaction patients treated in retail health clinics experience with nurse practitioner (NP) care. The second purpose of this study was to establish if the Nurse Practitioner Satisfaction Survey-Retail Health Care (NPSS-RHC) is a valid tool for measuring patient satisfaction with services provided by NPs in retail health clinics. The third purpose was to test if the NPSS-RHC reliably measures patient satisfaction with services provided by NPs in retail health clinics. The fourth purpose was to determine if differences in patient satisfaction are attributable to demographic characteristics of the individuals treated by NPs in retail health clinics or the retail health clinic system the patient went to for care.

The design and methods for the dissertation study are discussed in this chapter as well as the population selected, sample selection, a priori power analysis, and participant recruitment methods. The instrument used to measure the concept of interest as well as study procedures are outlined. Protection of human subjects is described. Finally, data analytic procedures are outlined.

Design

A qualitative research question focuses on understanding the meaning of something (Shank, 2006). For example qualitative questions ask *what* of something. There are several types of questions; exploratory research questions are the most common type of qualitative research question. When the research community does not have a clear picture of what is going on in a particular situation, an exploratory research question is appropriate. A potential
qualitative research question is: What aspects of the retail health care clinic visit contribute to patient satisfaction? The purpose of a qualitative study is to determine if all factors that contribute to patient satisfaction with care provided by nurse practitioners in retail health clinics are identified.

Green (2002) and Agosta (2005) recommend that a qualitative study would be valuable to consider individual perceptions of what contributes to patient satisfaction with services provided by NPs, patterns of perceptions, and to make sure that what contributes to patient satisfaction is understood.

Patient satisfaction is a well-established topic of inquiry. A majority of studies on patient satisfaction with NP care use a quantitative method. Many instruments have been developed to measure patient satisfaction. One NP developed and validated a patient satisfaction instrument for measuring satisfaction with NP care in an outpatient setting (Agosta, 2005). Agosta (2005) conducted exploratory and confirmatory factor analysis procedures when developing the Nurse Practitioner Satisfaction Survey; this process validated what contributes to satisfaction with nurse practitioner care in outpatient settings. A qualitative method of inquiry would not allow the researcher to answer the research questions for the study.

The design chosen for this study was quantitative, cross-sectional, and descriptive-correlational. The specific quantitative method was survey research. Quantitative studies use methods that collect numerical data. In the study, participants completed a survey tool and demographic data form. The instrument has three subscales; each results in a numeric score. Cross-sectional studies measure a concept of interest at one time point. Descriptive studies seek to explain a concept of interest; in this study that concept is patient satisfaction. Correlational
studies explain the relationship between variables (Marczyk, DeMatteo, & Festinger, 2005). In this study, patient satisfaction and nurse practitioner care are the main concepts of interest.

Shadish, Cook, and Campbell (2002) define correlational studies as those that examine the relationship among variables. Correlational studies do not have the same design features as experimental studies and are also referred to as a non-experimental design. Correlational studies allow non-random selection of participants, no random assignment of participants to groups, and often have only one group of participants. In correlational research, a researcher proposes hypotheses about the relationship between study variables versus causal statements (Rudestam & Newton, 2007).

When a researcher does not have access to the entire population, a non-probability method of sample selection is appropriate. A convenience sample is an example of a non-probability method of sampling and “the most widely used of all sampling techniques” (Vogt, 2007, p. 81). Although this was the most appropriate sampling method for the dissertation study, this places limits on the generalizability of study findings.

A convenience sample of participants reported levels of satisfaction experienced from NP care in a retail health clinic encounter. Participants completed surveys once. The researcher hypothesizes there is a relationship between patient-centered communication and care provided by nurse practitioners and patient satisfaction. This is a correlational statement; a correlational design accomplished the goal of the study.

**Population**

The general population of the study was individuals who have sought treatment in a retail health clinic. The population of the study was individuals age 18 and above who sought treatment in a retail health clinic or accompanied a child or dependent adult on a visit to a retail
health clinic located in a large metropolitan area in the Midwestern United States. Researchers found 61% of the population of retail clinic patients were female, 39% male, 63% were between 18 and 64 years, 41% had commercial insurance, and 64% had no primary care physician (Mehrotra & Lave, 2012).

The geographic site of the study covered a nine-county area in the Northeastern corner of the state. The largest county (Cook) in this region of the state has an approximate population of 5.2 million (U.S. Census Bureau, 2010), which is about 40% of the state’s population (12.9 million) (U.S. Census Bureau, 2013). Three major retail health clinic corporations operate 95 clinics in this nine-county area in May 2013, MinuteClinic (36) (MinuteClinic, n.d.), Take Care Health (50) (Take Care Clinic, n.d.), and Target Clinics (9) (Target, n.d.). Other health care companies have additional retail clinics in this geographic area.

The question of retail clinic use has not been answered adequately, and is not published elsewhere (Rand Corporation, 2010). In the absence of a compiled source of retail health clinic visit numbers for all clinic systems, this researcher estimates a population of individuals treated in retail health clinics in this geographic area of at least one million. If 10 patients are treated daily throughout the year in each of the 95 clinics of the three largest retail clinic providers in this geographic region, this results in 346,750 visits per year.

A Midwestern metropolitan area is the geographic region in which the study took place. In this metropolitan area, three national corporations and other local private health care corporations operate retail health clinics. The concentration of retail health clinics, and population in this geographic area are high, which indicated a large population was available from which to obtain a sample.
Sample

This study included a convenience sample of individuals obtained from the population of interest. One method of power analysis determined an appropriate sample size. This section describes the a priori power analysis completed to determine the desired sample size and the method used for obtaining the sample.

Power analysis. An a priori power analysis determined the number of participants needed. There are many resources available for calculating sample size. Raosoft provides a free online sample size calculator, which was used to calculate a sample size for the study (Raosoft website, n.d.). Four numbers are required to complete the power analysis calculation, acceptable margin of error, confidence level, population size, and expected response distribution.

The acceptable margin of error is the $P$ value or “the probability of obtaining the observed difference if the null hypothesis is true” (Devane, Begley, & Clarke, 2004, p. 300); the “$P$ value is the primary index of statistical significance” (Marczyk et al., 2005, p. 218). A five percent ($\alpha .05$) margin of error is common, and used in the power analysis. “The confidence level or interval is closely related to $p$ value” (Vogt, 2007, p. 130). An alpha of .05, and a confidence level or beta of 95%, which “represents the error rate of failing to reject a false null hypothesis” (Cohen, 1988, p. 5) completes the power analysis equation.

Published sources list national patient visit numbers and do not include a breakdown by geographic region (Deloitte Center for Health Solutions, 2009). A population size of 20,000 is recommended when actual population size is unknown because sample size does not change much for populations larger than 20,000 (Raosoft, n.d.). The recommended response distribution is 50% (Raosoft website, n.d.), which is the most conservative assumption about sample size calculations. The power analysis calculation recommended a sample size of 377 with an alpha
(α) of 0.05 (5%) and a 95% confidence level with a population size of 20,000 and a 50% response distribution.

**Sampling method.** Retail health organizations typically obtain feedback from a convenience sample of individuals treated in the clinics. The organization may survey the patients or contract with a company to survey individuals treated. Health care providers may distribute satisfaction surveys at the time of discharge with other paperwork or a survey is e-mailed to individuals treated in the clinics if a valid email address was provided during the registration process. The researcher surveyed individuals treated at all retail health clinic systems. The researcher obtained a convenience sample of participants in the community from the population of interest. The participants were solicited via Survey Monkey Target Audience Feature and through advertisement in community newspapers.

A question on the Nurse Practitioner Satisfaction Survey Retail Health Care (NPSS-RHC) asks participants if they received care at a retail health clinic in the past month or more than one month ago. Participants were not excluded if it had been more than a month ago. Stevens et al. (2006) and Jensen, Ammentorp, and Kofoed (2010) found differences in reported satisfaction levels when patients were surveyed more than once after being treated. The differences in reported satisfaction levels may be related to patient health status, which changes over time, and satisfaction with the treatment received.

**Human Subject Protection.**

The Belmont Report (The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) outlines guidelines for the protection of individuals who participate in research. The ethical principles described in this report continue to have relevance in research today. The ethical principles most relevant to the study are respect for
persons, beneficence, and justice. Specific applications of these three ethical principles in this dissertation study are addressed in the next section. See appendix L for the IRB approval letter.

**Ethical considerations.** Respect for the participants’ wishes in relation to the study is paramount throughout the process. The researcher did not coerce participants. It is essential not to create ill will about research and the research process. The researcher gave informed consent (See Consent Form in Appendix H). The consent is written; the participants recruited through advertising in community publications were provided the written consent, signed it, and given a copy of the consent. For online participants, the consent was presented before the survey and demographic data form. If the participant completed the survey, this constituted their consent to participate. Participants could refuse to participate and withdraw from the study at any time; this exemplifies the ethical principal of autonomy.

Individuals less than age 18 were not included as participants in the dissertation study. For a child to be seen at a retail health clinic, a parent or guardian must sign a consent for treatment. The parent or guardian is present during the visit, provides medical history and other patient information, and receives discharge instructions and teaching related to home and after care of the child.

The researcher encouraged participants to ask questions and have questions answered to their satisfaction before participating in the study. On the consent form, the researcher gave participants the name and contact information for the researcher if they had questions about the study at a later time. The participant could elect to withdraw from the study after data was collected by notifying the researcher via phone or email.

Confidentiality and anonymity of participants is essential throughout the research process. No identifying information was present on surveys completed; each survey was
assigned a number. A coding sheet with numbers assigned to surveys and the participant were kept separate from the completed surveys. This coding sheet facilitated identifying and removing data from the aggregate data file after a participant submitted a completed survey and later requested to withdraw from the study. Consents were kept separate from the surveys. Completed surveys, consents, and data were maintained separately in a secure manner (i.e. under lock and key). The researcher reports data in aggregate, did not falsify data, and accurately report study findings.

The principal of autonomy is supported by allowing participants to withdraw from the study at any time. Participants recruited via community newspaper advertisement could contact the researcher via e-mail (retailhealthstudy@gmail.com) or phone (773-771-3533) to withdraw from the study after submitting the completed survey. If the participant chose to receive the study via e-mail, the e-mail with the participant’s completed data forms could be deleted after the data is deleted from the aggregate data file. If the participant completed and returned a paper-and-pencil survey, the numbered survey associated with the participant’s name on a participant coding sheet could be identified and subsequently destroyed (shredded) after the data is removed from the aggregate data file. The participant could choose not to complete the consent form and or the survey after it was received. This supports participant autonomy and constitutes withdrawal from the study before survey completion.

Participants recruited via Survey Monkey Target Audience could choose not to complete the consent form and or the survey after it was received. This supports participant autonomy and constitutes withdrawal from the study. If the participant completed and submitted the consent or survey, he/she could contact the researcher via e-mail (retailhealthstudy@gmail.com) or phone (773-771-3533) to withdraw from the study. SurveyMonkey assigns an ID to each survey
submitted. The researcher could look up the ID of the participant in the data file, and delete the participant’s data from the aggregate file.

The ethical principles of beneficence and nonmaleficence assert the obligation not to do harm, to maximize benefits and minimize risk to participants throughout the research process (The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). In this study, risk was minimal and no harm was expected to occur to participants throughout the research process. If a participant were to express uncomfortable feelings or emotional upset related to participation in the study, the researcher would encourage the participant to seek counseling from a community resource.

Risks associated with the measurement process were minimal. The participant should be able to complete the consent process and survey in approximately 10 minutes; this time varied related to characteristics of the individual. The participant did not incur any costs. It is possible that unpleasant memories could be resurrected related to remembering the RHC experience. Not all individuals who seek care in RHCs will have a good experience. Individuals who experience unpleasant memories about their RHC experience could be referred to counseling at a community mental health center. These individuals should also be encouraged to provide feedback about the experience to the RHC system where they were treated if this has not already been done. The risk benefit ratio in the study was likely equal. The participant should expect minimal or no risk and minimal or no benefit.

**Variables**

Patient satisfaction was the dependent variable, retail health clinics the independent variable, and NP care a composite variable in the study. The NPSS-RHC measured patient satisfaction with nurse practitioner care in retail health clinics. The instrument contains 28
questions, with Likert-type responses of strongly disagree, disagree, agree, strongly agree, and uncertain. The 28-item instrument is divided into three subscales (factors), general satisfaction (18-items), communication (6-items), and convenience and accessibility (4-items). Items one through five, 10-20, 22, and 24 compose the general satisfaction subscale, items 21, 23 and 25-28 the communication subscale, and items six through nine the convenience and accessibility subscale.

**Instrument**

The instrument modified to measure patient satisfaction with NP care in retail health clinics was the Nurse Practitioner Satisfaction Survey (NPSS) developed by Agosta (2005). Agosta is a NP and developed the instrument to measure patient satisfaction in an outpatient occupational health setting; in this outpatient clinic, NPs were the primary care providers. The instrument contains questions that assess the patient-centered aspects of NP care and interactions with the patient.

**Rationale for selection.** Agosta (2005) developed the NPSS for use in a clinic where NPs were the primary care providers. An outpatient occupational health clinic is an episodic care environment much like a retail health clinic. Agosta’s population consisted of adult (age 18 and >) employees of a hospital and their adult family members aged 18 and above. Retail health clinics will treat children from age 18 months; the study population included the parent or guardian because this individual must provide treatment consent at the time of the visit. The parent or guardian accompanies the child to the RHC visit and is the individual who reports satisfaction or dissatisfaction with services.

**Modified instrument.** The modified instrument is called the Nurse Practitioner Satisfaction Survey-Retail Health Care (NPSS-RHC). Four changes made to Agosta’s (2005)
28-item satisfaction instrument made the questions relevant to the retail clinic encounter. Question three and six of the NPSS ask about scheduling appointments with the nurse practitioner in the clinic. The retail health clinic model is on a walk-in first-come, first-serve basis. Question three states *I am likely to visit a retail clinic staffed by an NP in the future*; question six states *I was able to see the NP in the clinic at a time convenient for me*. Questions eight and nine of the NPSS refer to access to care at the clinic where Agosta’s study took place. Question eight states *the retail health clinic is easy to find*; question nine states *seeing the NP in the retail clinic is easier than seeing a doctor in an office or clinic*.

Questions 29 through 36 on the NPSS-RHC are similar to the original questions on the NPSS, but were modified to reflect seeking treatment in a retail health clinic. In this section, questions determined who received treatment (question 29), when the retail clinic visit took place in relation to completing the survey (question 30), what retail clinic system the patient was treated at (question 31), if the patient has a regular health care provider (question 32), the type of service needed at the retail health clinic (question 35), and the type of health insurance the patient has (question 36). Questions 33 and 34 ask the participant to indicate which type of health care provider they have been most satisfied with (question 33) and which one provides the best health education (question 34). Questions 29 through 36 are not scored.

The demographic data form developed for this study included demographic questions removed from the NPSS (See Appendix H). Questions 37 through 41 determine the gender, age, race, marital status, and home zip code of the patient treated at the retail health clinic. Patients seeking treatment in retail health clinics commonly do so at clinics near their home (Rand Corporation, 2010). The participant was asked to indicate the highest level of education completed, employment status and yearly household income in questions 42 through 44.
The participant was asked to complete the NPSS-RHC followed by a free text question allowing the participant to *provide any additional comments that you have about your experience receiving care provided by a nurse practitioner in a retail health clinic*. This question allowed participants the opportunity to comment on other aspects of the retail health clinic experience that may not be assessed by other questions on the NPSS-RHC. This information may provide clues to other factors that contribute to patient satisfaction with nurse practitioner care in retail health clinics. The final questions collected demographic information about the participant and the patient treated in the retail clinic if different than the participant.

**Reliability and validity.** Reliability refers to the extent to which a measuring procedure (test) yields the same results on repeated uses (Carmines & Zeller, 1979). Validity refers to the extent to which a measure (tool) measures what it says it measures. Reliability is an empirical issue, whereas validity is more of a theoretical issue. Agosta (2009) reported initial reliability and validity of the NPSS.

Agosta (2009) calculated Cronbach’s alpha reliability for each of the subscales on the Nurse Practitioner Satisfaction Survey. The general satisfaction subscale consisting of 18 items demonstrated a reliability of .978. The six item communication subscale had an alpha of .828, and the four-item convenience and accessibility subscale had an alpha of .759. The closer the alpha reliability coefficient is to 1.00, the better the internal consistency of the instrument (Polit, 2010). Reliability coefficients of .80 to .90 are very high whereas .70 is satisfactory (Vogt, 2007).

**NPSS-RHC.** DeVon et al. (2007) recommend evaluating and reporting the reliability and validity of a modified instrument. Hypotheses three and four of this study are related to reliability and validity of the NPSS-RHC. The reliability and validity of this modified
instrument were assessed. Internal consistency reliability of the instrument was evaluated by computing Cronbach’s alpha, a widely known method for reliability evaluation of an instrument (Polit, 2010). Reliability of the three subscales of the instrument were calculated and compared with those obtained by Agosta (2009).

The presence of construct validity indicates whether an instrument measures what it intends to measure (Polit, 2010). Agosta (2009) established the construct validity of the NPSS through the use of exploratory factor analysis; general satisfaction, communication, and convenience and accessibility are the three factors that contribute to patient satisfaction.

In this dissertation study, the researcher made modifications to the instrument. The first dissertation chair, a nurse, reviewed the modifications and offered suggestions for further changes. The researcher modified the instrument several times until agreement was reached on the questions and length of the instrument. This process aided in establishing the construct validity of the NPSS-RHC.

Hypothesis testing contributed to establishing the construct validity of the NPSS-RHC. Construct validity of an instrument is supported if the scoring reflects the theoretical framework as hypothesized (DeVon et al., 2007). Hypothesis one (null) stated individuals treated in retail health clinics report no satisfaction with the care provided by nurse practitioners when measured with the NPSS-RHC. The alternative hypothesis stated individuals treated in retail health clinics report satisfaction with the care provided by nurse practitioners when measured with the NPSS-RHC. The outcome of data analysis tested if the null or alternative hypothesis was supported and contributed to establishing the construct validity of the NPSS-RHC.
Recruitment of Participants

The researcher recruited participants by two different methods, ads placed in community newspapers and through online recruitment via Survey Monkey Target Audience. A detailed description of each recruitment method is presented in the next section.

Community newspaper recruitment. An advertisement (See Appendix I) placed in community newspapers throughout the Midwestern geographic region selected for the study provided the researcher’s email address and phone. The participant completed a paper-and-pencil survey or one attached to an email from the researcher. The consent, NPSS-RHC, and demographic data form was mailed to participants. A self-addressed and stamped envelope was included with the mailed survey to facilitate completed survey return.

The recruitment via Survey Monkey Target Audience was completed first and took place over five days. The advertisement in community newspapers ran for four weeks. Data collection took place over four weeks total.

Online recruitment. This researcher purchased a professional membership and created the consent, NPSS-RHC, and demographic data form in a personal account on the Survey Monkey website. The Survey Monkey research staff circulated the survey to a targeted audience in the selected geographic area. The audience target was those individuals 18 years and above with registration zip codes in the Midwestern geographic study area. The targeted audience members were sent an email invitation with a screening question that asked if they had been treated in a retail health clinic; a second question asked if they had accompanied a child or dependent adult to a retail health clinic visit. The participant was then directed to the consent if they indicated a yes response to either question. If the participant indicated “yes” on the bottom
of the consent form, this indicated willingness to participate in the survey. The participant was then directed to the NPSS-RHC followed by the demographic questions.

**Data Analysis**

An SPSS © version 21 data file was created in preparation for data entry and analysis. At the completion of data collection, data from each of the 360 completed surveys and demographic questionnaires was entered into the data file by the researcher. The first 28 questions of the NPSS-RHC provided nominal level data responses; the researcher coded this data for analysis by assigning a number to each of the responses on the first 28 questions of the survey tool (Agosta, 2009). Numbers assigned to responses are strongly disagree = 1, disagree = 2, uncertain = 3, agree = 4, and strongly agree = 5. Simple descriptive statistics were calculated in SPSS © version 21 to report the demographic characteristics of the sample; these findings are reported beginning on page sixty-two.

**Research questions and analyses.** For research question one, the total satisfaction scale mean for the 28-item instrument was reported as well as the mean for each subscale, satisfaction, scheduling and communication. Means were calculated for all 360 completed surveys. This resulted in interval level data. The means of the subscale scores were compared with t-tests. A Pearson R correlation coefficient was calculated to answer research question two as well as regression analysis to establish if correlation existed between satisfaction and demographic variables. A Cronbach’s alpha statistic was calculated for each of the three subscales of the NPSS-RHC from the pilot study data and primary study data to answer research question three. No additional statistical analysis procedures were required to answer research question four. The research questions, data analysis procedures, and rationale for each are outlined in table five beginning on page sixty.
<table>
<thead>
<tr>
<th>Research Question</th>
<th>Analysis</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the level of satisfaction reported by individuals treated in retail health clinics?</td>
<td>Score questions 1-28 on the NPSS-RHC. Use simple descriptive statistics to summarize the three subscale scores, general satisfaction, communication, convenience and accessibility.</td>
<td>A descriptive statistical summary will represent demographic variable data (i.e. gender, race, age, etc). Frequencies and means will depict characteristics of the sample (Marczyk et al, 2005). Tables and figures illustrate the data (Polit, 2010), which supports discussion in text.</td>
</tr>
<tr>
<td>What is the correlation if any between levels of satisfaction reported by individuals treated by nurse practitioners in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care?</td>
<td>Multiple regression analysis</td>
<td>Answers the question if independent variables(s) explain or predict dependent variables (Polit, 2010).</td>
</tr>
<tr>
<td></td>
<td>Pearson r correlation coefficient</td>
<td>Answers the question about the relationship between level of satisfaction reported, demographic characteristics and the brand of retail health clinic the individual went to for care.</td>
</tr>
<tr>
<td></td>
<td>Examination of data scatterplots to determine if test assumptions are met.</td>
<td>Four test assumptions: normally distributed data, linear data, variability in scores is similar for each variable, and no data outliers.</td>
</tr>
<tr>
<td>What does the calculated Cronbach’s alpha statistic indicate about the reliability of the NPSS-RHC for measuring patient satisfaction with nurse practitioner care in retail health clinics?</td>
<td>Cronbach’s alpha statistic</td>
<td>Reliability assessment of each subscale score (DeVon et al., 2007). Internal consistency reliability is the most commonly used procedure for evaluation of multiple item scales (Polit, 2010).</td>
</tr>
</tbody>
</table>
Open-ended question. The NPSS-RHC concluded with one open-ended question that allowed the participant “to provide any additional comments that you have about your experience receiving care provided by a nurse practitioner in a retail health clinic.” In the dissertation study, an open-ended question is part of a quantitative study. This is an example of embedding the data (Creswell & Plano Clark, 2007). Creswell and Plano Clark (2007, p. 7) recommend “mixing” the data in some way to “form a more complete picture of the problem”. Surveys often include open-ended questions allowing those taking the survey to expound on their responses (Dillman et al., 2009). In this dissertation study, response to the open-ended question was optional. The data from this question is not used to answer any of the four research questions. A general summary of the responses to this question is provided in chapter four.

Summary

The study design was quantitative, cross-sectional, and descriptive correlational. The appropriateness of the design to answer the research questions was described in this chapter. A detailed description of the methodology including sampling, power analysis, participant recruitment, instrument, and data analysis were provided. The population, sample, and variables were described. Human subject protection and ethical considerations were addressed.
Chapter Four

Results

Introduction

The introduction and background of the study are described in Chapter One. In Chapter Two, a review of the literature is discussed and the study methodology in Chapter Three. In this chapter, the sample and demographic characteristics of the study participants are described. Data analytic and other procedures used to answer each of the four research questions and the findings are reported.

Sample Demographics

Three hundred and sixty individuals participated in this research study. Three hundred fifty-four (98%) of the participants were recruited through Survey Monkey Target Audience, six (2%) through community recruitment. In addition to the study instrument, the Nurse Practitioner Satisfaction Survey Retail Health Care (NPSS-RHC), the participants completed a demographic questionnaire asking them to indicate their gender, age, marital status, highest education level achieved, employment status and household income.

The researcher used descriptive statistics to describe the sample of participants. One hundred seventy-one (47.5%) participants were male, one hundred eighty-nine (52.5%) were female. Forty-four participants (12.2%) were between 18 and 29 years of age, sixty-five (18.1%) between 30 and 44 years of age, one hundred forty-four (40%) between 45 and 60 years of age, one hundred and three (28.6%) over the age of sixty, and four (1.1%) did not answer this question. Ten participants (2.8%) reported race as Asian, 20 (5.6%) as Hispanic, 18 (5%) as African American, 301 (83.6%) as Caucasian, and nine (2.5%) as other. Four (1.1%)
participants did not answer this question. Gender, age and race of participants are summarized in table six.

Table 6: Gender, age and race of participants

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>171</td>
<td>47.5</td>
</tr>
<tr>
<td>Female</td>
<td>189</td>
<td>52.5</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>44</td>
<td>12.2</td>
</tr>
<tr>
<td>30-44</td>
<td>65</td>
<td>18.1</td>
</tr>
<tr>
<td>45-60</td>
<td>144</td>
<td>40.0</td>
</tr>
<tr>
<td>&gt;60</td>
<td>103</td>
<td>28.6</td>
</tr>
<tr>
<td>Did not answer</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>20</td>
<td>5.6</td>
</tr>
<tr>
<td>African American</td>
<td>18</td>
<td>5.0</td>
</tr>
<tr>
<td>Caucasian</td>
<td>300</td>
<td>83.3</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Did not answer</td>
<td>4</td>
<td>1.1</td>
</tr>
</tbody>
</table>

One hundred twenty-five (34.7%) of the participants were single or never married, one hundred seventy-six (48.9%) were married or living together, 6 (1.7%) were separated, thirty-three (9.2%) were divorced, and sixteen (4.4%) were widowed. Four (1.1%) participants did not indicate their marital status. One participant (.3%) had completed some high school, twenty-seven (7.5%) had graduated high school or completed a GED program, fifteen (4.2%) had attended a trade school, sixty-five (18.1%) had completed some college, thirty-three (9.2%) had an associate degree, one hundred ten (30.6%) had a bachelor’s degree, eighty-three (23.1%) had
a master’s degree, and twenty-two (6.1%) had a doctoral degree. Four (1.1%) participants did not indicate the highest level of education completed.

Thirty (8.3%) participants were not employed outside the home, 46 (12.8%) were employed part-time, five (1.4%) were employed on an as needed basis, 13 (3.6%) were employed on a contract basis, 208 (57.8%) were employed full-time, 50 (13.9%) were retired, and four (1.1%) had more than one job. Four (1.1%) participants did not indicate their employment status. Thirty-seven (10.3%) participants had a yearly household income of less than $25,000, 67 (18.6%) had between $25,001 and $50,000 annual household income, 72 (20%) reported a yearly household income between $50,001 and $75,000, 75 (20.8%) between $75,001 and $100,000, and 105 (29.2%) reported an annual household income over one hundred thousand dollars. Four (1.1%) participants did not answer the yearly household income before taxes question on the survey. Marital status, the highest level of education completed, employment status and annual household income of participants are summarized in table seven.

**Research Question One**

What is the level of satisfaction reported by individuals treated in retail health clinics was the first research question in the study. Calculating an overall satisfaction score, and a score for each of the subscales of the NPSS-RHC was completed to answer this question. Comparisons were made between mean total satisfaction and subscale scores. The three subscales of the NPSS-RHC are: satisfaction, communication and scheduling. The satisfaction subscale includes questions one through five, 10 through 20, and questions 22 and 24. The communication subscale includes items 21, 23, and 25 through 28. The scheduling subscale includes questions six through nine. The researcher used the Statistical Package for the Social Science (SPSS) © version 21 for data management and analysis.
Table 7: Marital status, education level, employment status and household income of participants

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/never married</td>
<td>125</td>
<td>34.7</td>
</tr>
<tr>
<td>Married/living together</td>
<td>176</td>
<td>48.9</td>
</tr>
<tr>
<td>Separated</td>
<td>6</td>
<td>1.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>33</td>
<td>9.2</td>
</tr>
<tr>
<td>Widowed</td>
<td>16</td>
<td>4.4</td>
</tr>
<tr>
<td>Did Not Answer</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td>High school/GED</td>
<td>27</td>
<td>7.5</td>
</tr>
<tr>
<td>Trade school</td>
<td>15</td>
<td>4.2</td>
</tr>
<tr>
<td>Some college completed</td>
<td>65</td>
<td>18.1</td>
</tr>
<tr>
<td>Associate degree</td>
<td>33</td>
<td>9.2</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>110</td>
<td>30.6</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>83</td>
<td>23.1</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>22</td>
<td>6.1</td>
</tr>
<tr>
<td>Did Not Answer</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not employed outside the home</td>
<td>30</td>
<td>8.3</td>
</tr>
<tr>
<td>Part-time</td>
<td>46</td>
<td>12.8</td>
</tr>
<tr>
<td>PRN/as needed</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td>Contract</td>
<td>13</td>
<td>3.6</td>
</tr>
<tr>
<td>Full-time</td>
<td>208</td>
<td>57.8</td>
</tr>
<tr>
<td>Retired</td>
<td>50</td>
<td>13.9</td>
</tr>
<tr>
<td>More than one job</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td>Did Not Answer</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; $25,000</td>
<td>37</td>
<td>10.3</td>
</tr>
<tr>
<td>$25,001 - $50,000</td>
<td>67</td>
<td>18.6</td>
</tr>
<tr>
<td>$50,001 - $75,000</td>
<td>72</td>
<td>20.0</td>
</tr>
<tr>
<td>$75,001 - $100,000</td>
<td>75</td>
<td>20.8</td>
</tr>
<tr>
<td>&gt;$100,000</td>
<td>105</td>
<td>29.2</td>
</tr>
<tr>
<td>Did Not Answer</td>
<td>4</td>
<td>1.1</td>
</tr>
</tbody>
</table>
The five-point Likert scale for each of the 28 questions of the NPSS-RHC was re-coded to permit calculating a score. Strongly agree was coded five, agree was coded four, uncertain was coded three, disagree was coded two and strongly disagree was coded one. The total score was calculated by adding the value of all twenty-eight questions of the NPSS-RHC and dividing by twenty-eight. All total scores from all participants were added and divided by the total number of participants to obtain the average total score. Summing questions one through five, 10 through 20, and questions 22 and 24 resulted in the satisfaction subscale score. Adding the value of questions six through nine yielded the scheduling subscale score. The communication subscale score is composed of the value of items 21, 23, and 25 through 28. The average subscale score for each of the three subscales was obtained by summing all subscale scores for that subscale and dividing by 360.

The scale for each of the 28 questions had a maximum value of five. The average total satisfaction score was 4.04 (SD = 0.58). The average subscale scores were 4.00 (SD = 0.63) for satisfaction, 4.11 (SD = 0.62) for scheduling, and 4.10 (SD = 0.60) for communication. Total satisfaction and subscales scores are represented in figure two.

The means of the subscale scores were compared with t-tests. The mean score for scheduling (M=4.11; SD=0.62; p=0.012) and communication (M=4.10; SD=0.60; p=0.024) was higher than satisfaction (M=4.00; SD=0.58) to a statistically significant degree.

**Research Question Two**

The correlation between levels of satisfaction reported by the participants, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care was the second research question in the study. To answer this
A research question was a Pearson R correlation coefficient was calculated. A Pearson R correlation coefficient indicates if there is a linear relationship between variables measured independently.

Figure 2: Average total satisfaction and subscale scores

First, the researcher identified five predictor variables for a regression analysis to establish if correlation existed between satisfaction and demographic variables. The predictor variables chosen were age of the patient, insurance status (insured vs. uninsured), whether the patient had a regular health care provider (yes or no), and income and education level of the study participant.

A majority of patients treated in retail health clinics (n=310, 87.3%) had a regular health care provider (doctor, nurse practitioner or physician assistant), 45 (12.7%) did not. Most patients were insured (n=329, 92.7%), 26 (7.3%) were not. Individuals in all age groups sought treatment in retail health clinics. Thirty-one (8.7%) were less than 18 years. Thirty-seven (10.4%) were between 18 and 25 years. Forty-five (12.7%) were between 26 and 35 years. Forty-one (11.5%) were between 36 and 45 years. Sixty-eight (19.2%) were between 46 and 55 years. Seventy-nine (22.3%) were between 56 and 65 years, 44 (12.4%) were between 66 and 75 years.
years. Six (1.7%) were between 76 and 85 years, and 4 (1.1%) were 86 years or older. The education and income level of study participants are described in the demographics at the beginning of the results section, starting on page sixty-one. Table eight summarizes the frequencies of the five predictor variables.

Table 8: Frequencies of five predictor variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Health Care Provider</td>
<td>No</td>
<td>45</td>
<td>12.68</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>310</td>
<td>87.32</td>
</tr>
<tr>
<td>Insurance</td>
<td>No</td>
<td>26</td>
<td>7.32</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>329</td>
<td>92.68</td>
</tr>
<tr>
<td>Age of Patient</td>
<td>Less than 18 years</td>
<td>31</td>
<td>8.73</td>
</tr>
<tr>
<td></td>
<td>18-25 years</td>
<td>37</td>
<td>10.42</td>
</tr>
<tr>
<td></td>
<td>26-35 years</td>
<td>45</td>
<td>12.68</td>
</tr>
<tr>
<td></td>
<td>36-45 years</td>
<td>41</td>
<td>11.55</td>
</tr>
<tr>
<td></td>
<td>46-55 years</td>
<td>68</td>
<td>19.16</td>
</tr>
<tr>
<td></td>
<td>56-65 years</td>
<td>79</td>
<td>22.25</td>
</tr>
<tr>
<td></td>
<td>66-75 years</td>
<td>44</td>
<td>12.39</td>
</tr>
<tr>
<td></td>
<td>76-85 years</td>
<td>6</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>86 and above</td>
<td>4</td>
<td>1.13</td>
</tr>
<tr>
<td>Education Level Of Participant</td>
<td>Some high school</td>
<td>1</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>High school/GED</td>
<td>27</td>
<td>7.61</td>
</tr>
<tr>
<td></td>
<td>Trade school</td>
<td>15</td>
<td>4.23</td>
</tr>
<tr>
<td></td>
<td>Some college completed</td>
<td>65</td>
<td>18.31</td>
</tr>
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<td></td>
<td>Associate degree</td>
<td>33</td>
<td>9.30</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree</td>
<td>109</td>
<td>30.70</td>
</tr>
<tr>
<td></td>
<td>Master’s degree</td>
<td>83</td>
<td>23.38</td>
</tr>
<tr>
<td></td>
<td>Doctoral degree</td>
<td>22</td>
<td>6.20</td>
</tr>
<tr>
<td>Income Level Of Participant</td>
<td>&lt;$25,000</td>
<td>37</td>
<td>10.42</td>
</tr>
<tr>
<td></td>
<td>$25,001 - $50,000</td>
<td>67</td>
<td>18.87</td>
</tr>
<tr>
<td></td>
<td>$50,001 - $75,000</td>
<td>71</td>
<td>20.00</td>
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<td></td>
<td>$75,001 - $100,000</td>
<td>75</td>
<td>21.13</td>
</tr>
<tr>
<td></td>
<td>&gt;$100,000</td>
<td>105</td>
<td>29.58</td>
</tr>
</tbody>
</table>
The correlation between total satisfaction scores and the five predictor variables for 355 observations was positive but low, $R^2 = 0.061$. With 332 degrees of freedom, this correlation was not significant. The five predictor variables did not explain a significant amount of the variance in total satisfaction scores.

Two of the predictor variable groups were small, uninsured patients ($n=26$) and those without a regular health care provider ($n=45$). A two-sample t-test was conducted to determine the effect of insurance status on the total satisfaction score. There was no significant difference between the insured ($M=4.03; SD=0.59$) and the uninsured ($M=4.06; SD=0.43$); the t-test (observed) was -0.25 with 33 degrees of freedom and a p-value of 0.802.

A two-sample t-test was conducted to determine the effect of having a regular health care provider on the total satisfaction score. There was no significant difference between those with a regular health care provider and those without; the t-test observed was 1.508 with 55 degrees of freedom and a p-value of 0.137. In both t-tests, the computed statistic was less than the critical value from the t distribution table. When there is no statistical significance found, the null hypothesis cannot be rejected.

The brand of retail health clinic was the predictor variable for the second regression analysis. Participants ($n=359$) were asked to indicate what retail health clinic they went to for care. Two-hundred seven (57.66%) visited a Walgreen’s Health Care Clinic, 101 (28.13%) participants went to MinuteClinic, 15 (4.18%) received care at Target Clinic, and 36 (10.02%) indicated other for retail health clinic visited. Table 9 summarizes the frequencies of the predictor variable for brand of retail health clinic.
Table 9: Frequencies of predictor variable—brand of retail health clinic

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand of retail health clinic</td>
<td>Walgreen’s</td>
<td>207</td>
<td>57.66</td>
</tr>
<tr>
<td></td>
<td>MinuteClinic</td>
<td>101</td>
<td>28.13</td>
</tr>
<tr>
<td></td>
<td>Target Clinic</td>
<td>15</td>
<td>4.18</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>36</td>
<td>10.02</td>
</tr>
</tbody>
</table>

The correlation between total satisfaction scores and brand of retail health clinic for 359 observations was positive but low, $R^2 = 0.007$. With 355 degrees of freedom, this correlation was nonsignificant. The brand of retail health clinic (predictor) variable did not explain a significant amount of the variance in total satisfaction scores.

An ANOVA was conducted to compare the effects of the different brands of retail health clinic system on satisfaction scores. There was no significant effect of brand of retail health clinic on total satisfaction scores; $F(3, 355) = 0.812, p = 0.488$.

A majority of participants went to Walgreen’s Health Care Clinic or CVS MinuteClinic for care. A two sample t-test was conducted to determine the effect of brand of retail clinic system on the total satisfaction score; this results in a comparison of the mean satisfaction scores for these two independent groups. There was no significant difference between those who went to Walgreen’s clinic ($M=4.01; SD=0.60$) and those who went to CVS MinuteClinic ($M=4.10; SD=0.54$); the t-test observed was $-1.38$ with 218 degrees of freedom and a $p$-value of 0.085. The computed statistic was less than the critical value from the t distribution table. When there is no statistical significance found, the null hypothesis cannot be rejected.
Research Question Three

What does the calculated Cronbach’s alpha statistic indicate about the reliability of the NPSS-RHC for measuring patient satisfaction with nurse practitioner care in retail health clinics was the third research question in this study. A pilot study was done prior to the primary study. A Cronbach’s alpha was calculated with pilot study data first, then primary study data.

The researcher conducted a pilot study of the NPSS-RHC in May 2014. Twenty individuals were invited to participate in the pilot study; all were recruited from the community. Seventeen completed the pilot study. Nine of the participants were retail health clinic nurse practitioners, eight were patients. All pilot study participants had sought treatment in a retail clinic at least once prior to their participation or accompanied a child to a retail health clinic visit. Each pilot study participant was given the NPSS-RHC, demographic data form, as well as a short questionnaire asking them to provide comment on the NPSS-RHC and the experience of taking the survey. One nurse practitioner participant did not complete the NPSS-RHC survey tool, but did complete the consent and other study forms. The researcher used the data from the pilot study to answer research question three.

A Cronbach’s alpha statistic was calculated for each of the three subscales of the NPSS-RHC from the pilot study data. Cronbach’s alpha for the satisfaction subscale was 0.96, 0.57 for scheduling and 0.83 for communication. The NPSS-RHC was not changed based on feedback obtained in the pilot study.

The lower Cronbach’s alpha statistic obtained for the scheduling subscale was very different than the other subscales. Generally, an alpha of 0.70 is considered adequate (Vogt, 2007). For comparison, a Cronbach’s alpha statistic was calculated on each of the three subscales of the NPSS-RHC from the primary study data. Cronbach’s alpha for the satisfaction
subscale was 0.85, 0.80 for scheduling and 0.96 for communication. Cronbach’s alpha reliability calculations for the pilot and primary study data are summarized in table ten.

Table 10: Cronbach’s alpha reliability calculations

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pilot Study</th>
<th>Primary Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>0.96</td>
<td>0.85</td>
</tr>
<tr>
<td>Scheduling</td>
<td>0.57</td>
<td>0.80</td>
</tr>
<tr>
<td>Communication</td>
<td>0.83</td>
<td>0.96</td>
</tr>
</tbody>
</table>

**Research Question Four**

What does analysis of the NPSS-RHC indicate about the validity of the tool for measuring patient satisfaction with nurse practitioner care in retail health clinics was the fourth research question of the study. Construct validity of the NPSS-RHC is addressed in this section.

Face validity, one form of construct validity, is accomplished by a subjective assessment of the instrument by lay people and experts who have knowledge of the subject. A pilot study was conducted in May 2014. Twenty individuals were invited to participate. Seventeen participated, nine retail health clinic NPs and nine lay individuals. All pilot study participants had previously sought care at a retail health clinic at least one time. All were provided the NPSS-RHC and a questionnaire about the experience taking the survey. Each participant was asked to take the survey as well as evaluate the instrument. The pilot study participants provided feedback on the adequacy of the instrument for assessing the aspects of a retail health clinic visit experience contributing to satisfaction. See Appendix J and K for the patient and NP pilot study questionnaire.
The pilot study participants felt the NPSS-RHC was an appropriate measure of patient satisfaction. One NP identified an error in the age of the retail health clinic patient demographic question; one age group (<18 years) was missing. This demographic question was changed on the paper and pencil survey based on this feedback; the question was in the correct format on the Survey Monkey online questionnaire. Another nurse practitioner recommended adding a question. The suggested question would ask the patient to indicate whether it took less time to see their regular provider in an office appointment or a nurse practitioner for a retail health clinic visit. Although adding a question could provide additional information, the researcher felt adding another question to the 28-item instrument based on the feedback of one NP was not appropriate. The walk-in nature of the retail health clinic visit as well as the convenience is reflected in questions on the scheduling subscale.

Hypothesis testing contributes to the construct validity of an instrument. The NPSS-RHC is a satisfaction instrument and measures level of satisfaction with NP care for a retail health clinic visit. The outcome of satisfaction scoring is discussed in the results for research question one in Chapter Four and the discussion in Chapter Five.

**Open Ended Question**

One question on the NPSS-RHC is an open-ended question that allows a participant to “please feel free to provide any additional comments that you have about your experience receiving care provided by a nurse practitioner in a retail health clinic”. The subjective data from the responses did not contribute to answering any of the four research questions. The responses were analyzed to identify if factors contributing to patient satisfaction or dissatisfaction with NP care were not adequately assessed by questions on the survey.
Sixty-seven (19%) participants answered the question. The responses were reviewed by the researcher. Themes were identified in the data. All responses were categorized to one of the themes. Themes included: convenience, wait time short, wait time long, treatment for minor illnesses, satisfaction, dissatisfaction, expounding on an experience, doctor not available, nurse practitioner communication, any qualified provider, researcher, and other.

Ten (14.92%) participants mentioned that retail health clinics are great for receiving care for minor illnesses or health care issues. Nine (13.43%) participants commented about the convenience of retail health clinics. Nine (13.43%) participants stated they were satisfied or very satisfied with nurse practitioner care in retail health clinics. Seven (10.44%) participant’s comments were classified as other. The comments were varied and did not fit into one of the other themes. All comments made were not related to nurse practitioner care or retail health clinic visits. Seven (10.44%) participants expounded on a retail health clinic visit experience. Six (8.95%) comments focused on the communication skills and time a NP spends with a patient. Five (7.46%) made comments for the researcher. Specifically, participants indicated they wished other responses or multiple responses were possible for some of the questions. Three (4.48%) participants commented about “quick” wait times in retail clinics while three (4.48%) indicated wait times were “long” in the retail health clinic. Three (4.48%) participants indicated dissatisfaction with a retail health clinic visit. Three (4.48%) discussed they were willing to see any qualified provider for a health care visit. Two (2.99%) mentioned their doctor was not available as the reason for a retail clinic visit. A summary of the sixty-seven responses to the open-ended question can be found in table eleven.
Table 11: Summary of responses to open-ended survey question

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment for minor health issues</td>
<td>10</td>
<td>14.92</td>
</tr>
<tr>
<td>Convenience</td>
<td>9</td>
<td>13.43</td>
</tr>
<tr>
<td>Satisfied or very satisfied</td>
<td>9</td>
<td>13.43</td>
</tr>
<tr>
<td>Expounding on experience</td>
<td>7</td>
<td>10.44</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>10.44</td>
</tr>
<tr>
<td>NPs listen and spend time</td>
<td>6</td>
<td>8.95</td>
</tr>
<tr>
<td>Researcher</td>
<td>5</td>
<td>7.46</td>
</tr>
<tr>
<td>Wait time quick</td>
<td>3</td>
<td>4.48</td>
</tr>
<tr>
<td>Wait time long</td>
<td>3</td>
<td>4.48</td>
</tr>
<tr>
<td>Dissatisfaction</td>
<td>3</td>
<td>4.48</td>
</tr>
<tr>
<td>Any qualified provider</td>
<td>3</td>
<td>4.48</td>
</tr>
<tr>
<td>Doctor not available</td>
<td>2</td>
<td>2.99</td>
</tr>
</tbody>
</table>

Hypotheses

Research question one of the study was: What is the level of satisfaction reported by individuals treated in retail health clinics? The null and alternative hypotheses were: \[ H_{0} \]: Individuals treated in retail health clinics report no satisfaction with the care provided by nurse practitioners as measured with the NPSS-RHC. \[ H_{A} \]: Individuals treated in retail health clinics report satisfaction with the care provided by nurse practitioners as measured with the NPSS-RHC. The average total satisfaction score was 4.04 (SD = 0.58) on a 5.00 scale. The findings
lend support to the alternative hypothesis that individuals who seek care in retail health clinics report satisfaction with nurse practitioner care as measured with the NPSS-RHC.

Research question two of the study was: What is the correlation if any between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care? The null and alternative hypotheses were: H$_{20}$: There is no correlation between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care. H$_{2A}$: There is a correlation between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care. There was no correlation between total satisfaction score and the five demographic characteristics selected or the brand of retail health clinic system the individual went to for care. No statistically significant differences in the mean total satisfaction scores were found in any of the comparisons made. These findings lend support for the null hypothesis, there is no correlation between levels of satisfaction reported by individuals treated by NPs in retail health clinics, the demographic characteristics of those individuals or the brand of retail health clinic system the individual went to for care.

The third research question of this study was: What does the calculated Cronbach’s alpha statistic indicate about the reliability of the NPSS-RHC for measuring patient satisfaction with nurse practitioner care in retail health clinics? The null and alternative hypotheses were: H$_{30}$: The NPSS-RHC is not a reliable tool for measuring patient satisfaction with NP care in retail health clinics. H$_{3A}$: The NPSS-RHC is a reliable tool for measuring patient satisfaction with NP
care in retail health clinics. The Cronbach’s alpha internal consistency reliability findings lend support for the alternative hypothesis: the NPSS-RHC is a reliable tool for measuring patient satisfaction with NP care in retail health clinics.

The fourth research question in this study was: What does analysis of the NPSS-RHC indicate about the validity of the tool for measuring patient satisfaction with nurse practitioner care in retail health clinics? The null and alternative hypotheses were: H$_{40}$: The NPSS-RHC is not a valid tool for measuring patient satisfaction with NP care in retail health clinics. H$_{4A}$: The NPSS-RHC is a valid tool for measuring patient satisfaction with NP care in retail health clinics.

The pilot study contributed to establishing face validity of the instrument and allowed the researcher to identify any problems with the survey tool before the formal study. The pilot study participants completed the survey tool and provided comment about their experience taking the survey. All participants felt the NPSS-RHC was an appropriate tool for measuring satisfaction with nurse practitioner care. The pilot study participants did not identify any other components of patient satisfaction that were not assessed by the 28-question survey tool. One problem with one question on the survey tool was identified in the pilot study; this issue was corrected before the main study took place. The findings of the pilot study as well as hypothesis testing (research question one) lends support for the alternative hypothesis, the NPSS-RHC is a valid tool for measuring patient satisfaction with nurse practitioner care in retail health clinics.

**Summary**

Three hundred and sixty individuals participated in this research study. Overall, levels of satisfaction as measured with the NPSS-RHC were reported. The average total satisfaction score was 4.04 (SD = 0.58). The average subscale scores were 4.00 (SD = 0.63) for satisfaction, 4.11 (SD = 0.62) for scheduling, and 4.10 (SD = 0.60) for communication. In one regression analysis,
the five predictor variables (age of the patient, insurance status, whether the patient had a regular health care provider, income and education level of the study participant) did not explain a significant amount of variance in total satisfaction scores. In the second regression analysis, the brand of retail health clinic (predictor variable) also did not explain a significant amount of variance in total satisfaction scores. No statistically significant differences in the means of the total satisfaction scores were found in any comparisons made.

The NPSS-RHC demonstrated internal consistency reliability in the pilot and primary study. Cronbach’s alpha reliability calculations were 0.567 for scheduling, 0.83 for communication and 0.96 for satisfaction in the pilot study. Cronbach’s alpha reliability calculations were 0.80 for scheduling, 0.85 for satisfaction and 0.96 for communication in the primary study.

Construct validity of the NPSS-RHC was supported by an evaluation of the face validity of the instrument. This was done by a panel of nurse practitioners and patients in a pilot study. Hypothesis testing contributed to establishing construct validity of the instrument as well.

Sixty-seven participants answered the one open-ended question on the survey tool. Responses were reviewed and classified into twelve main themes: treatment for minor health issues, convenience, satisfied or very satisfied, expounding on experience, other, NPs listen and spend time, researcher, wait time quick, wait time long, dissatisfaction, any qualified provider and doctor not available.

Findings of this study lend support to the alternative hypothesis for research question one: individuals who seek care in retail health clinics report satisfaction with nurse practitioner care as measured with the NPSS-RHC. For research question two, findings lend support for the null hypothesis; there was no correlation between total satisfaction scores and demographic
characteristics or brand of retail health clinic system individuals went to for care. The Cronbach’s alpha internal consistency reliability findings lend support for the alternative hypothesis for research question three: the NPSS-RHC is a reliable tool for measuring patient satisfaction with NP care in retail health clinics. The findings of the pilot study as well as hypothesis testing (research question one) lends support for the alternative hypothesis of research question four, the NPSS-RHC is a valid tool for measuring patient satisfaction with nurse practitioner care in retail health clinics.
Chapter Five
Discussion

Introduction

Chapter Four summarized the results of the data analysis to address the four research questions of the study. Chapter Five describes the conclusions and recommendations reached from the data analysis. The four research questions, the study methodology, implications of the study for nurse practitioners and retail health clinic systems, the strengths and limitations of the study as well as recommendations for future research are also discussed in this chapter.

Demographics

Mehrotra and Lave (2012) reported some of the first descriptive statistics of retail health clinic patients. Between 2000 and 2006, 62.8% of patients were female and 37.2% were male; between 2007 and 2009, 61.1% of patients were female and 38.9% male. Eighty-five point nine percent of patients were between six and 64 years old from 2000 through 2006, 80.5% between 2007 and 2009. Between 2000 and 2006, 67.1% of patients had some type of insurance, 70.5% between 2007 and 2009. Thirty-eight point seven percent had a primary care physician between 2000 and 2006, this decreased to 35.5% between 2007 and 2009.

There were some notable differences in demographic characteristics of retail health clinic patients in this study and what was reported by Mehrotra and Lave (2012). In this study, 47.2% of patients were male, 51.1% female. More men are seeking care in retail health clinics than previously. Twenty-eight point three percent of retail health clinic patients in the current study were over 60 years old. Mehrotra and Lave (2012) reported 7.5% were 65 and older between 2000 and 2006, and 14.7% between 2007 and 2009. More older adults are presenting to retail clinics for care. In the current study, 92.7% of participants were insured, and 87.3% had a
primary care provider. Mehrotra and Lave (2012) reported 67.1% between 2000 and 2006 and 70.5% between 2007 and 2009 had some form of insurance. Thirty-eight percent between 2000 and 2006 had a primary care physician and 35.5% between 2007 and 2009. Currently, more insured patients and those with a primary care provider are seeking treatment in retail health clinic patients.

**Patient Satisfaction**

The total mean patient satisfaction score was 4.04 (SD = 0.58) on a 5-point scale in this study. Higher mean subscale scores with scheduling (mean 4.11, SD = 0.63) and communication (mean 4.10, SD = 0.60) were found. The higher subscale score for scheduling is likely related to the walk-in model of care in retail health. Patients present, sign-in and are seen on a first-come first-serve basis. The patient is seen immediately if no one else is checked in. Retail health clinics are open seven days a week including holidays and have early evening hours. This provides patients the opportunity for care when illnesses, injuries and other health care needs occur unexpectedly or the patient is not able to access their regular healthcare provider during day time office hours.

The higher mean subscale score for communication is likely related to the philosophy of care in retail health as well as the nurse practitioner provider. Visits in retail clinics are patient centered, the NP is seeing one patient at a time. The NP completes all aspects of the patient visit from history taking, the physical exam, testing, treatments, through teaching and discharge. The patient is provided ample opportunity to ask questions and engage in discussion with the nurse practitioner.

There was minimal variability in total patient satisfaction scores, which makes it difficult to find significant differences. None of the predictor variables had any significant impact on the
total satisfaction scores. The combined effect of predictor variables explained a negligible amount of movement in total satisfaction scores. When treated separately in independent sample t-tests, the binary variables also showed no ability to influence total satisfaction scores. The five-point Likert-type scale incorporated in the 28-item NPSS-RHC may be why little variability was reported. If a continuous scale had been used instead of the 5-point Likert-type scale, it may have been possible to detect more variability in patient satisfaction scores.

Mean total patient satisfaction scores may show little variability because overall patients seen in retail clinics are highly satisfied with the care received. This is evidenced by the growth in the industry and the educated consumer looking for more affordable avenues of care (Commins, 2014). Hunter, Weber, Morreale, et al. (2009) also reported little variability in the responses on a retail health patient satisfaction study conducted in Arizona from May 2006 through July 2007. This study is the only other retail health study reported in the literature that collected and reported original data.

Agosta (2005) and Houseworth (2008) reported patient satisfaction with nurse practitioner care in an occupational health clinic and rural primary care clinics respectively. Both researchers used the Nurse Practitioner Satisfaction Survey for data collection. Other researchers report satisfaction with NP care in rural clinics (Ramsey et al., 1993; Knudtson, 2000), a university health clinic (Cole, Mackey & Lindberg, 2001), seven nurse-managed centers (Benkert et al., 2007), a school based health center (Benkert et al., 2009), and seven community based occupational medicine clinics (Guzik et al., 2009). Various satisfaction instruments were used by the researchers in these studies.

The optional open-ended question included in the NPSS-RHC allowed participants the opportunity to expound on any topic. The information provided by the 67 individuals who
answered the question did not identify any additional factors that contribute to patient satisfaction that were not adequately assessed by one of the existing 28-questions on the measurement tool.

**Reliability and validity of the NPSS-RHC**

Cronbach’s alpha for the satisfaction subscale in the primary study was 0.85, 0.80 for scheduling and 0.96 for communication. Cronbach’s alpha closer to 1.00 indicate higher internal consistency of the items on the scale (Polit, 2010). This means the items on the scale measure the same construct, patient satisfaction. Table 12 summarizes Cronbach’s alpha statistic for each subscale of the NPSS-RHC and those for the NPSS (Agosta, 2005).

Table 12: Cronbach’s alpha statistic NPSS and NPSS-RHC

<table>
<thead>
<tr>
<th></th>
<th>NPSS</th>
<th>NPSS-RHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>0.98</td>
<td>0.85</td>
</tr>
<tr>
<td>Scheduling</td>
<td>0.76</td>
<td>0.80</td>
</tr>
<tr>
<td>Communication</td>
<td>0.83</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Cronbach’s alpha statistic is the only index of internal consistency reliability that could be calculated for this study since the survey was administered once (DeVon et al., 2007). The satisfaction subscale has the highest internal consistency in Agosta’s (2005) study conducted in an occupational health clinic, followed by communication and scheduling. In this study of retail health clinic patients, the communication subscale has the highest internal consistency followed by satisfaction and scheduling. The differences in the internal consistency reliability coefficient findings in the two studies are minimal and likely related to the different patient populations and
the different clinical settings in which the 28-item instrument is used to measure patient satisfaction.

Agosta (2005) established construct validity of the Nurse Practitioner Satisfaction Survey through evaluation of face validity, pilot testing including exploratory and confirmatory factor analysis and revision of the instrument, as well as hypothesis testing. In this study, construct validity of the NPSS-RHC was established in several ways. Lay and professional experts evaluated the NPSS-RHC, which contributed to establishing face validity of the instrument. Face validity is the simplest form of construct validity and easy to determine (DeVon et al., 2007). Statistical conclusion validity was supported through hypothesis testing. Using appropriate statistical procedures and meeting test assumptions contributes to statistical conclusion validity (Vogt, 2007). Establishing construct validity of the NPSS-RHC provides evidence that the instrument is valid for measuring patient satisfaction with nurse practitioner care in retail health clinics.

Implications for Nurse Practitioners

It is part of the nurse practitioner role to conduct research (AANP, 2010b). Nurse practitioners in all types of settings measure outcomes of care. Valid and reliable patient satisfaction measurement tools facilitate outcome measurement for practicing NPs and researchers. The NPSS-RHC is a valid and reliable tool for measuring patient satisfaction in clinical practice and research. Independently owned NP practices may find it cost prohibitive to utilize commercially available patient satisfaction (i.e. Press Ganey) measurement services. The NPSS-RHC would be appropriate for use in single outpatient clinics, independently owned practices or clinic systems where NPs are the care providers.
Implications for Retail Health Clinic Systems

Patient-centered care is emphasized in health care today and a major focus of retail health clinic systems. Aragon’s Primary Provider theory served as the theoretical framework for this study. Aragon (2012) stipulates the patient-centeredness of the health care provider as evidenced by the communication style and relationship with the patient directly influence patient satisfaction. Retail health clinic systems should incorporate questions assessing the communication style of the provider and the relationship with the patient in satisfaction tools. This will provide data about the patient centeredness of the provider, a major influence on the satisfaction experienced by individuals who access care in retail health clinics. Providers would find this feedback meaningful and allow them to adapt behaviors and encourage a more patient centered approach to care.

Strengths of the Study

One strength of the study was the sampling methodology. Survey Monkey Target Audience Feature is an innovative strategy for recruiting study participants. The demographics of Target Audience members have previously been determined by Survey Monkey. To conduct a study using Target Audience members, a researcher must identify the demographic(s) and geographic area for the survey. Survey Monkey circulates an invitation to participate as well as information about the study to Target Audience members in the selected geographic region with the desired demographic characteristics.

Most participants (n=354) were recruited through Survey Monkey in five days. The remainder of participants (n=6) were recruited by placing ads in community newspapers in a Midwestern metropolitan area. It took thirty days to recruit the six participants through advertisement. Using Target Audience allowed the researcher to conduct the survey and collect
data in a timely manner. If the researcher had relied on only one method of participant recruitment, it would have resulted in a very small sample. A small sample would have limited power and generalizability (external validity) of the findings.

The findings of this study provide further evidence of patient satisfaction, one outcome of care of nurse practitioners. At this critical point in the development of the nurse practitioner profession, it is important to conduct research and document outcomes of care. Doing so provides information to support justification for nurse practitioners to be granted full practice authority as independent health care providers. Currently, twenty-one states have laws permitting full unencumbered practice by nurse practitioners (American Association of Nurse Practitioners [AANP], 2015a). Other states have introduced legislation seeking full practice authority (American Association of Nurse Practitioners [AANP], 2015b).

**Limitations of the Study**

Anticipated limitations of the study were the convenience sampling strategy, cross-sectional measurement and the maturation effect on internal validity. Other limitations found included the Likert-type measurement scale incorporated in the NPSS-RHC, the sample size obtained in the study, and missing data.

Cross-sectional measurement of a concept provides data about a concept at one point in time. Patient satisfaction is a concept that can change with time. Many things contribute to satisfaction and dissatisfaction with care. In an episodic practice environment like retail health care, patients can seek care more than once. The cross-sectional method used in the study limits external validity of study findings. To truly understand patient satisfaction with care it should be measured more than once to capture changes in satisfaction levels that may take place over time.
Maturation is an effect that may have influenced study participants. A participant may have sought care in a retail clinic recently (< one month ago) or more than one month ago. A participant may have had a positive or negative health outcome, which may influence satisfaction reported on a survey. No attempt was made to limit participation based on the time since an individual received treatment in a retail health clinic. Maturation is one potential threat to the internal validity of the study (Marczyk et al., 2005).

Little variability was found in responses to the 28-questions of the NPSS-RHC. This may be related to the 5-point Likert-type scale used in each question; this is a known issue with Likert scale items. It may have been possible to identify more variability in responses if survey questions incorporated a continuous scale rather than a Likert-type five-point scale (P. Oliver, personal communication, April 20, 2015).

The researcher designed the study to minimize or eliminate the possibility of missing values. Missing data can influence research findings and the conclusions drawn from data. In this study, only an occasional response to a question was missing. This pattern of missing data is called missing completely at random (MCAR) (McKnight, McKnight, Sidani, & Figueredo, 2007) and is not likely to have an impact on data interpretation. Different methods are used by researchers for missing values (Vogt, 2007). In this study, participant data was only excluded if an answer was not provided for the question.

The a priori power analysis determined that a sample size of 377 was desired for the study. Actual sample size was three hundred and sixty or 95 percent of desired. Sample size influences the power in a study, but many other factors do as well (Cohen, 1988). It is unclear what influence achieving only 95% of the desired sample size had on study findings.
Community recruited participants received and returned study documents via email or returned completed hard copies by mail. Four of the participants recruited in the community did not return a completed demographic data form. It is unclear why this form was not completed and returned. The missing demographic data of four participants had little to no influence on interpreting study findings.

**Recommendations for Further Research**

The findings of this study have made a small contribution to understanding satisfaction with nurse practitioner care in retail health clinics. Retail health care continues to expand; today there are more than 1,900 retail health clinics throughout the United States (Convenient Care Association [CCA], 2015). This study could be replicated in other regions of the United States besides the Midwest.

The NPSS-RHC may be a suitable instrument for measuring satisfaction with nurse practitioner care in other outpatient settings besides retail health clinics. Future quantitative studies should include evaluation of the reliability and validity of the instrument for measuring patient satisfaction in retail health clinics, or any other setting where nurse practitioners are the primary care providers.

The scheduling subscale was the least reliable in this study and Agosta’s (2005) study. Further exploratory and confirmatory factor analysis of the NPSS-RHC may identify other factors important in measuring patient satisfaction with scheduling. Qualitative or mixed method research may identify other aspects of care and communication that contribute to satisfaction with nurse practitioner care. Findings from any of these methodologies may lead to further refinement of the NPSS-RHC for measuring patient satisfaction.
Summary

Demographic characteristics of retail health clinic patients have changed since previously reported. More older adults (>60 years old) are seeking treatment in retail health clinics. A majority of retail health clinic patients are insured, and have a primary care provider. More men are seeking treatment in retail health clinics than previously reported.

Mean total patient satisfaction and subscale scores of 4.00 or higher on a 5-point scale were reported by participants as measured with the Nurse Practitioner Satisfaction Survey Retail Health Care. The scheduling and communication subscale scores were higher than the satisfaction subscale score to a statistically significant degree. These findings lend support for the alternative hypothesis of research question one: individuals who seek care in retail health clinics report satisfaction with nurse practitioner care.

There is no correlation between five demographic variables, the brand of retail health clinic system and total satisfaction scores as measured with the Nurse Practitioner Satisfaction Survey. The predictor variables and combined effect of predictor variables did not have an effect on total mean patient satisfaction scores. These findings support the null hypothesis for research question two.

Survey tools typically incorporate at least one open-ended question. In this study, 67 participants answered the open-ended question. Responses were reviewed, and 12 themes identified in the responses. The researcher reviewed the responses and did not identify any additional components of patient satisfaction that were not already assessed by one of the 28-items on the survey tool.

A Cronbach’s alpha statistic was calculated for each of the three subscales of the Nurse Practitioner Satisfaction Survey Retail Health Care. The satisfaction subscale was 0.85,
scheduling 0.80 and 0.96 for communication. These findings lend support for the alternative hypothesis: The NPSS-RHC is a reliable tool for measuring patient satisfaction with NP care in retail health clinics.

Face validity of the NPSS-RHC was considered in a pilot study by a group of patients and NPs who had all sought care in a retail health clinic at least one time. Hypothesis testing with appropriate statistical procedures as well as meeting the test assumptions supports the validity of the instrument. Establishing construct validity and hypothesis testing provides support for the alternative hypothesis of research question four.

One strength of the study was using Survey Monkey Target Audience sampling methodology. Study outcomes supporting patient satisfaction with nurse practitioner care is a second strength. Limitations of the study were convenience sampling and cross-sectional measurement. Other limitations were achieving 95% of the sample size determined through a priori power analysis, the difficulty in determining variability when using a five-point Likert scale and missing data. A valid and reliable tool for measuring patient satisfaction with NP care in a retail health clinic is one implication and outcome of this study. It is important that a patient satisfaction instrument measures the patient-centeredness of the provider. Patient centeredness is a major contributor to patient satisfaction.

Future research recommendations include using the NPSS-RHC to measure patient satisfaction in retail health clinics in other regions of the United States or in other clinical outpatient settings where NPs are the primary care providers. Qualitative or mixed methods research could identify other aspects of care and communication that contribute to satisfaction with NP care.
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influence of patient-centeredness on minority and socioeconomically-disadvantaged 
patients’ trust in their physicians: An evidence-based structural equation modeling 
investigation. *Journal of Health Disparities Research and Practice, 1*(1), 63-74.

across gender in emergency departments: A multigroup structural equation modeling 
investigation. *American Journal of Medical Quality, 18*(6), 229-240. doi: 
10.1177.106286060301800603


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http://dx.doi.org/10.1108/17511870810870565


http://dx.doi.org/10.1177/1077558704266821


Appendix A: Permission to Use Primary Provider Theory Model

September 10, 2012

Hi Laura,

This confirms that you have permission to use the Primary Provider Theory and model in your dissertation. The attached journal includes my most recent study and thinking regarding the theory. Please call me at [redacted] you have any questions.

Best wishes,

Stephen J. Aragon, Ph.D.
Associate Professor of Healthcare Management
School of Business and Economics
Winston-Salem State University
Winston-Salem, NC 27110

[redacted]
From: Laura J. Tucco
Sent: Monday, September 10, 2012 1:46 AM
To: Aragon, Steve
Subject: Permission to Use Model

Dear Dr. Aragon,

My name is Laura Tucco. I am a PhD student in nursing at the University of Phoenix. My dissertation study is entitled Patient Satisfaction with Nurse Practitioner Care in Retail Health Clinics. I am using the Primary Provider Theory of Patient Satisfaction as part of the theoretical framework in my study. I would like permission to use the model in my dissertation; if you could provide a Word or PDF file of the model, this would be helpful.

On your website, your associated journal articles page indicates that the Aragon et al. (2012) manuscript was submitted for publication. Has this publication been accepted yet? If so, could you share the file with me? I have been trying to locate any publications associated with the conference presentation of the other nursing study (presented at Sigma Theta Tau in 2007) that uses the PPT, but am unable to locate any publications. Has there been any studies published by the nurses who have used the PPT in their studies?

Thank you in advance for your reply. I really appreciate your time and consideration of my requests.

Laura Tucco
Family Nurse Practitioner
PhD Student Nursing
University of Phoenix
Appendix B: Shuler APN Conceptual Model

THE SHULER APN CONCEPTUAL MODEL

INPUTS

A. Episodic
B. Comprehensive with Health Problem
C. Comprehensive without Health Problem

PATIENT/ANP THROUGHPUTS

Unmet Basic Needs
Psychological Problems
Cultural Relationships

 Illness/Disease
Stress Overload
Environmental Occupational Distress

Lack of Fitness
Lack of Social Support
Spiritual Distress

Over/Under Nutrition
Spiritual Awareness

SELF-CARE PLANNING IMPLEMENTATION

TREATMENT PLAN DEVELOPMENT

PROBLEM JUDGMENT

SELF-CARE ACTIVITIES

DISEASE PREVENTION ACTIVITIES
HEALTH PROMOTION ACTIVITIES

DIAGNOSES

UNIQUE COMBINATIONS OF NEEDS, FACTORS AND PROBLEMS

CONSULTATION REFERRAL

DIAGNOSIS(ES)

A. EPISODIC
1. How diagnosis made
2. Signs & symptoms of condition
3. How to know when to consult health care professional
4. How patient can make the diagnosis in future

B. COMPREHENSIVE EXAM WITH AN EXISTING ACUTE PROBLEM
1. How diagnosis made
2. Rhythm & symptoms of condition
3. How to know when to consult health care professional
4. How patient can make the diagnosis in future

C. COMPREHENSIVE EXAM WITH AN EXISTING CHRONIC PROBLEM
1. How diagnosis made
2. Rhythm & symptoms of condition
3. How to know when to consult health care professional
4. How patient can make the diagnosis in future

PATIENT OUTCOMES

Movement toward improved health status and wellness, including:

- achievement of basic needs
- increasing ability to utilize self-care activities
- setting achievable goals & actions to meet goals
- setting health goals & actions to meet goals
- creating plans to manage in daily life situations
- assessing environmental occupational conditions
- identifying & implementing health care needs
- becoming aware of the necessary steps to address treatment plan
- discovering complications & exacerbations of acute chronic health conditions
- improving quality of life

APN OUTCOMES

Movement toward personal wellness, including:

- setting & meeting health priorities
- initiating personal health care behaviors
- identifying personal health care needs
- developing comprehensive health care plan
- implementing health care plan
- achieving health goals
Appendix C: Permission to Use Shuler Model

July 1, 2012

Dear Laura,

Yes, I give you permission to use The Shuler Nurse Practitioner Practice Model in your dissertation research. The only form of the model that is available to the public is the PDF version, please let me know if you have problems printing it and I can email it to you. Hopefully you can scan the PDF version and upload it into your document, or include it in the appendix. It is a privilege for me that you have selected The Shuler to guide your study. Thank you efforts in advancing nurse practitioner research and best wishes with your important work.

Sincerely,
Dr Pam Shuler
Family Nurse Practitioner

On Wed, Jun 27, 2012 at 10:43 PM, Laura J. Tucco wrote:

Dear Dr. Shuler,

My name is Laura Tucco. I am a doctoral nursing student at the University of Phoenix. My dissertation research is on patient satisfaction with care provided by nurse practitioners in retail health clinics. I intend to use the Shuler Nurse Practitioner Practice Model as part of the theoretical framework for my study. I am writing to you today to obtain your permission to use the actual model in my study. At the present time, I am writing a paper related to my dissertation study and would like to include the model as an appendix to support my discussion of the model. I have been to your website and have downloaded the pdf file of the model, but was wondering if you could provide me with the file in MS word to include in my paper if you give me permission to use the model.

I appreciate all the work you have done that highlights the value of nurse practitioner practice as well as the model you have developed. I look forward to hearing from you.

Laura

Laura Tucco APN (CNS/NP), MSN, CEN

[Redacted]

[Redacted]

Mobile
[Redacted]

Home & Fax
We are conducting a study of patient satisfaction regarding the use of nurse practitioners. The survey is completely confidential and only summary information will be reported in the study results. Thank you in advance for your help with this survey.

Please indicate your degree of satisfaction with the following statements:

"SD" = Strongly Disagree  "D" = Disagree  "A" = Agree  "SA" = Strongly Agree  "U" = Uncertain

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>A</th>
<th>SA</th>
<th>U</th>
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<tbody>
<tr>
<td>1. Overall I was satisfied with my visit with the nurse practitioner(NP)</td>
<td>☺</td>
<td>☺</td>
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<tr>
<td>2. I am likely to recommend the NP to others</td>
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<tr>
<td>3. I am likely to schedule appointments with the NP in the future</td>
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<td>4. The NP was not rushed</td>
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<tr>
<td>5. I would rather see the NP than my regular physician</td>
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<tr>
<td>6. I was able to schedule a convenient appointment with the NP</td>
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<tr>
<td>7. When I feel the need to see a healthcare provider, I can get an appointment with the NP without a problem</td>
<td>☺</td>
<td>☺</td>
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<tr>
<td>8. The Woman's Hospital Employee Health clinic is easy to access</td>
<td>☺</td>
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<tr>
<td>9. Scheduling an appointment with the Woman's Hospital Employee Health Clinic NP is easier than scheduling with my usual physician</td>
<td>☺</td>
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<tr>
<td>10. My NP is a skilled healthcare provider</td>
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<tr>
<td>11. My NP discusses methods other than medication to treat my problem</td>
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<tr>
<td>12. I am satisfied with how the NP treated me</td>
<td>☺</td>
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<tr>
<td>13. I was satisfied with the amount of time the NP spent with me</td>
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<tr>
<td>14. My NP is caring</td>
<td>☺</td>
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<tr>
<td>15. My NP is knowledgeable about health problems</td>
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<tr>
<td>16. I trust my NP</td>
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<tr>
<td>17. My NP knows when to refer to or consult with a physician</td>
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<tr>
<td>18. The NP listened to what I had to say</td>
<td>☺</td>
<td>☺</td>
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<tr>
<td>19. The NP was interested in my health concerns</td>
<td>☺</td>
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</tr>
<tr>
<td>20. The NP respected me</td>
<td>☺</td>
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</tbody>
</table>

©12/16/2004
21. I can easily talk to the NP about my health concerns
22. I understood what the NP explained to me
23. I understood what the NP taught me
24. The NP explained things in an understandable manner
25. I feel comfortable asking the NP questions
26. I feel comfortable asking my personal physician questions
27. I left the NP visit with all questions answered
28. I usually leave my personal physician's visits with all questions answered

29. Please choose only one response for questions 29 and 30

29. From past experience, who do you feel has provided healthcare that you've been most satisfied with? Nurse Practitioner, Physician, Physician's Assistant

30. From past experience, who do you feel has provided you with the best health education? Nurse Practitioner, Physician, Physician's Assistant

31. Number of times in the past year that you have seen the NP in the Employee Health Clinic at WH:
   1-5, 6-10, 11-15, 16 or more

32. Number of times in the past year that you have seen a: Physician (MD), Nurse Practitioner (NP), Physician's Assistant (PA)
   None, 1-5, 6-10, 11-15, 16 or more

35. Gender
   Male, Female

36. Patient Type
   Woman's Hospital Employee, Family Member of Employee, Contract Employee

37. Highest Education Level Completed
   Less than High School Degree, High School Degree/GED, Some
   Vocational/Technical School, Degree/Some, College Associate Degree (AD)
   Bachelors Degree (BA/BS), Masters Degree, (MA/MS) Doctoral Degree

38. Age
   18-25, 26-35, 36-45, 46-55, 56-65, 66-75, 76-85, 86 and older
39. Race
○ Hispanic
○ African
○ Other (please specify):
○ American Asian
○ Caucasian (white)

40. Employment Status
○ Unemployed
○ PRN/ As Needed
○ Full Time
○ Contract Part
○ Retired

41. Health Insurance
○ Aetna
○ State Employees Group
○ Blue Cross Blue Shield
○ United Healthcare
○ Cigna
○ Woman's Hospital Health Plan
○ Medicare/Medicaid
○ Other (please specify): Ochsner

42. Marital Status
○ Single
○ Never Married
○ Married/Cohabitating
○ Separated
○ Divorced
○ Widowed

43. How ill are you today?
○ Very Ill
○ Moderately Ill
○ A Little Ill
○ Not Ill

44. How injured are you today?
○ Very Injured
○ Moderately Injured
○ A Little Injured
○ Not Injured

45. What current health problems do you currently take medication for? Please check ALL that apply.
○ High Blood Pressure
○ Asthma/Lung/Breathing Problems
○ HIV/AIDS
○ Heart Disease
○ Diabetes/High Blood Sugar
○ Cancer
○ Other
○ Cholesterol
○ Thyroid Problems

46. Number of prescription medications that you currently take:

47. Your yearly net (take home) income
○ $75,001 - $100,000
○ <$25,000
○ $25,001 - $50,000
○ $50,001 - $75,000
○ >$100,000
Appendix E: Permission to Use the NPSS

September 18, 2011

Dr. Lucie Agosta
Assistant Professor
Southeastern Louisiana University

Dear Dr. Agosta,

My name is Laura Tucco. I am a doctoral student in Nursing at the University of Phoenix. I am developing my dissertation study, and intend to describe patient satisfaction with nurse practitioner delivered services in retail health clinics. I have reviewed all the instruments that I have found that measure patient satisfaction with care provided by nurse practitioners. I would like permission to use the Nurse Practitioner Satisfaction Survey (NPSS) that you developed and validated for your dissertation study.

If I am given permission to use the NPSS, I need to make minor modifications in the instrument to tailor the instrument to the retail health clinic experience. I would rename the adapted instrument the NPSS-RHC (retail health clinic).

Thank you in advance for your reply. Please let me know if you need more information or I can answer any questions that you may have about my study. I welcome any suggestions or recommendations that you have about using the NPSS in future studies on patient satisfaction with nurse practitioner delivered services.

Sincerely,

Laura J. Tucco APN (CNS/NP), MSN, CEN
Doctoral Student in Nursing
University of Phoenix

Home & Fax; Mobile
Laura:
Attached is a copy of the NPSS for use with your research study. Please consider this email my permission to utilize the instrument and to adapt it to meet your needs. Please let me know if I can be of further assistance. Best of luck with your research.
Thanks, Lucie

---
Lucie Agosta, PhD, RNC
Assistant Professor
Adult/Family Nurse Practitioner
Southeastern Louisiana University
School of Nursing
Graduate Program
Appendix F: NPSS-RHC

Nurse Practitioner Satisfaction Survey-Retail Health Clinic (NPSS-RHC)
I am conducting a study about your experience seeking health care at a retail health clinic for you, a child or dependent adult. The survey is completely confidential and only summary information will be reported in the study results.

Think about your most recent experience of seeking health care at a retail clinic.
Please place an “X” in one box next to each statement that indicates your answer to that statement:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, I was satisfied with the visit to the nurse practitioner (NP).</td>
<td></td>
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<tr>
<td>2. I am likely to recommend a NP to others.</td>
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<tr>
<td>3. I am likely to visit a retail clinic staffed by a NP in the future.</td>
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<tr>
<td>4. The NP was not rushed.</td>
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<tr>
<td>5. I would rather see a NP than a doctor.</td>
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<tr>
<td>6. I was able to see the NP in the clinic at a time convenient for me.</td>
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<td>7. The retail health clinic has hours that are convenient for me.</td>
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<td>8. The retail health clinic is easy to find.</td>
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<tr>
<td>9. Seeing the NP in the retail clinic is easier than seeing a doctor in an office or clinic.</td>
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<tr>
<td>10. The NP is a skilled health care provider.</td>
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<tr>
<td>11. The NP discusses methods other than medication to treat my problem.</td>
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<tr>
<td>12. I am satisfied with how the NP treated me.</td>
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<td>16. I trust the NP.</td>
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<tr>
<td>17. The NP knows when to refer to or consult with a doctor.</td>
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<tr>
<td>18. The NP listened to what I had to say.</td>
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<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>Uncertain</td>
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<tr>
<td>19. The NP was interested in my health concerns.</td>
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<tr>
<td>20. The NP respected me.</td>
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<tr>
<td>21. I can easily talk with the NP about my health concerns.</td>
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<tr>
<td>22. I understood what the NP explained to me.</td>
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<tr>
<td>23. I understood what the NP taught me.</td>
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<tr>
<td>24. The NP explained things in an understandable manner.</td>
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<tr>
<td>25. I feel comfortable asking a NP questions.</td>
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<tr>
<td>26. I feel comfortable asking a doctor questions.</td>
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<tr>
<td>27. I left the NP visit with all questions answered.</td>
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<tr>
<td>28. I usually leave a doctor’s visit with all questions answered.</td>
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29. **Who was treated by the NP in the retail health clinic?**

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<tr>
<td>Yourself</td>
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<td>A child</td>
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<td>Other: You have Power of Attorney or are guardian of the patient.</td>
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30. **When was your most recent visit to a retail health clinic?**

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<td>One month ago or less</td>
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<td>More than one month ago</td>
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</table>

31. **What retail health clinic were you or the person you are completing this survey for most recently treated at?**

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</thead>
<tbody>
<tr>
<td>MinuteClinic (CVS)</td>
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<tr>
<td>Take Care Health (Walgreens)</td>
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<tr>
<td>Target Clinic</td>
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<td>Other: (write in here)</td>
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</table>

32. **Do you have a regular health care provider (doctor, nurse practitioner or physicians’ assistant)?**

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<tr>
<td>Yes</td>
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<tr>
<td>No</td>
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</tbody>
</table>
33. From past experience, who do you feel provided health care that you’ve been most satisfied with?

| Nurse Practitioner | Doctor | Physician’s Assistant |

34. From past experience, who do you feel has provided the best health education?

| Nurse Practitioner | Doctor | Physician’s Assistant |

35. What service(s) did you or the person treated recently at the retail health clinic need?

| Illness | Injury | Vaccine (immunization) | Screening (i.e. TB test, blood pressure monitoring, lipid panel, A1C, blood sugar, etc.) | Wellness (i.e. stop smoking, physical) | Other: (please write in here) |

36. What type of health insurance do you (or the person treated at the retail health clinic) have?

| Private-PPO (BCBS, Aetna, Cigna, United Healthcare, Humana, etc.) | Self-pay (no health insurance coverage) | Private-HMO (Humana, Aetna, BCBS, etc.) | Public- (Medicare, Medicaid, Kidcare, etc.) | Other: (please write in here) |
Please feel free to provide any additional comments that you have about your experience receiving care provided by a nurse practitioner in a retail health clinic.

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Thank you for taking the time to complete this survey!
Appendix G

Demographic Information

Mark an “X” in one box or write in a number (question 42). Answer each question about yourself or the patient who was treated in the retail clinic if this is not you.

37. Patient gender

- Male
- Female

38. Home zip code of patient

39. Patient age

- Less than 18 years
- 18-25 years
- 26-35 years
- 36-45 years
- 46-55 years
- 56-65 years
- 66-75 years
- 76 years and above

40. Patient race

- African American
- Hispanic
- Asian
- Caucasian (white)
- Other:

41. Patient marital status

- Single/never married
- Married/living together
- Separated
- Divorced
- Widowed

42. Highest level of education you have completed

- Some high school
- High school/GED
- Trade school
- Some college completed
- Associate degree
- Bachelor’s degree
- Master’s degree
- Doctoral degree

43. Your employment status

- Not employed
- Part-time
- PRN/as needed
- Contract
- Full-time
- Retired
- More than one job

44. Your yearly household income

- < $25,000
- $25,001 - $50,000
- $50,001 - $75,000
- $75,001 - $100,000
- > $100,000

Thank you for taking the time to complete this survey!
Dear Research Subject,
My name is Laura Tucco. I am a student at the University of Phoenix. I am doing research for my doctoral degree. The study is called Patient Satisfaction with Nurse Practitioner Care in Retail Health Clinics. The purpose is to understand if patients are satisfied with nurse practitioner care in retail health clinics.

You will fill out a form called Nurse Practitioner Satisfaction Survey Retail Health Care. A second form asks questions about the person completing the survey. Other questions ask about the patient treated in the retail health clinic. You can decide to be in the study or not. When you start the survey you can stop at any time. You will not experience harm or lose benefits if you withdraw. The results of the research study will be published in articles. Your name and information will remain private. Your name will not be made known to any outside party.

In this research, there are no known risks to you.

You may or may not benefit from taking the survey. You may help the researcher understand if you are satisfied or not with nurse practitioner care in retail health clinics. The answers you give may help improve care other patients receive. There are no costs to you for taking the survey.

For questions about the research study call the researcher at [phone number]. Leave your name and address in the message. Or e-mail the researcher at [e-mail]. For concerns or complaints contact the University of Phoenix Institutional Review Board at [phone number].

As a subject in this study, you should understand the following:

1. You may decide not to be part of this study. You may withdraw from the study at any time. You can withdraw from the study without problems. Send an e-mail to the researcher at [e-mail] if you want your answers removed after submitting the study.
2. Who you are will be kept private. Laura Tucco (the researcher) has fully explained the research study. You have a right to have all of your questions and concerns answered.
3. The survey will be kept in a locked area. No one but the researcher can get into this area. The survey will be kept for at least three years. After three years the survey is destroyed.
4. The results of this study will be published. No information about you will be in the study report or articles.

“When you sign this form you are saying you understand what the study is about. You agree you were informed about risks of participating. The researcher has informed you how your privacy is protected. By signing you agree you are at least 18 years old. You give your permission. You volunteer to be in the study described here.”

( ) I accept the above terms. ( ) I do not accept the above terms. (CHECK ONE)

Your signature ____________________________ Date ____________

Signature of the researcher ________________________ Date ____________
Appendix I: Newspaper Advertisement

Retail Health Study

Please complete a short survey about the care you received from a nurse practitioner in a retail health clinic (Clinics in Walgreens, Target, CVS, Osco, etc.). Email your name and address to [redacted] or leave a message at [redacted] to request a mailed survey. Your identity will be kept private. Thanks for your help with my nursing doctoral study!
Appendix J: Pilot Questionnaire Patient

April 16, 2014

I am conducting a pilot study of the survey tool I am using in my doctoral dissertation study. I value your opinion as an individual who has sought treatment in a retail health clinic. Please complete the survey instrument and answer the following questions. Your name will not be published or associated with the answers that you provide. I appreciate your honesty and willingness to provide your expert opinion about the research study tool. Thank you for your time and participation!

Laura Tucco, Doctoral Student, University of Phoenix

1. How many minutes did it take you to complete the survey? ____________________________

2. Was the survey easy to read? ____________________________________________________________________

3. Were there any questions you did not understand? ____________________________

4. Was there anything you found confusing about the survey? If so, what was confusing?
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

5. What is your name? Sign: ____________________________

Print your name: ____________________________

6. If you have any questions, concerns or comments about the survey, please provide this here.
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
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   __________________________________________________________________________

Please return the completed survey and the questionnaire to me in the envelope provided.
I am conducting a pilot study of the survey tool I am using in my doctoral dissertation study. I value your opinion as a Nurse Practitioner who has retail health care experience. Please review the survey instrument (Nurse Practitioner Satisfaction Survey-Retail Health Care [NPSS-RHC]) and answer the following questions about the instrument. Your name will not be published or associated with the answers that you provide. I appreciate your honesty and willingness to provide your expert opinion about the research study tool. Thank you for your time and participation!

Laura Tucco, Doctoral Student, University of Phoenix

1. Fill out the survey if you have ever gone to a retail health clinic for any type of service. How many minutes did it take you to complete the survey? ________________________________

2. Was the survey easy to read? _____________________________________________________

3. Were there any questions you did not understand? ________________________________

4. Are there any concepts related to patient satisfaction that are important to you that were not assessed by the NPSS-RHC (first 28 questions of the survey instrument)? If so, what concepts or questions do you think should be added to the survey instrument?
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

5. Was there anything you found confusing about the survey? If so, what was confusing?
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

6. What is your name? Sign if completing a hard copy: _______________________________

   Print or type your name here: ________________________________

7. If you have any questions, concerns or comments about the survey, please provide this here.
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

   Please return the completed survey and the questionnaire to me in the envelope provided.
Appendix L: IRB Approval Letter

4-17-14

Dear Laura Tucco:

The role of the University of Phoenix Institutional Review Board (IRB) is to review research studies proposed by students, faculty and others to determine compliance with federally mandated regulations and local requirements regarding protection of human subjects in research studies conducted in accordance with University policies. Your IRB Application for the research study titled Patient Satisfaction with Nurse Practitioner Care in Retail Health Clinics was recently reviewed by the Board. I am pleased to confirm that the Board has determined your IRB Application is approved and your study is determined to be exempt. This means you may proceed with data collection.

Please understand that this approval is subject to the following:

1. The approval is valid for one year from the date of this communication. If your research study is not completed by one year from the date of this communication, the approval will expire and you must resubmit a completed “Request for IRB Time Extension” form and an updated copy of your IRB Application. These should be submitted to the Dissertation Process Liaison for the School of Advanced Studies through SAS Web.

2. IRB approval for your research study is based upon the information you provided in your IRB Application. If any aspects of your research study change significantly (such as a change in scope, data collection sites, etc.), you must notify the Board of the changes and request approval for continuance of the research under the new conditions. This can be done through the “IRB Change Request for Previously Approved Study” form. Please consult with your Dissertation Chair if you have a question as to whether a change you have made requires Board review and approval.

3. Any conditions that may be associated with this approval decision must be satisfied before data collection commences. Notification of fulfillment of conditions to the Board is required and Board concurrence is expected. Notification may be done by contacting the Board at: [Contact Information].

4. Please retain this communication as documentation of IRB approval of your study.

5. Any conflict of interest that may occur with regard to your study or your role as the primary researcher must be reported promptly to the IRB.

6. Permission to use published surveys, materials, private databases, or other records must have the explicit approval of the author/owner.

7. Any tape recording associated with data collection must be explicitly stated as part of the Informed Consent to which subjects must agree.

8. Individual identity protection must be maintained and separation of Informed Consent from the primary data collection instrument is required.
If you have any questions about human subject protection in research, please refer to the CITI web site or contact the University of Phoenix IRB at . Best wishes for the successful completion of your study.

Sincerely,
Institutional Review Board
## AUTHOR BIOGRAPHY

### EDUCATION

<table>
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<tr>
<th>Dates</th>
<th>Institution &amp; Location</th>
<th>Degree &amp; Subject</th>
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<td>2009-2015</td>
<td>University of Phoenix</td>
<td>PhD Nursing</td>
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<td>Phoenix, Arizona USA</td>
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<td>2002-2006</td>
<td>University of Illinois</td>
<td>Post Master’s Family Nurse Practitioner Certificate</td>
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<td></td>
<td>Chicago, Illinois USA</td>
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<tr>
<td>1995</td>
<td>James Cook University</td>
<td>Graduate Certificate in Education Tertiary Teaching</td>
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<td></td>
<td>Townsville, Queensland, Australia</td>
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<tr>
<td>1992-1994</td>
<td>University of California</td>
<td>Master of Science Nursing Major: Critical Care/Trauma</td>
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<tr>
<td></td>
<td>San Francisco, California USA</td>
<td>Minors: AIDS; Education</td>
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<td>1985</td>
<td>Edison Community College</td>
<td>Emergency Medical Technician Certificate</td>
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<tr>
<td></td>
<td>Naples, Florida USA</td>
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<tr>
<td>1977-1981</td>
<td>Indiana University</td>
<td>Bachelor of Science Nursing</td>
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### LICENSES/CERTIFICATIONS/VERIFICATIONS

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<th>Dates</th>
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<tr>
<td>1981 – present</td>
<td>Registered Nurse – Illinois &amp; Indiana (current), Florida, Ohio, New York, California (inactive)</td>
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<td>1995 – present</td>
<td>Registered Nurse – Queensland, Australia &amp; New Zealand (inactive)</td>
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<td>2001 – present</td>
<td>Advanced Practice Nurse (Clinical Nurse Specialist) Illinois</td>
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<tr>
<td>2006 – present</td>
<td>Advanced Practice Nurse (Nurse Practitioner) Illinois</td>
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<td>2006 – present</td>
<td>American Nurses Credentialing Center Certified Family Nurse Practitioner</td>
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<td>2006 – present</td>
<td>IL APN Controlled Substance License</td>
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<tr>
<td>2006 – present</td>
<td>DEA Controlled Substance Registration Certificate</td>
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</tbody>
</table>
**LICENSES/CERTIFICATIONS/VERIFICATIONS**

1986 – present  Certified Emergency Nurse (Emergency Nurses Association)
1977 – present  American Heart Association (AHA) Basic Cardiac Life Support Provider
1986 – present  AHA Advanced Cardiac Life Support Provider
1991 – present  AHA Pediatric Advanced Life Support Provider

**PRINCIPAL POSITIONS HELD**

2007- present  MinuteClinic  
Chicago, Illinois District 4  (USA)  
• Family Nurse Practitioner

2010 – present  University of Phoenix  
Northwest Indiana Campus (USA)  
• Faculty

Education Consultant; Certified Legal Nurse Consultant  
Townsville, Queensland  (Australia)/Chicago, Illinois (USA)  
• Providing CEN Review Courses  
• Specialties:  Advanced Practice, Retail Health Care, MRI, Outpatient, Emergency-Trauma, Critical Care, Pediatrics to Geriatrics

2006 – 2007  Illinois Masonic Medical Center  
Chicago, Illinois  (USA)  
• Emergency Department Nurse Practitioner

2005 – 2006  Northwestern Memorial Hospital  
Chicago, Illinois  (USA)  
• Emergency Department Staff Nurse

2002 – 2005  Superior Air-Ground Ambulance Service  
Elmhurst, Illinois  (USA)  
• Critical Care Ambulance Transport Nurse  
• Education Specialist for Critical Care Division
<table>
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<th>Year Range</th>
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<td>2001–2002</td>
<td>University of Illinois Medical Center</td>
<td>Chicago, Illinois (USA)</td>
<td>Clinical Practice Specialist/Manager Emergency Department</td>
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<tr>
<td>2000</td>
<td>TravCorps Staffing</td>
<td>United States</td>
<td>Registered Nurse Emergency Department</td>
</tr>
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<td>1999–2000</td>
<td>Gisborne Hospital</td>
<td>Gisborne, New Zealand</td>
<td>Registered Nurse Emergency Department</td>
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<td>1997–1999</td>
<td>Townsville General Hospital</td>
<td>Townsville, Queensland (Australia)</td>
<td>Registered Nurse Emergency Department</td>
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<td>1995–1999</td>
<td>James Cook University</td>
<td>Townsville, Queensland (Australia)</td>
<td>Lecturer, School of Nursing Sciences</td>
</tr>
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<td>1994</td>
<td>College of San Mateo</td>
<td>San Mateo, California</td>
<td>Associate Degree Nursing Program Instructor</td>
</tr>
<tr>
<td>1994</td>
<td>University of California</td>
<td>San Francisco, California (USA)</td>
<td>Research Assistant for Dr. Kathleen Puntillo FAAN</td>
</tr>
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<td>1993–1994</td>
<td>Sunrise Nurses</td>
<td>San Francisco, California (USA)</td>
<td>Emergency Department Staff Nurse, Intensive Care Unit Staff Nurse</td>
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<tr>
<td>1992–1994</td>
<td>Mobile Life Support/American Medical Response</td>
<td>Burlingame, California/Fremont, California (USA)</td>
<td>Critical Care Ambulance Transport Nurse</td>
</tr>
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</table>
PRINCIPAL POSITIONS HELD

1991 – 1992  Stanford University Hospital
Stanford, California  (USA)
  •  Emergency Department Staff Nurse (Level 3)
  •  Medical/Surgical/Trauma Intensive Care Unit Staff Nurse

1990 – 1992  Kaiser Permanente Medical Center
South San Francisco, California  (USA)
  •  Emergency Department Staff Nurse/Charge Nurse
  •  After Hours Advice Staff Nurse

Tampa, Florida  (USA)
  •  Emergency Department Staff Nurse

1987 – 1988  Edison Community College
Ft. Myers, Florida  (USA)
  •  Associate Degree Nursing Program Instructor

1986 – 1989  Lee Memorial Hospital
Ft. Myers, Florida  (USA)
  •  Emergency Department Staff Nurse/Charge Nurse
  •  Intensive Care Unit Staff Nurse

1986 – 1989  Emergency Medical Services
Collier County, Florida  (USA)
  •  Emergency Medical Technician/Paramedic

1984 – 1986  Naples Community Hospital/Marco Island Urgent Care Center
Naples & Marco Island, Florida  (USA)
  •  Emergency Department Staff Nurse/Charge Nurse

1983 – 1984  Indiana University/Wishard Memorial Hospital
Indianapolis, Indiana  (USA)
  •  Emergency Department Staff Nurse

1980 – 1983  Indiana University/Riley Children’s Hospital
Indianapolis, Indiana  (USA)
  •  Infant Care Unit Staff Nurse/Charge Nurse
HONORS

2013  Received the President’s Distinguished Service Award for Serving as the Treasurer of ISAPN

2011  Received the President’s Distinguished Service Award for Serving as the Region #7 Chair for the Illinois Society for Advanced Practice Nursing

2004  Received the President’s Distinguished Service Award for Serving as the First Region #2 Chair for the Illinois Society for Advanced Practice Nursing

2003  Awarded University of Illinois Board of Trustees Graduate Tuition and Service Fee Waiver from University of Illinois College of Nursing for 2003-2004 Academic Year

1993  Invited and Inducted into Sigma Theta Tau, International Nursing Honor Society

PROFESSIONAL ORGANIZATION MEMBERSHIPS

2002 – present  Charter Member Illinois Society for Advanced Practice Nursing
1984 - present  Emergency Nurses Association (USA)
2009 – present  American Association of Nurse Practitioners
1993 – present  Sigma Theta Tau International Nursing Honor Society/Alpha Eta Chapter
1999 – present  American Nurses Association

COMMUNITY SERVICE

2011 - 2013  Treasurer, Board of Directors, Executive Committee Illinois Society for Advanced Practice Nursing

2009 - 2011  Board of Directors Representative for Region 7 Illinois Society for Advanced Practice Nursing

2008 - present  INVENT (Illinois Nurse Volunteer Emergency Needs Team)


2001 - 2003  Item Writer for Certified Emergency Nursing Examination Board of Certification Emergency Nursing, ENA
COMMUNITY SERVICE

2002 - 2004  Board of Directors Representative for Region 2  
Illinois Society for Advanced Practice Nursing

2002 - 2006  Member Education Committee  
Illinois State Council Emergency Nurses Association

2006 – 2007  Member Spring Symposium Committee  
Illinois State Council Emergency Nurses Association

1978 – present  Volunteer Blood and Platelet Donor

1995  James Cook University Display Booth at Townsville Show  
Blood Pressure Screening

1995  Volunteer Fund Raiser “Walk Against Want”  
Townsville, Queensland, Australia

1994  Student Representative on the Registration Fee Committee  
University of California San Francisco

1994  Co-Chairperson for Planning and Orchestrating Graduate Students  
Research Day/University of California San Francisco

1994  Raised funds for AIDS Walk San Francisco benefiting Bay Area  
AIDS Organizations

1992 – 1994  Active Member of the Graduate Nursing Student Council  
University of California San Francisco

1993 – 1994  Co-Chair for Nursing on the Graduate Students Association  
University of California San Francisco

1993 – 1994  Student Representative to the Financial Aid Committee  
University of California San Francisco

1991 – 1992  Volunteer Basic Cardiac Life Support Instructor  
Department of Nursing Services, Stanford University Hospital

1992  Guest Lecturer for Class of Paramedic Students  
Stanford Emergency Services Training Center

1981  Volunteer Nurse at Indianapolis Motor Speedway Hospital
PROFESSIONAL PRESENTATIONS

2014 & 2015  Illinois State Council Emergency Nurses’ Association
             Naperville, Illinois
             “Certified Emergency Nursing Review Course”

2013  Illinois Society for Advanced Practice Nursing
       East Peoria, Illinois
       “Patient Centered Care: What’s in a name?”

2008  Loyola University Medical Center
       Maywood, Illinois
       “Emergency Nursing Review Course”

2008  Alexian Brothers & St. Alexius Medical Center
       Arlington Heights, Illinois
       “Emergency Nursing Review Course”

2008  Evanston Northwestern Healthcare
       Highland Park, Illinois
       “Emergency Nursing Review Course”

2008  Illinois State Council ENA Spring Symposium
       Oak Brook, Illinois
       “Surviving the Legal Minefields of Emergency Nursing Practice”

2006 & 2008  Memorial Hospital
              Belleville, Illinois
              “Emergency Nursing Review Course”

2005  Bilingual Nurse Consortium Mercy Hospital
       Chicago, Illinois
       “Pediatric Review Course”

2005  Certification in Emergency Nursing (CEN) Review Course
       Illinois Masonic Hospital Chicago, Illinois
       “Patient Care Management”
       “Professional Issues”

2004  Illinois State Council ENA Spring Symposium
       Oak Brook, Illinois
       “Practicing Defensively in the Emergency Department”
2004  
Critical Care Transport (CCT) Annual Mandatory In-service Day  
Elmhurst & Rockford, Illinois  
“Advanced Assessment Course for CCT Staff”

2004  
Pediatric Education Day Mercy Hospital  
Chicago, Illinois  
“Care of the Acutely Ill Child”

2003  
Triage Course  
Morris, Illinois  
“Legal Issues”

2003  
Trauma Update  
Chicago, Illinois  
“Head and Spinal Trauma”

2003  
Emergency Nursing Review Course  
Maywood, Illinois  
“Neurological Emergencies”  
“Communicable/Infectious Diseases”

2002  
Triage Course  
Maywood, Illinois  
“Legal Issues, EMTALA and Consents”

2002  
Adolescents, Drugs and Unexpected Consequences  
Arlington Heights, Illinois  
“ED Management of the Adolescent Under the Influence”

1999  
Manly Hospital Nursing Staff  
Manly, New South Wales  
“Rapid (10 minutes or less) Physical Assessment”

1999  
Queensland Emergency Nurses Association Annual Conference  
Townsville, Queensland, Australia  
“Sea Creature Envenomation Injuries”

1999  
Gisborne Hospital Nursing Staff  
Gisborne, New Zealand  
“Assessment of the Traumatically Injured Patient”
RESEARCH POSTER PRESENTATIONS

2007  University of Illinois at Chicago College of Nursing Research Day

*Fatigue Before and After Acute Myocardial Infarction*

Ann Eckhardt BSN, RN; Anne Fink BSN, RN; Michelle Fennessy MSN, RN;
Jessica Jones BSN, RN; Kathryn Szigetvari MS, RN; Laura Tucco MSN, RN;
Cathy Ryan PhD, RN; Julie Zerwic PhD, RN

PUBLICATIONS

Publishing Company.

Section Editor


RESEARCH

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University of Phoenix
August, 31, 2015