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PATIENTS' EXPECTATIONS

AND SATISFACTION WITH NURSING CARE,

AND THEIR NURSES' AWARENESS OF THEIR EXPECTATIONS

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ABSTRACT

Patient satisfaction with nursing care has become increasingly important to health care providers in recent years. Patients' expectations for their care have long been identified as a critical factor in patient satisfaction. Researchers have typically operationalized expectations as the level of care patients imagined they would receive in the *ideal* hospital setting. This study operationalized patients' expectations as the care they anticipated receiving during their present hospitalization from their actual nurses. Healthcare providers' understanding of patients' expectations has also been identified as an important factor in patient satisfaction but again, it was operationalized as providers' understanding of the patients' ideal, not the expectations of their own patients regarding their actual care. This study operationalized this variable as nurses' ability to assess their actual patients' expectations. The conceptual model that guided the study was King's Theory of Goal Attainment. Its utility was its focus on patient-nurse interactions and its consideration of the importance of patients' expectations.

A descriptive correlational mixed-method research design was used to examine the relationships between two predictor variables (patients' expectations before hospitalization of the nursing care they anticipated receiving, and nurses' assessments of patients' expectations of care) and the outcome variable (patient satisfaction with nursing care). The quantitative portion of this study relied on three questionnaires. This study modified the existing Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) to create (1) a questionnaire to measure patients' expectations with nursing care (Patient Expectations for Nursing Care Quality Questionnaire, or PENCQQ), and (2) a questionnaire to measure nurses' assessments of their patients' expectations (Nurse's Assessment of the Patient's Expectations Questionnaire, or NAPEQ). The qualitative portion of this study was based on data obtained from a subgroup of

the initial patients' responses to four open-ended questions regarding their experience with nursing care. The convenience sample for the study consisted of 109 patient-nurse dyads with each dyad comprised of one patient and one nurse. In each dyad, the nurse was the nurse who cared for the patient.

The study found no relationship between nurses' assessments of patients' expectations and patients' ratings of their own expectations, or between nurses' assessments of patients' expectations and patients' satisfaction. There was, however, a moderate relationship between patients' expectations and satisfaction, and the meaning of the complex relationship between the two variables was considered. The qualitative comments were consistent with the quantitative results and both types of data support the same conclusion about the patients' experiences. A significant outcome of this study was the development of a measure that allows patients to rate their expectations for nursing care and another measure that allowed nurses to give their assessment of patients' expectations.

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Chapter 1

INTRODUCTION

Satisfying patients' expectations has always been important to health care providers, and it has become even more important in recent years. Over the past decade, patients have taken a more active role in their treatment as a result of their concerns with the safety, quality and cost of their care. As patients have become better educated and more assertive consumers of medical services, their level of satisfaction with services they receive has become a critical concern for the health care profession, making the measurement of patient satisfaction a critical endeavor.

The steady rise in the measurement of patient satisfaction as an indicator of quality care has placed greater accountability on health professionals to accurately gauge and monitor the efficiency and quality of services (McGillis Hall et al., 2003; Williams, 1994). But it is not just the measurement of patient satisfaction that is critical. Our understanding of the concept of patient satisfaction is critical as well. The Institute of Medicine (Wunderlich, Sloan, & Davis, 1996) identified interagency research on patient satisfaction as key to gaining insight into quality of care issues.

Mandates and regulations imposed by several regulatory agencies and accreditation organizations have also led to changes in how health care is evaluated. For years, the consumer movement has stated that consumers' opinions and satisfaction with providers should guide organizational and structural changes in health care. The standards the Joint Commission instituted in 1986 hold health care organizations accountable for demonstrating continuous quality improvement (Joint Commission of Accreditation of Hospitals, 1986). Patient satisfaction has become so important that the Joint Commission (2007) made it a required patient outcome measure. Similarly, the Agency for Healthcare Research and Quality (AHRQ) has designated

patient satisfaction a criterion for evaluation of overall quality of care, along with mortality and morbidity (Stanton & Agency for Healthcare Research and Quality, 2002), which are considered measures of clinical outcome. The Joint Commission even requires health care organizations to establish formal administrative structures to respond to patients' complaints and concerns (Schweikhart & Strasser, 1994). The federal government put its imprimatur on the importance of patients' perceptions of health care delivery when Congress passed the Omnibus Reconciliation Act (OBRA) in 1988 and mandated that reimbursement for health care services would be contingent on employing outcome assessments as the primary means to evaluate patient perceptions of care. Furthermore, the federal government's Centers for Medicare and Medicaid Services (CMS) require data on patient satisfaction, along with data on mortality and morbidity, when they make their Medicare reimbursement decisions. Now, hospitals that report patient satisfaction data using a common instrument are eligible to receive financial incentives according to recent Medicare payment reforms. These reforms will begin providing incentives based on patient satisfaction results (Kutney-Lee et al., 2009).

Because patient satisfaction has become such an important factor in the health care industry, measuring patient satisfaction has become essential to any institution's ability to survive in today's fiercely competitive environment (Brice, 1994; Greeneich, 1993; Krowinski & Steiber, 1996; Shelton, 2000). Schmele (1996) suggested that health care organizations improve their competitive advantage in the marketplace by better understanding and appreciating the notion of consumer assessment of quality. This would help them to improve patient satisfaction and consequently increase the utilization of services as well as bolster revenue. The evidence strongly suggests that patients with high satisfaction with care are more likely to return and continue to use the medical services (Elder et al., 2004; Laschinger, Hall, Pedersen, & Almost,

2005; Otani & Kurz, 2004; W. E. Peterson, Charles, DiCenso, & Sword, 2005; Raper, 1996; Ware, Wright, Snyder, & Chu, 1975).

The greater focus on patient satisfaction has meant a shift away from relying solely on clinical outcomes such as pressure ulcers, falls, mortality and morbidity and resulted in more research on the other components of patient satisfaction (Bond & Thomas, 1992; Ellenweig, 1992; Hudak, Hogg-Johnson, Bombardier, McKeever, & Wright, 2004; Lynn, McMillen, & Sidani, 2007; Tomlinson & Ko, 2006). One important component of overall patient satisfaction is satisfaction with nursing care. In fact, satisfaction with nursing care has repeatedly been documented as the most important predictor of overall satisfaction with hospital care (S. Abramowitz, Cote, & Berry, 1987; P. D. Cleary, Keroy, Karapanos, & McMullen, 1989; Delbanco et al., 1995; Drachman, 1996; Greeneich, 1993; Nelson & Larson, 1993). Nursing professionals have promoted the use of the patient's perception of the quality of nursing care in addition to traditional outcome measures as an important indicator, or outcome measure, of patient satisfaction (McDaniel & Nash, 1990).

Patients' perceptions of quality of their care are directly related to the actual quality of care they receive, but how should the quality of care be defined and measured as actual quality? Quality of care has been defined a number of ways. Donabedian (1992) described one framework for evaluating the quality of nursing care as having three components: structure, process and outcome. Subsequent researchers have considered outcome measures such as patient satisfaction to be key indicators of quality of care (P. D. Cleary et al., 1991; Donabedian, 1988b; Hinshaw & Atwood, 1982). Donabedian (1980, p. 46) also suggested defining it as "the degree of agreement between the reality and previously set criteria" (p. 46) and divided care into two domains: technical and interpersonal. Technical care means applying the science or technology

of medicine to manage health problems. Interpersonal care refers to managing the social and psychological interaction between clients and practitioners.

Patients do in fact express concerns with both technical and interpersonal aspects of their care (Donabedian, 1980; Heffring, Neilsen, Szklarz, & Dobson, 1986; Irurita, 1999; Jacox, Bausell, & Mahrenholz, 1997; S. Linder-Pelz, 1982; Ware, Davies-Avery, & Stewart, 1978). Thus, both technical and interpersonal concerns factor into patients' perceptions of patient satisfaction. Some patients perceive nurses as "expert technicians" (Mrayyan, 2006). In the interpersonal domain, patients report being more satisfied with care that is perceived as individualized and meeting their needs (Gonzalez-Valentin, Padin-Lopez, & de Ramon-Garrido, 2005; Schmidt, 2003). They are concerned with whether and how information is communicated to them regarding their care (Alt, 1995; P. D. Cleary, Edgman-Levitan, et al., 1991; D. O. Thomas, 1995; Ware, 1995; Yellen, 2003a). Patients want information about their health care situation, want to participate in their care, and want to be included in decisions regarding their care (P. D. Cleary & McNeil, 1988; Hack, Degner, Watson, & Sinha, 2006; Kremer, Ironson, Schneiderman, & Hautzinger, 2007; Long & Greeneich, 1994; Lynn & McMillen, 1999; Minnick, Young, & Roberts, 1995; Speedling & Rose, 1985). Given patients' interest in these aspects of their care, these variables factor significantly in a patient's evaluation of their care. Similarly, it would also be anticipated that patients would have expectations related to these aspects of their care.

Consumer satisfaction is defined broadly as the difference between what consumers expect of products or services and what they experience when using them (Davidow & Uttal, 1989). For the health care industry, this means that provider organizations that wish to emphasize service quality and satisfy their patients' expectations must first understand their patients'

expectations and then establish appraisal systems for patients to rate their level of satisfaction. Patient expectations could play a major role in satisfaction. If a patient's expectations are very low, then mediocre nursing care may result in a higher perception, or evaluation, of care than if the patient's expectations were very high and the nursing care was mediocre.

Statement of the Problem

While patient satisfaction with nursing care has long been a concern of health care providers, a body of evidence has developed around the concept only relatively recently. Within this growing body of literature, there are issues with how to define the concept, how to understand some of the key factors that influence patient satisfaction, and how to measure them. There are also issues with the role of patient's expectations and nurses' ability to assess these expectations.

There are a few well-developed conceptual descriptions of patient satisfaction in the literature (Sitzia & Wood, 1997; L. H. Thomas & Bond, 1996) but little consensus about the best way to conceptualize it. With various, competing conceptualizations of the phenomenon and no dependable way to compare results across settings (McGillis Hall, et al., 2003), very little actual theory testing or theory building has been possible (Aharony & Strasser, 1993; Lin, 1996; L. H. Thomas & Bond, 1996). As a result, researchers have been at a disadvantage as they tried to ground their conceptualizations of patient satisfaction on a variety of theoretical frameworks, from the health sciences to the social and behavioral sciences.

Hall and Dornan's (1988) meta-analysis of satisfaction studies highlighted the problem when they experienced difficulty in comparing studies of satisfaction because the studies measured different aspects of care. Despite the variety of approaches used, satisfaction studies have been remarkably consistent in finding that interpersonal and communication skills are better

predictors of patient satisfaction than technical care (Ahmad & Alasad, 2004; Johansson, Oleni, & Fridlund, 2002; Larrabee et al., 2004; Lin, 1996; Liu & Wang, 2007).

Donabedian (1987) argued that while patients are not capable of judging the quality of the technical care they receive, they are capable of judging the quality of the interpersonal processes related to care. There have been disagreements over whether patient satisfaction surveys are capable of adequately assessing technical and interpersonal skills and competence. Vuori (1987) argues that patient satisfaction cannot be measured in a way that yields useful results because it is difficult – if not impossible – to define what “quality” means to patients, and the concept is dependent on many different patient characteristics. Researchers’ understanding of patient satisfaction has been driven in part by the instruments that have attempted to confirm what researchers themselves considered important about the construct, and more recently, what patients considered important (Johansson, et al., 2002; Mahon, 1996).

The instruments for measuring patient satisfaction suffer from a lack of validity and reliability. Institutions wishing to evaluate patient satisfaction often developed their own measures. The most frequently identified deficiencies of these instruments included lack of conceptual clarity (Lin, 1996), insufficient reliability and validity, and lack of sensitivity (K. Chang, 1997; Eriksen, 1995; Laschinger, Almost, & Tuer-Hodes, 2003; Pascoe, 1983; Wagner & Bear, 2009). Without a commonly accepted tool to measure patient satisfaction, researchers were unable to generalize beyond their specific population or setting. Consequently, there were very few follow-up studies.

Until recently, the various measures of patient satisfaction also failed to capture key nursing activities and thus were poor indicators of nursing care (K. Chang, 1997). The work done by Laschinger is largely responsible for addressing this situation. With studies in 2003 and 2005,

Laschinger and her colleagues developed an instrument that focuses exclusively on nursing behaviors. The Patient's Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) aims to do a better job than previous surveys in measuring real nursing-related behaviors (Laschinger, et al., 2005). All 19 of the items on the questionnaire are related to nursing behaviors, whereas the items found on other instruments such as SERVQUAL and Press Ganey assess many aspects of the hospital environment, from equipment to the aesthetics of the hospital. In other words, the SERVQUAL and Press Ganey tools are not focused on nurse behaviors and nurse-patient interactions. Laschinger and her colleagues developed their instrument to measure nurse-related behaviors and then conducted studies to establish its validity and reliability.

As noted above, it is expected that patients' expectations for their care influence their overall satisfaction, but this factor has not been studied in depth. Patient satisfaction is often defined in terms of patient expectations and perceptions of the care received (Carr-Hill, 1992; P. D. Cleary & McNeil, 1988; Mrayyan, 2006). The combination of patient expectations of nursing care and perceptions of the care actually received is expressed as patient satisfaction with nursing care (Bond & Thomas, 1992; Eriksen, 1995; Risser, 1975).

As important as patients' expectations and perceptions of their care are, little is known about how aware nurses are of their patients' expectations regarding the care they will receive and if it makes a difference to patients' satisfaction of their care if nurses are aware of their expectations. There is some evidence in the literature suggesting that patients express greater satisfaction when there is patient-nurse agreement on health care expectations (Kovner, 1989; P. A. Larson, 1987; Lynn & McMillen, 1999) and what constitutes good nursing care. For example, some of the most satisfied patients have patient-nurse agreement on identified goals, while some of the most dissatisfied patients have unrealistic expectations. Kovner's study (1989) was one of

the few to address this issue of nurse-patient agreement on patient expectations or goals. Her findings revealed the more the nurse and patient agreed on goals, the more satisfied patients are with their care.

Purpose

The purpose of this study was to advance our understanding of patient satisfaction with nursing care by:

1. Comparing patients' expectations of their care before treatment with their satisfaction with the care they received following treatment,
2. Examining nurses' assessment of the patients' expectations of their care, and
3. Analyzing the level of agreement between the nurses' assessment of their patients' expectations and (a) the patients' expectations and (b) the patients' satisfaction with their nursing care.

This study also sought to contribute to the literature on patient satisfaction by focusing on the nursing care component using the PSNCQQ. The study modified the PSNCQQ in two ways to create two new tools.

The first modification was altering the wording of Dr. Heather Laschinger's PSNCQQ questionnaire to allow patients to rate their expectations regarding nursing care. The tool asked patients to rate their expectations before treatment and not just rate their satisfaction after treatment. The second modification was altering the wording so that it was appropriate for nurses to indicate their assessment of patients' expectations regarding the care the patients expected to receive.

Even though patients' expectations have been studied, they have not been widely studied using an instrument that is considered a valid and reliable tool for measuring expectations

specifically for nursing care. It is unclear if expectations and satisfaction have been studied in a research design that directly compares each individual patient's expectations with her or his own satisfaction following treatment. This study will add to the literature on patient satisfaction by extending the work of Laschinger, et al., (2005) to examine patient expectations and nurse assessments of patient expectations.

If the likelihood of patient satisfaction is improved when nurses tailor their interactions to the unique needs of the patient, as suggested by Bear and Bowers' research (1998), then it should prove helpful to discover how well nurses assess patients' expectations. The purpose of this study was to gain a better understanding of one of the key factors influencing patient satisfaction with nursing care – i.e., patient's expectations – and examine if there was a relationship between patient satisfaction with nursing care and nurses' assessment of patients' expectations for their care.

Significance

The importance of patient satisfaction with nursing care to organizations has been well documented and described above. This study hoped to further our understanding of certain components of patient satisfaction so that we can more intelligently predict what nurses can do to address their patients' expectations. Comparing patients' expectations with their satisfaction may lead to a better understanding of the role expectations have in treatment.

Nurses' ability to influence patients' satisfaction with their care goes beyond their ability to provide care. It includes the nurse's ability to influence and shape patients' expectations regarding the care they will receive. This study did not attempt to have nurses manipulate patients' expectations, but did look at nurses' assessment of their patients' expectations. This study was the first to ask nurses to rate their understanding of their patients' expectations for

nursing care. The relationship between these ratings and their patients' expectations for their care and their patients' satisfaction with their care was also examined. Nurse-patient agreement may be a mediating variable in the study of patient satisfaction. It would be important to better understand exactly how it influences patient satisfaction. With a greater understanding of the importance of nurse-patient agreement, nurses could more positively influence patient satisfaction. Patients' expectations regarding their nursing care has been studied before but possibly not with the best tools or the best research design. This study will be able to contribute to the literature by correcting these two shortcomings.

A better understanding of patient satisfaction with nursing care could result in better patient experiences in hospitals, greater satisfaction and improved outcomes. Investigators have claimed that patient satisfaction is not only a direct indicator of the quality of care patients receive but also an indicator of the efficiency and effectiveness of the organizations that manage the care providers (Oswald, Turner, Snipes, & Butler, 1998). When health care providers thoroughly understand the factors influencing patient satisfaction, they will be better able to make changes that will increase satisfaction with the care they deliver. It is also important to measure satisfaction from the patient point of view and demonstrate relationships between hospital systems and the effect nursing care has on patients' expectations of their care because expectations influence satisfaction. To date, studies have assumed patients' satisfaction of their care were based on their individual experiences and seemed to assume that patient expectations either did not matter or would be adequately accounted for simply by studying the patients' satisfaction after their hospital experience. Measures and changes can be implemented to heighten nurses' awareness and sensitivity to patient satisfaction issues.

Before making changes to improve a process or system, it is important to know what patients expect of hospital care. Once this information is known, the components of care that contribute to those expectations can be identified. “Outcomes that are not known to be the consequences of antecedent care cannot be used to assess the quality of that care” (Donabedian, 1988a, p. 177). It is critical that nurses and other health care providers understand what patients expect from their care and then communicate to patients and their families about those expectations. For example, nurses or other providers can correct expectations that are unreasonable and unlikely to be met. This communication provides an opportunity for nurses to help shape both patients’ expectations and satisfaction with their care (Aiello, Garman, & Morris, 2003; Brown & Swartz, 1989; Bunting & Webb, 1988; Luther, 1996). It is important to identify what patients expect of hospital nursing care before measuring their satisfaction with it. This study may help nurses, health care providers, administrators and organizations to better understand what patients think of their nursing care and services in order to make improvements to the systems and processes engaged in care. In addition, with this information, nursing administrators and managers can educate patient-care staff to the importance of seeing care through the patients’ eyes (Gerteis et al., 1993) and heighten caregivers’ sensitivity to patient satisfaction issues.

In today’s health care environment, nursing must demonstrate its contributions to the satisfaction of patients. Nursing must quantify the seemingly intangible measurement of nursing care by defining it clearly and in terms comparable to other factors used in resource allocation decisions (Valentine, 1989). In a time when every profession is increasingly asked to demonstrate its worth and justify its costs, demonstrating the value of nursing on patient outcomes is critical (Baer & Gordon, 1994; McDaniel & Nash, 1990; L. H. Thomas & Bond,

1996). Nurses need to be aware of issues that are important to the patients they serve and implement changes to address these issues. They also need to understand what is important to different groups of patients.

Nursing practice is patient driven and patient centered. This study fills a gap in current research by addressing the congruency of patient-nurse perceptions of care and the effect on patient satisfaction. This study will help researchers gain a greater understanding of how nursing care affects patients' expectations, and in turn, influences patient satisfaction. Care that identifies, educates, and helps patients develop realistic expectations of nursing care may influence patients' perception of care resulting in greater patient satisfaction.

Theoretical Framework for the Study

The literature on patient satisfaction strongly suggests that the single most important factor related to overall satisfaction with hospital care is satisfaction with nursing care, which is heavily based on the interaction between nurse and patient. King's Theory of Goal Attainment (King, 1992) provides a theoretical framework that is applicable to the concept of patient satisfaction precisely because it focuses on the patient-nurse interaction process. King's TGA was derived from the General Systems Framework (GSF). A system is defined as a series of functional components connected by communication links exhibiting purposeful, goal-directed behavior (King, 1997). King's philosophical approach was systems theory and holism as developed throughout the behavioral sciences. King's GSF includes three dynamic interacting systems: personal (individuals), interpersonal (groups), and social (society). (See Figure 1.1). Individuals are called personal systems. Selected concepts identified as relevant for understanding human beings as persons are perception, self, body image, growth and development, time, and space. Several kinds of interpersonal systems exist. For example, two

interacting individuals are called dyads. Several concepts to help understand interactions of human beings are role, interaction, communication, transaction, and stress. Interpersonal systems can also be called small or large groups. Social forces are embedded in the dynamics of society. Several concepts that help nurses function in social systems include organization, power, authority, status, decision making, and role.

The Theory of Goal Attainment can be summarized as follows: Individuals comprise one type of system in the environment called personal systems. Individuals interact to form dyads, triads, and small and large groups, which comprise another type of system called interpersonal systems (nurse/patient). Groups with special interests and needs form organizations, which make up communities and societies and are called social systems. Figure 1.1 represents the relationship between these three dynamic interacting systems (King, 1981). The TGA was derived from this open systems framework, specifically the personal and interpersonal systems of the GSF, which are delineated as follows:

- Social Systems: Family systems, Health care systems (hospitals, units), Educational systems, Organization.
- Interpersonal Systems concepts: Role (nurse/patient), Interaction, Communication, Transaction, and Stress.
- Personal System concepts: Perception, Self, Body Image, Growth and Development, Time and Space.

KING'S CONCEPTUAL FRAMEWORK FOR NURSING

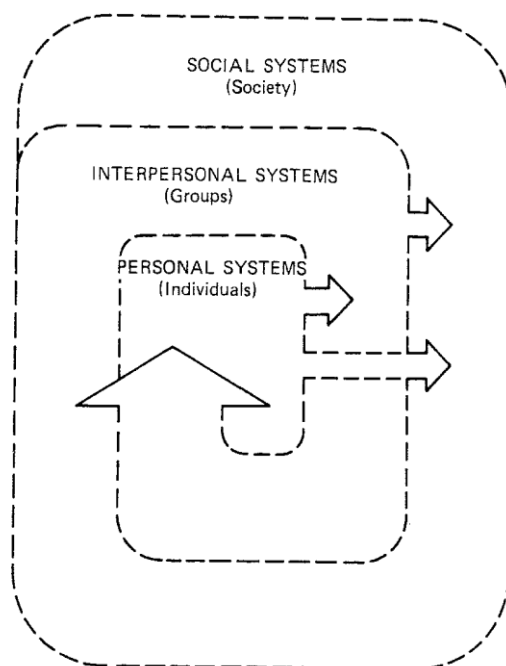


Figure 1.1. *A conceptual framework for nursing: Dynamic interacting systems.*
 Reprinted from I. M. King's *A Theory for nursing: Systems, concepts, process*,
 New York: John Wiley, 1981, p. 11.

King (1981) defined nursing as a process of interactions between nurse and client whereby each perceives the other and the situation; through communication, they set goals and explore and agree on the means to achieve the goals. Actions are taken as necessary by both the patient and the nurse to achieve their mutual goals. Transactions have occurred when goals are attained (King, 1992). The practice of nursing takes place through interpersonal relationships or dyads. When transactions are made between nurses, patients, and families, one can begin to predict that goals will be attained (King, 1997).

King's theory of goal attainment is a reaction-interaction-transaction process, with the nurse and patient perception, judgment, and action as key components in a general systems

model. The TGA specifies that the patient's perception and judgment are separate from the nurse's, even though the nurse and patient will interact. King emphasizes that professionals have a responsibility to assess data about their perceptions of the patient so that both provider and patient goals are congruent (King, 1992).

Several concepts emerge from this process of goal attainment, including perception, interaction, and transaction. Perception is the major concept associated with the personal system. It is the process that gives each individual his or her own beliefs and views of what was experienced; it is each person's representation of reality. Perception is knowledge that is essential for nurses if they are to understand themselves and others (King, 1989). Nurses negotiate with a patient's perception of the care situation. Thus, congruence between the nurses' and the patients' perceptions facilitates communication, and it is through communication that goals are attained (King, 1989).

The major concept of the interpersonal system is the interaction between individuals (Figure 1.2). Nurses and patients communicate through interactions, that is, through the patient-nurse dyad. These interactions provide the link to transactions that are necessary for goal attainment. During the process of communication (interaction between nurses and patient), nurses and patients share goals, needs, and expectations of each member of the dyad. Goal attainment occurs through the transactions that occur as a result of the perceptions of the nurse and the patient (King, 1989, 1992).

KING'S THEORY OF GOAL ATTAINMENT MODEL

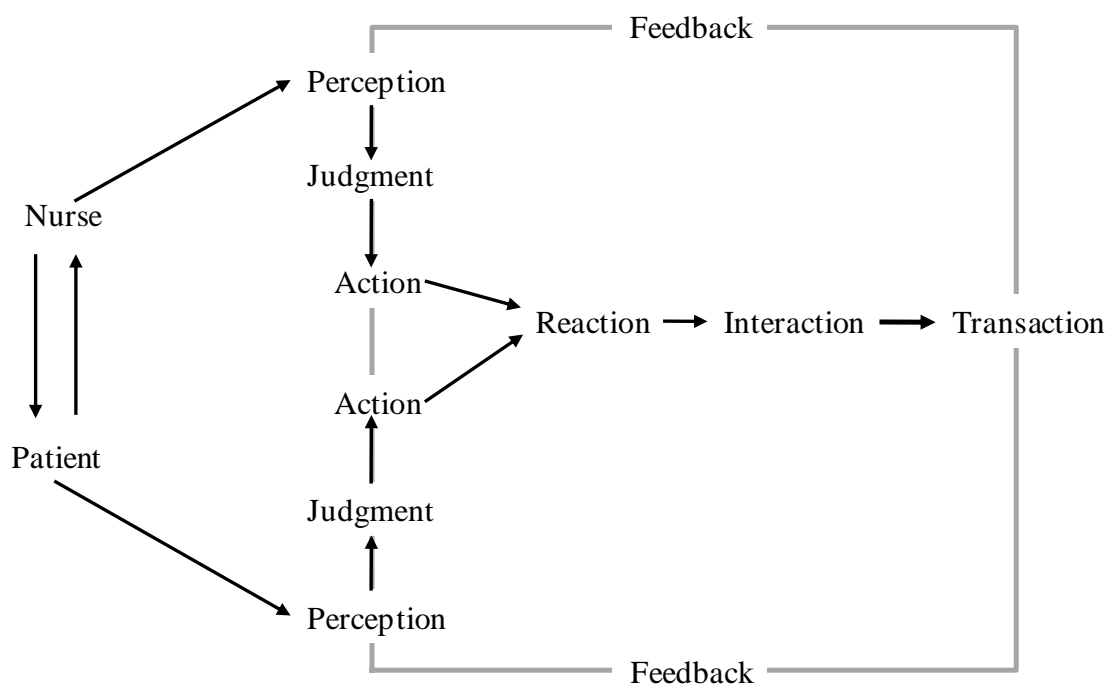


Figure 1.2. *A process of human interactions.*

Reprinted from I.M. King's *A Theory for nursing: Systems, concepts, process*. New York: John Wiley, 1981 p. 145.

Communication is an interchange of thoughts and opinions between individuals. Patients and nurses interact to communicate and work toward desired outcomes. Transactions represent the achievement of these goals or desired outcomes. King (1996) equated mutual goal setting with communication that leads to transactions and achieved goals. She stipulated that patient satisfaction is a way to monitor and evaluate the effectiveness of nursing care in terms of desired outcomes and attainment of valued goals (Austin & Champion, 1983).

King's TGA Model demonstrates the nurse-patient perceptions and communication within the personal and interpersonal systems. The major concept of the personal system is the perception of individuals, and a critical concept within the interpersonal system is

communication. Expectations, perception, and communication appear as key concepts in the patient satisfaction literature (Bond & Thomas, 1992; Carr-Hill, 1992; P. D. Cleary, Greenfield, & McNeil, 1991; J. A. Hall & Dornan, 1988; Mack, File, Horwitz, & Prince, 1995; Risser, 1975). From a review of the literature on these concepts, King's TGA is judged to be an appropriate theory and framework with which to study patient satisfaction. The structure and purpose of the theory of goal attainment emphasizes nursing interventions and outcomes. As King (1981) stated, "This theory [of goal attainment], derived from the conceptual framework, organized elements of the process of nurse-client interaction that result in outcomes, that is goals attained." King's concept of perception is also an important link to client outcomes because perceptions are influenced by and sensitive to nursing interventions (Johnson & Mass, 1997). For the purpose of this research, only the portion of the theory involving perception was used. Other major concepts in the theory of goal attainment, including self, role, stress, growth, development, time, and space were not addressed in this study.

King's TGA (1981) can be applied to patient satisfaction with care. The theory is based on patient-nurse interaction. Both nurses and patients approach their relationship with expectations about the care that will be provided. Nurses' expectations regarding the care they will deliver influence their judgments and actions. Similarly, patients' expectations regarding the care they will receive influence their judgments and actions. During the care process, patients and nurses react to each other's actions, communications, and other behaviors. Members of the dyad develop their own perceptions of the care as a result of this interaction. Agreement on goals promotes nurse-patient congruency regarding their perceived care and goal attainment. Thus, nurse-patient congruency on the expectations and perceptions of care is related to the desired

outcomes of goal attainment and patient satisfaction, as portrayed in Figure 1.3. The concepts in the figure that are represented in bold type are those that were examined in this study.

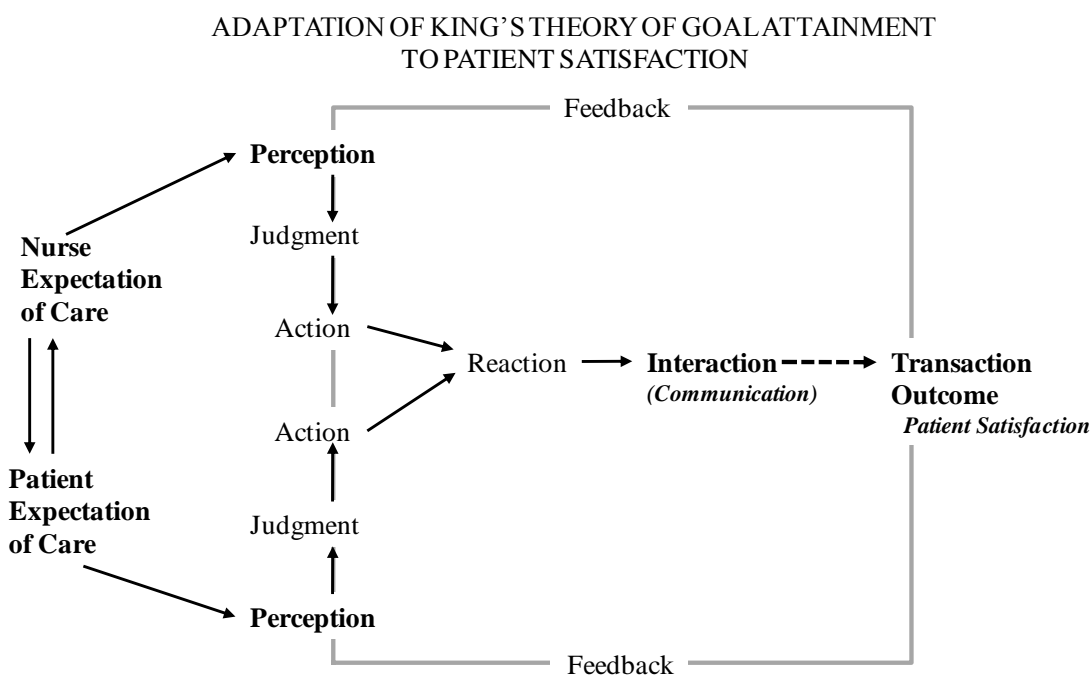


Figure 1.3. *A process of human interactions.*

Adapted from I. M. King's *A Theory for nursing: Systems, concepts, process*. New York: John Wiley, 1981, p. 145.

The following definitions of concepts relevant to this study are offered for clarification purposes.

Expectations of health care are beliefs about anticipated health care outcomes or experience, actions and behaviors of caregivers, and the performance of the system (Oberst, 1984). Expectations are cognitive phenomena that change over time and are influenced by information, environmental factors, and past experiences (Ross, Frommelt, Hazelwood, & Chang, 1987).

Perceptions of health care are beliefs about the actual health care outcomes or experience, the actions, and behaviors of caregivers, and the performance of the system. Perception is a process of human transactions with the environment that gives meaning to experience, represents an image of reality, and influences behavior to the extent that it is each person's representation of reality, or one's subjective world of experience (King, 1981).

Patient satisfaction is a measure of the match between the patients' expectations of the care they will receive and their perceptions of the care they actually receive (Carr-Hill, 1992; P. D. Cleary & McNeil, 1988). "Matching" expectations and perceptions does not mean that they are in agreement, consistent, or the same. While high expectations and high perceptions of care might produce high satisfaction, low expectations and low perceptions of care certainly would not produce high satisfaction. Rather, matching in this sense means bringing expectations and perceptions together and pairing, or comparing, them. In other words, patients' ratings of their satisfaction would be based on their perceptions of their experience, but their perception would be modified by their expectations. For example, if a patient's perception of her experience was mediocre but her expectations on admission had been high, she might rate her satisfaction low. On the other hand, if her perception of her experience was mediocre but her expectations had been low, she might rate her satisfaction high.

Communication is a process whereby information is given from one person to another, either directly in face-to-face meetings or indirectly through telephone, television, or the written word. Communication is the information component of the interactions (King, 1981).

Interaction is a process of perception and communication between a person and the environment and person to person, represented by verbal and nonverbal behaviors that are goal-directed (King, 1981).

Transactions are observable behaviors of human beings interacting with their environment. Transactions are viewed as the valuation component of human interactions. According to King, when transactions occur between nurses and patients, goals are more likely to be attained (King, 1981).

These conceptual definitions are derived from the supporting theoretical framework for the proposed study. Four of the concepts (perceptions, communication, interaction, and transaction) come directly from King's Theory of Goal Attainment. Expectations and patient satisfaction can contribute to a fuller understanding of what transpires between patients and the health care environment, and specifically between patients and nurses. King's model provides a framework for nurse-patient interactions. Transactions between nurses and patients lead to goal attainment and patient satisfaction, or not, depending on the nature of those transactions. These outcomes result from the expectations, communication, and interactions that occur between nurses and patients.

Research Questions

1. Can a patient's expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?
2. After having worked with a patient, are nurses able to assess what the patient's expectations for nursing care were at the time of admission?
3. Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge?

Chapter 2

LITERATURE REVIEW

The aim of this chapter is to review the relevant literature pertaining to patient satisfaction, satisfaction with nursing care, patient expectations, and the instruments that will be employed to measure these variables. The Search Engines used to identify relevant literature were MEDLINE, Cumulative Index of Nursing and Allied Health Literature (CINAHL), PUBMED, and PsycINFO. The key words used separately and in combination with each other for the searches were satisfaction, patient satisfaction, patient expectations, perceptions, satisfaction with nursing, patient perspective, patient care, and nurse-patient relations. The dates requested were from the year 1975 forward. A reference list of retrieved articles was also hand searched to identify additional relevant studies.

The Importance of the Concept of Patient Satisfaction

In 2006, nursing researcher Naomi Ervin noted that patient satisfaction has been “measured, explored, examined, dissected, and thoroughly written about for several decades” (p. 126) and was the subject of close to 2,000 articles over the previous 30 years. Patient satisfaction with nursing care is an important issue in today’s competitive health care environment, one that places a premium on demonstrated effectiveness and public accountability (Dozier, Kitzman, Ingersoll, Holmberg, & Schultz, 2001; Howard & Steinberg, 1999; Shore, 2001; Wagner & Bear, 2009).

Assessing patient care in hospitals is complex due to the large number of variables that affect care and the difficulty associated with measuring nursing care directly (Yellen, 2003b). Over the past decades, researchers and clinicians have become increasingly focused on patients’ perspectives on illness and quality care (P. D. Cleary & McNeil, 1988). From a policy

perspective, understanding patients' concerns, expectations, and perceptions is important for the measurement of health care quality, the delivery of health services, and the costs of care delivery (Kravitz, 1996). Studies have indicated that patients' satisfaction with nursing care is the most important predictor of overall satisfaction with their hospital care (K. S. Abramowitz, 1988; Elder, et al., 2004; Laschinger, et al., 2005; Lemke, 1987; Woodside, Frey, & Daly, 1989). To improve the quality of nursing care, the nurse needs to know what factors influence patient satisfaction. Laschinger and Almost (2003, p. 245) wrote that patient satisfaction "has emerged as an important indicator of health care quality that has implications for the survival of health care organizations and the well-being of patients under their care."

Schmele (1996) suggested that in order to improve the competitive edge in the marketplace, it is vital that health care providers understand the notion of consumers' assessment of quality, thus increasing satisfaction, utilization of service, and revenues (Liu & Wang, 2007; Otani & Kurz, 2004). Thus, patient satisfaction has emerged as an important measure of quality health care services. Greeneich (1993) and Niedz (1998) found that patient satisfaction with nursing care was an important predictor of overall satisfaction with hospital care. Undoubtedly, the study of patient satisfaction has given providers useful insight into the perceptions and expectations of consumers.

Defining Patient Satisfaction

Donabedian (1980), a leader in medical quality assurance, described patient satisfaction as "the patient's judgment on the *quality* or goodness of care" (p. 25, emphasis added). He considered it an element of health status (Donabedian, 1988b). For years, trying to define or understand patient satisfaction seemed tied inextricably to "quality" of care. Many researches and writers in the field seem to use "quality" and "satisfaction" interchangeably.

Others insist that there is a conceptual distinction between patient satisfaction and quality that matters (Laschinger, et al., 2003). Patient satisfaction is viewed by some as a mediator between the patients' perception of quality and their future intentions to reuse a hospital or recommend it to others (Elder, et al., 2004; Laschinger, et al., 2005; Otani & Kurz, 2004; W. E. Peterson, et al., 2005; Raper, 1996; Woodside, et al., 1989). Taylor (1994) claimed that it could be useful to conceptualize satisfaction as more of a temporal, situational variable and quality as a long-term attitudinal variable. By keeping them conceptually separate, they can then be measured independently.

Laschinger and colleagues did not find much about this debate in the nursing literature that she reviewed, reasoning that "Nursing is more concerned with using the data to improve that patients' health status and less concerned about patients' future intentions to choose a particular health care setting or recommend the organization to others (a logical interest of health care marketers)" (Laschinger, et al., 2003, p. 247).

The emphasis on quality in health care received a boost with the Total Quality Management (TQM) movement during the 1980s (Laschinger, et al., 2003). It was during this decade the concepts of satisfaction and quality became intertwined, as illustrated in the seminal works of Hinshaw and Atwood (1982) and Donabedian (1988b). References to measuring quality abound (J. M. Fitzpatrick, While, & Roberts, 1992) (1992). Taylor and Hausmann (1992) compared it to excellence and the best care that can be provided. Siberman (1995) defined quality as meeting the needs and expectations of consumers. If one considers "good" care instead of "quality" care, it seems easier to get agreement. Leino-Kilpi (1992, p. 140) defined good care as being "comprehensive and based upon a certain philosophical foundation and individual patient needs and the encouragement of self care." Frequently, quality is defined by listing the

desirable attributes and criteria that constitute what is believed to be optimal care (P. D. Cleary & McNeil, 1988).

Donabedian (1992) defined quality care in terms of a structure-process-outcome paradigm. Structure is defined as the physical and organizational properties of the settings in which care is provided. Process is what is done for patients, and outcome is what is accomplished for patients. He claimed that people look for evidence – direct or indirect – that the best strategy of care was selected by their providers. Patients seek evidence that their treatment strategy was the best possible strategy from their setting (structure), what happened (the process), and the outcome. Donabedian asserted that practitioners need to include the contributions of physicians, other professional caregivers, families and even patients themselves when assessing quality (Donabedian, 1996). He declared patient satisfaction was “an expression of a patient’s judgment on the quality of care in all its aspects, but particularly as concerns the interpersonal process” (1988b, p. 1746).

Donabedian (1992) split the concept of quality into three domains: technical, interpersonal, and environmental. While he asserted that each domain could be measured independently, Donabedian claimed that the relationship among the three is more than the sum of the parts. Cleary (1988) pointed out that patients’ goals and perceptions affect all three domains, even the technical domain, which is the most objective of the three and the least susceptible to individual interpretation. With a few exceptions, assessments of quality have tended to focus on structure and process, with little attention to assessing outcomes.

Originally, health care practitioners and researchers decided what variables would determine patient satisfaction. They did so a priori, reasoning from their own perspective, not as past or future patients, but as providers or researchers. Later, many researchers began saying that

it would be useful to get patients' input, or perspective, on what they thought was important, and Risser (1975) associated expectations with perceptions, conceptualizing patient satisfaction as "the degree of congruency between a patient's expectations of ideal nursing care and his perception of the real nursing care he receives" (p. 46). Researchers Lynn and McMillen began to see that what patients consider quality care "might not be so obvious to care providers" (Lynn & McMillen, 1999, p. 72). They argued that the perspectives of physicians, administrators, and health care professionals were of less value than those of the patients, if in fact, researchers were going to claim they were investigating patient satisfaction (Johansson, et al., 2002; Mahon, 1996). It was noted that providers focus more on how they treat patients (Donabedian, 1980), whereas patients place greater importance on the interpersonal aspects of care (Backhouse & Brown, 2000; Donabedian, 1980; Stichler & Weiss, 2000). The patients' perspectives were eventually incorporated into measures of patient satisfaction (Lynn & McMillen, 1999; Lynn & Moore, 1997).

The Role of Expectations in Patient Satisfaction

Even though patient satisfaction has always been considered a multidimensional concept (P. D. Cleary & McNeil, 1988; Greeneich, 1993; Mahon, 1996; McCorkle, 1984; Oberst, 1984; Strasser & Davis, 1991), for many years, attempts to define it made little mention of the importance of patients' expectations. For much of its history, researchers assessed patient satisfaction the same way restaurateurs might determine if their clientele were satisfied with their dinner. At the end of their meal, they would ask the clients how they liked the meal. Although the research and thinking on expectations and quality (satisfaction) occurred in the area of product marketing, it eventually became apparent that assessments of patient satisfaction could be more sophisticated – and more valid – if health care researchers also took expectations into

account (Lynn, et al., 2007; Redman & Lynn, 2005; Ross, et al., 1987). In general, relatively sophisticated marketing research had established the importance of factoring in people's expectations when evaluating their satisfaction with the products and services they purchased (A. Parasuraman, Zeithaml, & Berry, 1985).

However, expectations are complex, and people have different expectations about many aspects of their care. One study helped to demonstrate this by simply looking at patients' expectations, not as expectations related to or influencing satisfaction. Abramowitz, Cote, and Berry (1987) developed a 35-item scale and surveyed patients' expectation of care of 841 discharged patients from one hospital. An analysis of the results indicated that the patients' expectations about the quality of the care they were about to receive were significantly related to the type of service they received ($r = .71$) and to staff making their treatment as pleasant as possible ($r = .71$). The correlation between patient expectations regarding the equipment and facilities was lower (.56), suggesting that expectations regarding other amenities of hospital care are distinct from those regarding medical care and other services rendered. Interestingly, the variables uncovered in this study of expectations were consistent with Donabedian's (1988a) distinctions among the components of satisfaction with care: technical, interpersonal, amenities.

Expectations as Moderators of Satisfaction

Patient satisfaction is frequently defined as the match between the patients' expectations of care and the actual care they received (S. Abramowitz, et al., 1987; Hill, 1997; S. U. Linder-Pelz, 1982; Ludwig-Beymer et al., 1993; M. Peterson, 1988; Risser, 1975). In 2001, Dozier et al. (2001) agreed that patients needed to compare their experiences with their expectations in order to form a judgment about satisfaction. More recently, an operational definition of patient satisfaction was offered by Mrayyan (2006, p. 226) as "the degree to which nursing care meets

patients' expectations in terms of art of care, technical quality, physical environment, availability, and continuity of care, and the efficacy/outcomes of care." Research findings have shown that if expectations exceed actual performance, dissatisfaction will result (Churchill, 1979; Eriksson & Svedlund, 2007; Gonzalez-Valentin, et al., 2005; Graham, 1995; M. C. Hall, Elliott, & Stiles, 1993; Ludwig-Beymer, et al., 1993; Meisenheimer, 1991). Therefore, having the ability to assess patients' expectations of the care they will receive should improve the assessment of patient satisfaction with nursing care.

Methodological Challenges with Incorporating Expectations

Some of the early studies that included patient expectations as an independent variable did so in a way that was methodologically weak (S. U. Linder-Pelz, 1982). A couple of earlier studies (Korsch, Gozzi, & Francis, 1968; Larsen & Rootman, 1976) collected the expectation data at the same time they were collecting the satisfaction data, i.e., after the fact, thus confounding the ratings. Researchers cannot expect that assessing patients' expectations after their hospital experience is over will give them the same data as it would had they assessed the patients' expectations at the time of admission. An excellent case in point is a study by Swan, Sawyer, Van Matre, and McGee (1985). They tested a path model that examined associations with patients' expectations and their overall satisfaction. The results showed a strong relationship between the fulfillment of expectations and overall patient satisfaction. However, because they measured their subjects' expectations after the fact (they mailed a questionnaire to a sample of 500 discharged patients randomly selected from hospital records), the validity of their findings is questionable.

Swan et al. (1985) also compromised their findings because they used group differences to compare expectations and satisfaction. In other words, they failed to compare Subject A's

expectations ratings before hospitalization with her satisfaction ratings after her hospitalization; instead, they pooled Subject A's expectations ratings with those of all the other subjects, and satisfaction ratings with all the other subjects' satisfaction ratings. They then compared the pooled expectation and satisfaction data. In effect, they lost the very data they were trying to capture. Each subject's expectations needed to be compared to his or her ratings of satisfaction.

Linder-Pelz (1982) noted that another problem with the study of expectations and satisfaction can occur when a researcher assesses expectations using certain items and satisfaction using other items. This problem may have compromised the study conducted by Linder-Pelz herself as she wondered in her discussion (p. 588): “[C]ould this finding be affected by the fact that the items comprising the expectations scale did not correspond exactly to those comprising any of the satisfaction scales?”

Expectations of the Ideal Versus the Real

The patient satisfaction literature has viewed patient expectations in two very different ways: One is what patients expect when they enter a given hospital; the second is what patients would expect in an “ideal world.” The “gap model” of satisfaction fits this conceptualization of the former.

Parasuraman, Zeithaml, and Berry (1985) were the first to identify a gap model of satisfaction, or service quality. They sought to identify the factors that made a difference for people. They wanted to know what determines whether or not people who receive some type of service end up feeling satisfied with the service they received. These researchers made a clear distinction between expectations and perceptions. Expectations were predictions while perceptions were views or evaluations about what had occurred. Their chief concern was not a particular industry; they were looking across service industries, including health care. The “gap”

in the model they proffered referred to the magnitude and direction of the difference between consumers' expectations and their perceptions.

Similarly, La Monica, Oberst, Madea and Wolf (1986) supported these definitions of satisfaction and suggested that agreement between patients' expectations and their view of the nursing care they received constitutes patient satisfaction. Moreover, they argued that it is the patient's subjective perception of what constitutes patient satisfaction that counts. More recently, Eriksen (1995) identified two important aspects inherent in definitions of patient satisfaction: (a) the degree to which patients' expectations are met and (b) the evaluative component involved as patients decide the extent to which their expectations are met.

The second view of patient expectations considers what they would experience in an ideal world. Parasuraman et al., (1988) redefined expectations as the desires or wants of consumers. Expectations of service do not represent predictions of what service providers would offer, but rather what they *should* offer. A patient's satisfaction is more likely to be determined by how well the nurse's performance fulfills the innate needs, wants, or desires of patients, rather than how performance compares with presumed predictions. Interestingly, Parasuraman, Zeithaml, and Berry (1985) were all marketing professors and their shift toward viewing expectations as attitudes of what should happen instead of what would likely happen probably resulted from their purpose for studying satisfaction and quality: "Research has demonstrated the strategic benefits of quality in contributing to market share and return on investment" (1985, p. 41).

Inevitably, patient's expectations are a complicated phenomenon that is linked to the quality of nursing care. Expectations influence satisfaction and appear to have an inverse relationship with it: if expectations are low, satisfaction is higher (M. Cleary, Horsfall, & Hunt,

2003; Han, Connolly, & Canham, 2003; Laschinger, et al., 2005). Nonetheless, numerous studies have claimed that satisfaction results when actual performance meets or exceeds expectations (S. Abramowitz, et al., 1987; M. Cleary, et al., 2003; Greeneich, 1993; S. U. Linder-Pelz, 1982; Nguyen Thi, Briancon, Empereur, & Guillemin, 2002).

Patient Satisfaction with Nursing Care in Particular

Eriksen (1995, p. 61) defined patient satisfaction with nursing care as “the patients’ subjective evaluation of the cognitive-emotional response that results from the interaction of the patients’ expectations of nursing care and their perception of actual nurse behaviors/characteristics.”

Over the years, empirical studies investigating the determinants of patient satisfaction have focused on a wide range of variables considered important to patient satisfaction. Numerous studies have found that the single most important factor related to overall quality of hospital care is patient satisfaction with nursing care. For example, Wolf et al. (1998) found a “highly statistically significant relationship between patient reports of nurse caring and satisfaction with nursing care” (pp. 103-104). Schmidt (2003, p. 393) captured the importance of patient satisfaction quite succinctly: “As nursing represents a constant presence in the experience of hospitalized patients, it seems logical that satisfaction with nursing care has a primary influence on patients’ overall satisfaction with their experience.”

In a similar survey of 176 discharged patients, Carey and Posavac (1982) reported that the patients’ perception of nursing care was the most critical criterion for determining the hospital’s overall rating. They used a standardized 54-item mail survey developed for use by a private corporation. The response rate was 55%. Among those who rated the hospital as excellent, 90% rated nursing services as excellent; among the less satisfied patients, only 32%

rated nursing services as excellent. The factors rated as the most important to nursing care were technical competence, supportive attitude, responsiveness, and information giving.

Doering (1983) conducted a study to determine factors influencing inpatient satisfaction with care, using a short 11-item, 4-point Likert scale designed by the hospital's patient satisfaction committee. The response rate to the mailed questionnaire was 58%. The results reported by Doering were in terms of measures of association, using Cramer's V coefficient. Satisfaction with nursing care was more strongly associated with overall satisfaction than any of the other services specified in the closed question survey.

Carman (1990), in a sample of over 600 patients, identified hospital service quality factors by using the SERVQUAL instrument. The factors measured were tangible accommodations, food, privacy, nursing care, explanation of treatment, access, and courtesy. The results indicated that nursing care was considered by patients to be more important than any of the other factors.

Taylor et al. (1991) completed a qualitative study of 140 consumers (70 pairs) consisting of a patient and a significant other who was knowledgeable about the patient's recent hospitalization. A telephone interview was conducted with the patients two weeks following discharge from a university medical center. The question asked was "describe what you think quality nursing care is." A total of 930 responses were received and analyzed using content analysis. The analysis identified 8 attributes of quality nursing care that were grouped into 3 subcategories: (a) practice attributes – holistic care and nurse-patient interaction; (b) nurse attributes – personal qualities, proficiency, professional character, and commitment to excellence; and (c) practice-setting attributes – effective organization and management of the patient environment.

Brice (1994) measured patient satisfaction before and after a case management restructuring was implemented at a major medical center. A 4-point Likert-type scale (Cronbach alpha .95) was developed for telephone interviews of patients; the response rate was 60% (n = 358). The most significant improvements in patient satisfaction were in nursing care.

In summary, the consistent and high correlation between patient satisfaction and patient satisfaction with nursing care suggests that when measuring patient satisfaction generally, the investigator may actually be measuring patient satisfaction with nursing care.

Factors Identified as Influencing Patient Satisfaction

Given the considerable number of studies of patient satisfaction, many variables have been found to correlate with the concept (Mahon, 1996; Sitzia & Wood, 1997). For example, Ware, Davies-Avery, and Stewart (1978) demonstrated that the following variables all influenced satisfaction: interpersonal manner, technical quality, physical environment, availability, finances, and continuity. They developed one of the first taxonomies of such variables. Appendix A contains a listing of the quantitative studies of the factors that influence patient satisfaction conducted after 1997 in English-speaking hospitals. The table helped to organize and analyze the findings and helped with the following categorization: (a) socio-demographic and other patient characteristics, (b) environmental factors, (c) coordination and communication, and (d) the nurse-patient relationship and nurses' personal characteristics and attributes.

Socio-demographic and Other Patient Characteristics

Some of the patient demographic variables that have been found to correlate with patient satisfaction include age, gender, and culture (Arnetz & Arnetz, 1996; Larrabee, et al., 2004; Yellen, 2003a). A number of studies have found substantial associations between patient

satisfaction and the socio-demographic characteristics of age, gender, culture, social class, level of education, and physical environment. Several studies found the age of the patient to be important and a significant variable for the perception of satisfaction with the nursing care provided (E. Chang, Chenoweth, & Hancock, 2003; Jacox, et al., 1997; Larsson, 1999). Specifically, older patients tended to be more satisfied and rated the quality of care higher than younger patients (Liu & Wang, 2007; Nguyen Thi, et al., 2002; Uzun, 2001). However, these results are not consistent. Some studies did not find a significant relationship between age and patient satisfaction (Niedz, 1998). Wichowski et al. (2003) reported a significant inverse relationship between age and the perceived importance of physical care, suggesting that as patients age, all areas of nursing care are minimally important. Most studies have found no relationship between the patient's gender and satisfaction. However, some found gender to be a low level variable influencing patient satisfaction, with males reporting a higher level of satisfaction while other studies reported that females are more satisfied (Ahmad & Alasad, 2004; Nguyen Thi, et al., 2002).

The associations between patient socio-demographic characteristics and patient satisfaction have been summarized by Ware et al. (1978) who reviewed 81 publications and focused on the following six socio-demographic variables: age, education, family size, income, occupational level, and gender. Their results suggested that older persons were more satisfied with medical care than younger persons. The less educated patients appeared to be less satisfied with medical care. Those in large families were less satisfied with access to care and had fewer financial resources. Lower income persons tended to be less satisfied with access and care outcomes. Those with occupations requiring higher skills tended to be more satisfied with the technical quality of care. Females were significantly more satisfied than males with the care,

technical quality, and access/finance. Other variables such as marital status, race, social class, and religion were not significantly related to satisfaction.

Some years later, Hall and Dornan (1990) conducted a meta-analysis of 110 studies of patient socio-demographic characteristics as predictors of satisfaction with medical care. Besides the socio-demographic characteristics already described, they looked at medical-care variables, which included access, cost, overall quality of care, humanness of providers, competence of providers, information given by providers, bureaucracy, physical facilities, provider attention to psychosocial problems, continuity of care, and outcome of care. The findings demonstrated that greater satisfaction with medical care was significantly associated with older age and less education, and marginally associated with being married.

Environmental Factors

The surrounding physical environment has been identified as a significant variable influencing patient satisfaction (Irurita, 1999; Lynn & McMillen, 1999; Middleton & Lumby, 1999). The physical environment included such things as cleanliness, food, comfortable bed, comfortable temperature, and aesthetics of the premises, good lighting, and noise levels.

Although several of these factors are not under the direct control of nurses and do not pertain to direct nursing care, they are considered very important to the patients' overall perception of the quality of care provided and their experience with nursing care (Lynn & McMillen, 1999).

However, nurses do have some influence on several factors in the physical environment, e.g., the patient's warmth, the temperature of the room, and the level of noise in the surrounding environment. Consequently, nurses should continuously be aware of this influence and take measures to positively control these environmental factors, which could maximize patient satisfaction with nursing care.

Coordination and Communication

Greater patient satisfaction may result from improved communication between the patient and the health care provider. It has been suggested that improved communication may lead to increased patient compliance and, therefore, better care (P. D. Cleary & McNeil, 1988; Gonzalez-Valentin, et al., 2005; Kangas, Kee, & McKee-Waddle, 1999). Patients who have their needs for information met tend to be more satisfied (Atkins, Marshall, & Javalgi, 1996) and experience fewer symptoms and health problems (Kravitz et al., 2002). Bassett (1992) suggested that patient satisfaction is directly related to the relationship established between the service provider and the consumer, and specifically to their ability to communicate effectively. Therefore, nurses as service providers should be asking patients questions about the service: What is being done correctly? Which services need to be changed or improved? How would the patient like to see service provided as a whole? Service – and satisfaction – then become an ongoing dialogue in which information is continually being exchanged between nurses and patients about service expectations and preferences. This kind of information exchange would also help ensure that nurses know what patients expect in terms of nursing care.

Coordination of care and communication with patients are variables that significantly influence patient satisfaction with nursing care. Aiello et al. (2003) demonstrated that patient satisfaction is influenced by patient-specific characteristics and by patient-provider interactions. Four articles reviewed by Aiello et al. support the importance of providing adequate communication and information to the patient, which leads to increased patient satisfaction Aiello et al. (2003). The different aspects of information that were identified as making a difference in patient satisfaction included the amount of information, the type and relevance, as well as the timeliness. Middleton and Lumby (1999) identified two items specific to

communication that reportedly made a positive difference in the patient's outcome: the explanation of the procedure provided by the clinical nurse consultant at the pre-admission clinic and being informed about the details of their treatment while in the hospital. Poor communication and related problems were described as poor doctor-nurse-patient communication, lack of follow-up on aspects of care, and a lack of continuity and communication by health care professionals as inadequate (Irurita, 1999). Insufficient information has been shown to contribute to a patient's dissatisfaction with care. It was also reported to be important that the nurses' explanations were clear and straightforward so the patient could understand what they were talking about.

Several studies identified patients' expectations and emphasis on the importance of receiving adequate information as a significant variable influencing their satisfaction. Clear communication and information about their care, including explanations about their treatments, medications, tests and overall condition (Ahmad & Alasad, 2004; Aiello, et al., 2003; Eriksson & Svedlund, 2007; Nguyen Thi, et al., 2002; Schmidt, 2003; Sitzia & Wood, 1999; Tzeng & Ketefian, 2002) were imperative for the patient's perception of satisfaction with nursing care, but not to the degree of formal patient teaching that professionals identify as critical (Lynn & McMillen, 1999). Formal patient teaching was identified as a moderate variable influencing patient satisfaction.

Schmidt (2003) reported results related to an "explaining" category which reinforces the importance of giving information during the delivery of nursing care. In addition, patients focused on the staff's explanations and not on the formal patient education activities. Patients' expectations regarding nursing care and communication were important for the outcome of care.

Also, there were expectations that the nurse and physician would communicate and coordinate patient care.

The Relationship, Personal Behaviors and Attributes

Not surprisingly, the relationship between patients and nurses is significant to hospitalized patients. Patient satisfaction was generally found to be high in organizations where there were good relationships between nurses and patients (P. D. Cleary & McNeil, 1988). Characteristics of a good relationship include mutual understanding, respect, trust, honesty, cooperation, and humor (Mitchell, Leanna, & Hyde, 1999). The initial contact with the patient was especially important for the development of a good relationship and the patient's level of confidence in the nursing care and the organization (Irurita, 1999).

An overall review of the literature suggests that while patients believe nurses should be technically skilled and want them to have specific knowledge about each patient and his or her treatment (Jacox, et al., 1997), patients want more in the way of supportive, nurturing concern and empathic care (Larrabee, et al., 2004; Liu & Wang, 2007; Martin et al., 1998; Sitzia & Wood, 1997; Wolf, et al., 1998). There are many factors that need to be present to ensure that patients feel satisfied and many of them are directly related to nurse attributes and behaviors.

Many studies have made a concerted effort to investigate and understand which nursing behaviors help shape positive nurse-patients relationships that result in high patient satisfaction. Several studies reported that patients perceived being treated as individuals and receiving personal and unique nursing care as significant variables in patient satisfaction (Ahmad & Alasad, 2004; Dozier, et al., 2001; Elder, et al., 2004; Eriksson & Svedlund, 2007; Gonzalez-Valentin, et al., 2005; Liu & Wang, 2007; Martin, et al., 1998; O'Connell, Young, & Twigg, 1999; Schmidt, 2003; D. O. Thomas, 1995).

Other personal behaviors of nurses that were found to influence patient satisfaction included being kind, courteous, responsive, attentive, calm, and encouraging. While these are often described in the literature as personal “characteristics,” or attributes of nurses, they can more accurately be described as personal behaviors. Patients make inferences about nurses based on the behaviors they witness. Some other behaviors identified included being talkative and friendly and using humor and taking time to listen to the patient (O'Connell, et al., 1999). Middleton and Lumby (1999) reported some positive points identified by study participants, including the fact that nothing was too much trouble for the nursing staff and the nursing staff seemed to be continually present. Schmidt (2003) reported that patients described nurses as “seeing the individual patient,” and “watching over” them and responding to them as important dimensions of the nursing care they received. Patients in Schmidt’s study described feeling safe knowing that the nursing staff was present on the nursing unit and providing “surveillance.” Patients in the study by Irurita (1999) regarded consideration, empathy, compassion, and attentiveness from the nurses as necessary for patient satisfaction with nursing care.

Another factor identified as important by patients was the presence of “professionalism” by the nursing staff. Professionalism is another attribute ascribed to nurses based on behaviors that they may exhibit. Some of the behaviors identified by Lynn and McMillen (1999) that support the valuing of “professionalism” by patients include being dedicated (e.g., being present when needed) and efficient (getting good results). According to Lynn and McMillen, the way patients perceive the professionalism of the nurse will affect their opinion of the quality of the nursing care they receive and ultimately the patients’ satisfaction with nursing care.

Many of these nursing behaviors (empathy, attentiveness, friendliness, etc.) are related to communication between nurses and patients. It may be that improved communication, which

occurs as a result of these behaviors, is what actually influences a better patient outcome or positively influences patient satisfaction regardless of the patient outcome.

King's Theory of Goal Attainment Related to Nurse-Patient Interaction

The studies cited in this literature review demonstrate the influence of nurse-patient interaction and communication in ratings on patient satisfaction. King's Model of Goal Attainment provides a framework for understanding how this may occur. Risser's (1975) and Eriksen's (1995) definitions of patient satisfaction with nursing care fit within King's TGA, that is, transactions between the nurse and patient lead to the outcomes of goal attainment and patient satisfaction. These outcomes result from the communication, interactions, and perceptions between the nurse and patient. The outcome of the interaction process of the nurse-patient transaction is patient satisfaction.

A study by Houfek (1992) focused on the cognitive-behavioral aspects of nurse-patient interactions, using King's theory to describe the dimensions of 17 nursing care episodes as perceived by the nurses. Houfek's study provided information about nurse expectations for nurse-patient interactions. The investigator suggested it would be useful to study both patient and nurse expectations of nursing care situations, their agreement on patient outcomes, and patient satisfaction.

Jackson, Pokorny, and Vincent (1993) assessed the ability of the nurse to communicate in a manner that is perceived by the patient as accepting, thus leading to useful transactions and the outcomes of goal attainment and patient satisfaction. Their descriptive, correlational study explored nurse perceptions of patients with ostomies and examined the relationship between nurse perceptions and patient satisfaction with nursing care. A convenience sample of 12 nurse-patient dyads from two hospitals was interviewed. Pearson's Correlation Coefficient was used to

determine whether the patient scores on the La Monica-Oberst Patient Satisfaction Scale (LOPSS) were correlated with the nurses' scores on the attitude measure. No statistically significant relationship was identified between the nurses' perceptions of patients with ostomies and the patients' satisfaction with care.

Webb and Hope (1995) described King's concept of the nursing process as purposeful communication and information sharing between the patient and the nurse. For King, the principle modes of nursing intervention were identified as teaching, guiding, and counseling. In a convenience sample of 103 inpatients, a structured interview was conducted. Webb and Hope reported that the most important nursing activities for patients were ranked as listening to their worries and teaching them about their conditions, followed by relieving pain.

A large urban medical center in Florida implemented a theory-based nursing practice using King's Theory of Goal Attainment (Frey, Rooke, Sieloff, Messmer, & Kameoka, 1995). A sample of surgical patients was surveyed pre- and post-implementation of King's concepts, using Hinshaw and Atwood's Patient Satisfaction Inventory (Hinshaw & Atwood, 1982). Patients on control units were also surveyed. Frey et al. found that the control group was less satisfied than the experimental group ($N = 180$, $M = 3.6$, $p < .02$) and suggested that implementing theory-based nursing practice can improve patient satisfaction.

Measuring Patient Satisfaction

Measuring patient satisfaction has always been a challenge for three main reasons. First, there have been few well-developed conceptualizations or definitions of patient satisfaction (Sitia & Wood, 1997; D. O. Thomas, 1995) and none that have been generally accepted. Consequently, although it appeared as though people were studying the same construct, many were actually studying different constructs – similar in name only. To some extent, this problem

continues today. Laschinger and Almost (2003) pointed out that the majority of instruments measuring patient satisfaction were not based on a theoretical model; however, the “conceptualization of patient satisfaction is implied by the nature of the items in the questionnaires” (p. 250).

Second, people who were far more interested in getting data than they were in the psychometric properties of the tool they were using, constructed their own tools. The result has been the creation of hundreds of tools used by individual hospitals and researchers and no standardization. Over 50 years ago, Abdellah and Levine (1957) developed the first instrument specifically designed to measure patient satisfaction. While it did not include items regarding nursing satisfaction, it did include a measurement of the hours of professional and non-professional nursing care available. Most have had a short life, being used only once because of their weak or nonexistent psychometric properties (i.e., the reliability, validity, and internal consistency).

Third, tools measuring patient satisfaction are usually positively skewed with a constricted range of values (R. Fitzpatrick, 1993; R. Fitzpatrick & Hopkins, 1983; Laschinger, et al., 2003; Pierce, 1997; Staniszewska & Ahmed, 1999). This result is probably the result of a social desirability bias (Pearson, Durant, & Punton, 1989). This makes it statistically difficult to find effects even when they exist. Most conceptualizations of patient satisfaction revolve around either a patient’s overall response to their total health care experience or their response to a specific aspect of care such as nursing care, medical care, admission, or discharge (Laschinger, et al., 2003).

Beyond these general difficulties with measuring patient satisfaction, measuring satisfaction specifically related to nursing care is complicated for other reasons. One is related to

the test content, or the items that comprise the tests. Since many current tools measuring satisfaction with care fail to capture important nursing activities (K. Chang, 1997), or they embed items relating to nursing behavior with more general items unrelated to nurse behaviors, they cannot be used with any degree of confidence to assess patients' satisfaction with nursing care. A second reason is that patients must be able to differentiate nurses from other health care workers if they are going to be able to validly rate their satisfaction with nurses' behaviors (Pascoe, 1983).

Risser (1975) was one of the first behavioral scientists to develop an instrument to measure the factors that he believed comprised patient satisfaction specific to nursing care. The Risser Patient Satisfaction Scale (PSS) attempted to measure the constructs underlying patient satisfaction using a Likert-type scale. Risser evaluated patient attitudes toward nurses and nursing care in a primary care setting in order to develop the instrument. Two sequential trials were conducted with a sampling of 78 and 60 patients, respectively, at a group health cooperative. Finally, a Likert-type summated rating scale with 25 items was developed with 3 dimensions of nursing care as follows: (a) technical-professional behavior – activities associated with nursing care tasks and the knowledgebase required for competent performance; (b) interpersonal-education relationship – provision of information to patients; and (c) interpersonal-trusting relationship – behaviors and characteristics which permit productive patient-nurse communication and interaction.

Seeking to provide validity to the Risser instrument for use with inpatient hospital patients, Hinshaw and Atwood (1981) conducted a series of five replication studies over a period of eight years with a total of 600 inpatients and outpatients from medical and surgical services to verify Risser's instrument. They concluded that the three dimensions and the 25 items of nursing

care had acceptable levels of validity and reliability. Alpha coefficients for the three dimensions were technical/professional (.79), education (.78), and trust (.88). In terms of convergent validity, analyzing data among multiple traits of nursing care provided an estimate of moderate to strong (.80- .90) construct validity. Lin (1996, p. 210) questioned the analysis of the test's reliability, validity, and intratest consistency, noting that there was "considerable conceptual overlapping" between the technical-professional construct and the trusting construct."

LaMonica, Oberst, Madea, and Wolf (1986) viewed Risser's instrument as an indirect measure of patient satisfaction and used a series of three studies to develop and test a more sensitive measure of hospitalized patients' satisfaction. They conducted three consecutive studies (La Monica, et al., 1986) with more than 810 cancer patients to develop the LaMonica-Oberst Patient Satisfaction Scale (LOPSS). They used factor analysis to test the construct validity of a 41-item, 7-point Likert-type scale based on the work of Risser (1975) and Hinshaw and Atwood (1982). The final three dimensions were as follows: dissatisfaction (17 items), interpersonal support (13 items), and good impression (11 items). The goal of developing a tool with greater sensitivity was not achieved, however. The LOPSS had almost identical score ranges.

In light of the marketing and retail literature related to the role of expectations and perceptions in patient satisfaction, Parasuraman and her colleagues (S. Parasuraman, et al., 1985) conducted a series of studies with the goal of developing a taxonomy upon which to build an instrument that could measure satisfaction in a variety of different settings. With increasing refinement, they distinguished five dimensions of service that would make up the instrument called SERVQUAL (for service quality). These dimensions were tangibles (what gets delivered), reliability, responsiveness, assurance, and empathy (S. Parasuraman, et al., 1985).

A similar approach to the concept of service expectations is intended to measure consumer's normative expectations, which are represented as ideal standards of performance. Miller (1977) defined ideal expectations as wished-for levels of performance. Zeithaml et al. (1993) stated that what consumers expect is as diverse as their education, values, and experience. They also proposed that there is a positive relationship between the level of personal needs and the level of desired service.

Ware, Davies-Avery, and Stewart (1978) reviewed 81 empirical publications of patient expectations and satisfaction. Their results suggested that patients with lower expectations tended to be more satisfied with the actual service, whereas those with unrealistic expectations were less satisfied.

Babakus and Mangold (1992) conducted an empirical evaluation of SERVQUAL to determine the appropriateness of its use in a hospital setting. In a pilot of the scale, respondents cited redundancy in 22 items and found their positive and negative statements, as well as the 7-point Likert scale itself confusing. As a result, the scale was revised to consist of 15 pairs of matching expectation/perception items, all positively worded on a 5-point scale, ranging from strongly agree to strongly disagree. Questionnaires were mailed to 2,036 patients who had been discharged from the hospital within the previous 13 months. The response rate yielded 443 returns (22%). The results demonstrated that SERVQUAL had an excellent reliability of expectation and perception, which were .897 and .964, respectively.

Scardina (1994) used the five dimensions of SERVQUAL to measure patient satisfaction with nursing service. She adapted this instrument to measure both patient expectations and perceptions of nursing care. A convenience sample of 10 postoperative cardiothoracic patients who had been in the hospital an average of five days participated in the study. The results

showed that the most important dimensions to the patients were reliability and empathy, and the areas needing improvement were tangibles, reliability, and empathy. Despite the small sample size, Scardina's adaptation of the SERVQUAL instrument contributed to the validity and reliability of this highly adaptable tool that was specifically designed for use across services to measure patient satisfaction in terms of both perception and expectations.

Bowers et al. (1994) studied patients' perceptions of satisfaction by using 298 convenience subjects recruited at the main entrance of an Army hospital in the Southeast. An instrument developed by Ware, Snyder, and Wright (1983) was adapted for study. The items in the WSW address the same dimensions of the SERVQUAL, plus the two additional dimensions of caring and outcomes. The results demonstrated that caring was found to be a significant predictor of patient satisfaction.

Larson and Ferketich (1993) developed the CARE/SAT to measure patient satisfaction with nurse caring behaviors. The total scale and subscales of this 29-item tool had demonstrated both internal consistency and construct validity as evidenced by strong correlations with the Risser (1975) patient satisfaction measure.

Nelson, Hayes, Larson, and Batalden (1989) reported on the development of the Patient Judgments System (PJS). This tool was used to assess feedback from inpatients about their recent hospitalization (reliability $\alpha = .92$). The researchers defined the construct "hospital quality" as nursing care. The responses to this 68-item survey that was mailed to 2,160 patients identified the attitude/attention/concern from nurses as the most common source of overall patient satisfaction, other than overall quality of care.

Following this, Rubin and associates developed the Patient Judgment of Hospital Quality Scale, or PJHQ (Rubin, Ware, Nelson, & Meterko, 1990). This is another tool designed to help

evaluate a service quality model. The tool contains a nursing subscale that examines specific items related to nursing care, such as nurses' competence and skill level, their attention to a patient's condition, response to calls, nurses demonstrating a concern and a caring attitude, and providing information. The nursing subscale was the strongest predictor of overall rating of hospital quality and intention to recommend the hospital to others.

Laschinger, Hall, Pedersen and Almost (2005) developed the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) from the PJHQ questionnaire. The tool has 19 items plus three additional questions designed to tap satisfaction with the overall quality of care during the stay, overall quality of nursing care, and intent to recommend the hospital to family and friends. It was designed to represent the patient's perspective. The PSNCQQ showed excellent psychometric properties and a strong relationship with overall satisfaction with the quality of care received during hospitalization. The PSNCQQ is designed to be incorporated into existing hospital monitoring programs to monitor patient satisfaction over time.

Several commercial vendors offer services to measure patient satisfaction, such as Press Ganey Associates and the Picker Institute. The tools they developed use information gained from both patient and provider focus groups. The items on the Press Ganey tool are standardized sets of questions in a given context and relate to comfort, pain management, patient explanations/education, caring relationships, and courtesy (Kaldenberg & Regrut, 1999).

The Picker instrument has been primarily used in Canada. It was adapted by Charles et al. (1994) in a survey of medical-surgical patients to identify common sources of patient satisfaction in 57 hospitals in Canada. This instrument consists of seven categories: (a) patient preferences, (b) coordination of care, (c) information and education, (d) physical comfort, (e) emotional support, (f) involvement of family and friends, and (g) continuity and transition.

The fact that these commercial tools were developed using input from both patients and providers, and offer data on their psychometric properties, is an advantage. However, they have been criticized “for not tapping important aspects of nursing care and for being too global in nature”(Laschinger, et al., 2003, p. 270). These limitations impair their utility for use in research that is specifically geared toward satisfaction with nursing care.

Summary

This review of the literature confirms the importance of patient satisfaction with nursing care and the importance of continued research into this construct. The literature has demonstrated a solid link between patients’ *overall* satisfaction and patients’ satisfaction with nursing care. There is also a solid link between patients’ perceptions of their care and nurses’ behavior and interactions with patients.

The literature surrounding the measurement of patient satisfaction makes clear that in researchers’ zeal to study patient satisfaction, they were not always sophisticated in their attempts to develop satisfaction surveys. While instruments are bound to continue to evolve and improve, it appears that measures of patient satisfaction with nursing care are sufficiently developed so that they are actually measuring what they purport to measure.

In their recent concept analysis of patient satisfaction, Wagner and Baer (2009, p. 698) point out that nursing care directly affects satisfaction with inpatient experiences and “individualized nursing care increases patient satisfaction and promotes positive patient outcomes.” The literature has explored the nature of some of the ways nurses “individualize” their care of patients. One way they may individualize their care may be understanding and responding to patients’ expectations. Since research has shown that patients’ expectations affect their satisfaction, it may be important for nurses to have this understanding.

The research to date indicates that patients' expectations of the care they will receive play an interesting but not altogether clear role in outcome measures of patient satisfaction. The original thinking on this subject has given way to more sophisticated consideration, but there is much that remains unknown.

The nurse's appreciation of patient's expectations for the nursing care he or she will receive is one area of research that has yet to be explored. Given the obvious advantage nurses would have if they fully understood a patient's expectations, it is imperative that this area of research be explored. A greater understanding of patients' expectations for care may help nurses better individualize the care they provide and thus promote more positive patient outcomes.

Chapter 3

METHODS

This chapter describes the research methods used in this study and includes the following sections: the research design, sample, setting, instrumentation, and data analysis.

Research Design

A descriptive correlational mixed-method research design was used to examine the relationships between two predictor variables and patient satisfaction with nursing care (the outcome variable). One predictor variable was an attribute of nursing care in the hospital setting, i.e., nurses' assessments of patients' expectations of care. The other predictor variable was a patient attribute, i.e., the patients' expectations before hospitalization of the nursing care they anticipated receiving. The objective was to determine significant relationships between the predictor variables and the outcome variable.

The quantitative portion of this study relied on three questionnaires (see Table 3.1). Patients' expectations prior to hospitalization were measured using the Patient Expectations for Nursing Care Quality Questionnaire (PENCQQ) (Appendix B). Patients' satisfaction with their nursing care was measured at the time of discharge using the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) (Appendix C). The nurses' assessments of the patients' expectations of their care were measured on the same day as the patients were discharged using the Nurse's Assessment of the Patient's Expectations Questionnaire (NAPEQ) (Appendix D). One nurse completed one NAPEQ for each patient she or he was responsible for in the study, thus the nurse's response to the questionnaire was associated with a specific patient.

Table 3.1 *Study Questionnaires Related to Nursing Care*

Questionnaire Acronym	Questionnaire Name	Measures	Intended Subjects
PENCQQ	Patient Expectations for Nursing Care Quality Questionnaire	Patient Expectations	Patients
PSNCQQ	Patient Satisfaction with Nursing Care Quality Questionnaire	Patient Satisfaction	Patients
NAPEQ	Nurse's Assessment of the Patient's Expectations Questionnaire	Nurse's Assessment of the Patient's Expectations	Nurses

The qualitative portion of this study is based on data obtained from patients' responses to four open-ended questions, Patient Qualitative Questions (PQQ, Appendix E). The purpose of including a qualitative supplementary component in this study was to obtain information regarding patients' experiences of their nursing care in their own words in order to corroborate the findings of the quantitative data. This mixed design has the potential to give a better understanding of the data than could be obtained by using only one method. (Morse & Niehaus, 2009).

Demographic data were collected on both patients and nurses using investigator-designed questionnaires. The patients' background information questionnaires contained 18 items (Appendix F) and the nurses' background information questionnaires contained 19 items (Appendix G).

A diagram depicting the process of a mixed-method design is included in Appendix H. This research utilized what is called the simultaneous supplemental strategy for the "QUAN + qual" mixed method design (Morse & Niehaus, 2007, p. 548). It added a qualitative component to the primary quantitative data collection and analysis. With this type of research design, both primary and supplemental data were collected simultaneously. It was not necessary in such a

design to collect the qualitative data on all of the subjects. The qualitative data were analyzed separately and the supplementary findings integrated with those of the quantitative component at the interpretation stage of the research process.

Sample

The convenience sample for the study consisted of patient-nurse dyads with each dyad comprised of one patient and one nurse. The target patient population from which the patients were drawn consisted of patients who were hospitalized with an anticipated length of stay of two or more days. In each dyad, the nurse was the nurse who cared for the patient. Each patient could participate only once, while nurses could participate more than once. The study's design anticipated that a sample of 200 patient-nurse dyads would be sufficient to provide a 95% confidence interval of plus or minus 0.15 for a Pearson correlation coefficient and a concordance correlation coefficient (V. Chinchilli, personal communication, October, 2009).

All patients were Anglophone adults capable of giving informed consent, 18 years of age and older with the ability to read and write in English, and hospitalized to undergo non-emergency, elective, or urgent surgical procedures. The patient sample was identified from a list of patients scheduled for evaluation in the Anesthesia Preoperative Evaluation Clinic one-to-thirty days prior to admission to the hospital. All of the patients were surgery patients or those having an invasive radiologic procedure. The planned procedure excluded several patient groups because the anticipated length of stay was too short. Patients who became subjects but were then hospitalized less than 48 hours were dropped from the study. The planned procedure also excluded several patient groups because they were likely to be transferred to multiple units for the care they required. Patients who received their care on multiple units could easily have been confused about which nursing experience they were being asked to evaluate. These units

included specialty care units (e.g., the Surgical Intensive Care Unit) and the Emergency Department. The excluded patient groups also included individuals in good health who did not require an evaluation in the Anesthesia Preoperative Evaluation Clinic because they would simply arrive at the study hospital the morning of their procedure.

The nurses in this study were the nurses who cared for the patients. They were recruited to participate and assured that their participation was voluntarily. They were informed it would not affect their job in any way.

The qualitative portion of this study was conducted with a subgroup of the initial patients. The exact sample size of the qualitative subgroup was not determined ahead of time because in qualitative studies, also known as emergent-design studies, the decision about the exact number of subjects is determined “in the field, as the study unfolds” (Polit & Hungler, 1997, p. 197). The decision depends on a number of factors including the quality of the data, the uses to which it is applied, the particular research method (Sandelowski, 1994), and complexity of the setting. There are no statistical tests to estimate the number of subjects that will be needed so sample size so “qualitative researchers cannot predetermine the sample size and consequently cannot state the number of interviews” that will be needed (Morse & Field, 1995, p. 44). Boswell and Cannon (Boswell & Cannon, 2007, p. 173) described the importance of the concept of the “adequacy of data, or the amount of data collected (rather than the number of subject interviewed)...” Data saturation is a related concept that helps determine when a sufficient amount of data has been collected and interviews may stop. Data saturation suggests that themes have emerged and the data can be understood, giving the researcher confidence that no themes will be missed if data collection is terminated. That is, once data reaches saturation, the probability of new themes emerging from additional data collection drops and redundancy occurs (Morse & Field, 1995). In

this study, the supplemental qualitative strategy was to be used only until the researcher was certain the volume of qualitative data was adequate to provide enough information to achieve theoretical saturation and informational redundancy.

Setting

The study took place at the Penn State Milton S. Hershey Medical Center, a 501 licensed bed not-for-profit, tertiary and quaternary care academic medical center located in central Pennsylvania. It is fully accredited by both the Joint Commission and the Pennsylvania Trauma Systems Foundation, and is a member of the American Hospital Association. Annually, the hospital has more than 27,000 admissions, approximately 820,000 outpatient visits, and more than 52,000 Emergency Department visits. Slightly more than 30% of all ED visits result in hospital admission. This institution has an average census of 434 patients per day, which includes Women's Health Services, Surgery, Medicine, Heart and Vascular Institute, Cancer Institute, Neuroscience Institute, Orthopedics, and the Children's Hospital. The average length of stay is 5.32 days. The rationale for selecting this facility for the purposes of this study was based on several factors, including reputation, access, and uniqueness of services, the integration of the care and services, and convenience.

Procedure

The study was conducted with written approval from the Human Subjects Committee of the Hershey Medical Center and the hospital's Institutional Review Board for approval (Appendix I). Prior to initiating the research, the researcher and research assistant (RA) met with the Executive Director to review and discuss the study. The meeting agenda included a review of the purpose of the study, a description of the instruments used, the length of time required to complete the questionnaires, and provisions for patient and nurse anonymity and confidentiality.

The researcher scheduled meetings with the Directors of Nursing and Nurse Managers of the appropriate patient care units included in the study, the Admitting Office, and Medical Director and Office Manager of the Anesthesia Preoperative Evaluation Clinic. The purpose of these meetings was to inform them about the study, explain the time requirements for gathering the data, obtain their cooperation and support, and introduce the RA to them.

The investigator and RA met individually and in small groups on the appropriate units with all of the nurses who were willing to listen to a description of the study (which was minimal to avoid biasing any subjects). After receiving a verbal description of the study, the nurses were given a written description of the study (Appendix J) inviting their voluntary participation. The study description stated that they would be giving their implied consent to participate by completing a demographic information form (Appendix G) and a questionnaire about their patient. The researcher explained that their voluntary participation in this research would in no way affect their job, their employment, or their performance appraisal. The meeting was designed to help nurses agree to participate when they would later be asked by the RA to complete the background information form and questionnaire after working with a patient in the study.

To select the patients for the study, each Friday the researcher reviewed the list of patients scheduled for evaluation the following week in the Anesthesia Preoperative Evaluation Clinic. If the schedule was not full for each day of the week, the researcher reviewed the scheduled patient list again on the next Tuesday to identify other potential subjects who may have been added to the schedule. The researcher selected patients who met the inclusion criteria and were to be admitted to a patient care area and attended to by a nurse who had agreed to participate in the research. Those subject-candidates were approached individually by the RA at

the time of the patient's visit to the Anesthesia Preoperative Evaluation Clinic. The RA gave them a verbal and written explanation of the study (Appendix K) and solicited their participation. Patients were informed that they were being invited to participate in a research study. Participation required them to complete a short background questionnaire and two other questionnaires, each requiring 5-10 minutes to complete, one at the time of admission and the other at the time of discharge. The RA explained that their participation was completely voluntary and choosing or declining to participate would not affect their treatment in any way. She reviewed with each candidate the precautions to protect his or her confidentiality. If they agreed to participate, the RA gave them a summary explanation of the research study inviting their voluntary participation and stating that the completion of the demographic information and the expectations questionnaire would represent implied consent (Appendix L).

The RA then read the written instructions to the patients individually and gave them the PENCQQ, which took approximately 5-10 minutes to complete. The completed questionnaire was placed in an envelope coded for the patient until their scheduled admission date. Next, the RA read the background questions (Appendix F) to the patients and gave them a sheet of paper with the same questions so they could write their answers.

The RA tracked the patients and the dates of their scheduled procedures. Following the patients' procedures, the RA visited the patients to say hello, verify their day of discharge, and remind them that she would return on the day of discharge for them to complete the final questionnaire. The RA also recorded the name of the nurses to whom the patients were assigned. On the patients' day of discharge, the RA met individually with the patients to administer the PSNCQQ. At the conclusion of the interview, the PSNCQQ responses were placed in envelopes and sealed. If patients were not hospitalized for 48 hours or more, they were dropped from the

study. But since they had been told when they agreed to participate about the survey at the end of their hospitalization, they were offered the opportunity to take the PSNCQQ as if they were still part of the research.

The qualitative subgroup of the initial patients was asked at the time of discharge by the RA to answer the four short questions of the Patient Qualitative Questions (PQQ, Appendix E) after completing the PSNCQQ. The RA gave the patients a copy of the PQQ to follow on paper but she read the questions to them and digitally recorded their responses. The recordings were then transcribed and the transcripts were reviewed regularly by the researcher.

At the time of the patients' discharge, the RA gave the NAPEQ and the Nurse Background Information Form (Appendix G) to each patient's nurse to complete unless the nurse had not worked with the patient for the required amount of time. The Nurse Background Information Form (NBIF) was only given to the nurses with their initial NAPEQ, not if they had already been paired in the study with an earlier patient and had already completed the NBIF. The nurses were requested to complete the NAPEQ and NBIF prior to the end of their current shift. Once completed, the nurses enclosed the NAPEQs and NBIFs in envelopes, sealed them, and placed the envelopes in the agreed upon location on the unit for the RA to pick up.

To assure confidentiality, all of the forms and questionnaires were identified by alphanumeric codes rather than by names or other identifying information. A list of patients and their codes was maintained by the RA so the patients' pre-admission and discharge responses, as well as the nurses' responses to the questionnaires, could be correlated. The subject list was kept in a locked file by the researcher.

The procedures described above were piloted using the first ten subjects in this study. The only adjustment that was made in response to subjects' comments was to enlarge the font

size of the questionnaire instructions. Because this did not appear to alter the data collection procedures to any significant degree, the data for these pilot patients were kept in the patient pool. The procedure described above was used for the data collection for the entire study and used an increased font size on the patient questionnaires.

Instrumentation

In addition to the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) developed by Laschinger, McGillis Hall, Pedersen, and Almost (2005), two of the instruments used for this study were modifications of the original PSNCQQ. (See Table 3.1 above.) The modifications were done by the researcher in order to assess patient expectations and nurses' assessment of patients' expectations.

The purpose of using the original instrument was to assess patient satisfaction with nursing care. The PSNCQQ contained 19 Likert-type items, each reflecting a component of nursing care. In addition to these 19 items, the instrument included four other items to rate the patients' "overall perceptions" (the overall quality of care received during the hospital stay, the overall quality of nursing care specifically, their general health status, and how likely they would be to recommend the hospital to family and friends). The instrument was originally developed to assess the subject's perspective with content salient to their experience of their nursing care. The PSNCQQ added specificity to a range of nursing-care activities across the entire patient-care process from admission to discharge in order to produce results that would be actionable and therefore able to inform quality-improvement initiatives.

Each of the 19 items of the PSNCQQ consisted of a word or phrase to designate the content of the statement, followed by a more detailed description. Laschinger et al. (2005, p. 223) describe the instrument as follows:

A 5-point Likert scale ranging from poor to excellent is used for each item of the PSNCQQ. There are 2 methods to score the PSNCQQ. For general results, the scores for all items can be summed and averaged to yield a single value for each patient. For detailed feedback and more “actionable” results, item means and standard deviations can be calculated. Another option is to compute the percentage of “strongly agree” responses for each item. These results can be used to track changes over time or to evaluate the effects of quality improvement initiatives. The results can also be used for comparisons between units and hospitals.

To examine the patients’ expectations of nursing care as well as their nurses’ assessment of their expectations, the PSNCQQ instrument for the current study was revised in two specific ways. The first modification allowed the researcher to measure expectations of care that was about to happen instead of care that had already been received. The researcher changed the verb tense to be in the future and a few corresponding words so the items still would make sense to the reader. For the second modification, the researcher changed certain words so the items referred to the nurses’ assessment of the patients’ expectations. This modification allowed the researcher to measure the nurses’ assessment of the patients’ expectations of the care they would receive.

The researcher called Dr. Laschinger to discuss the intended study and obtain permission (Appendix M) to use the PSNCQQ and to develop a new instrument (personal communication, March 2, 2009). Dr. Laschinger was supportive of the modification in order to develop a new instrument and stated that she was unaware of anyone modifying the instrument to examine patients’ expectations with the nursing care. Nor was she aware of anyone attempting to assess nurses’ awareness of patients’ expectations for their nursing care. Dr. Laschinger readily agreed to allow the researcher to modify the PSNCQQ in order to create these two additional questionnaires, one for the patients’ expectations of their nursing care (the Patient Expectations for Nursing Care Quality Questionnaire, or PENCQQ), and one for the nurses’ assessment of the

patients' expectations for their care (the Nurse's Assessment of the Patient's Expectations Questionnaire, or NAPEQ).

The revisions that were needed to create a questionnaire on the patients' expectations required wording changes for some items but no changes for other items. For example, the PSNCQQ item "INSTRUCTIONS: How well nurses explained how to prepare for tests and operations" became "INSTRUCTIONS: How well nurses will explain how to prepare for tests and operations." The verb tense was changed from past behavior to future expectation, i.e., "explained" to "will explain." The following item from the PSNCQQ was the only one that did not require any wording change to create the expectations questionnaire: "EASE OF GETTING INFORMATION: Willingness of nurses to answer your questions."

Changes were made to the PSNCQQ items to create the Nurse's Assessment of the Patient's Expectations Questionnaire (NAPEQ). For example, the item "COORDINATION OF CARE: The teamwork between nurses and other hospital staff who took care of you" was changed to "COORDINATION OF CARE: The teamwork between nurses and other hospital staff who will take care of this patient." Certain items did not require any change, e.g., "RESTFUL ATMOSPHERE PROVIDED BY NURSES: Amount of peace and quiet."

The supplementary, qualitative component of the mixed-method design consisted of a separate sheet of paper containing the following open-ended questions (Patient Qualitative Questions, see also Appendix E):

1. Please provide us with some specific comments about the nursing care you received from your nurse, especially anything that stands out for you, either positively or negatively.

2. Overall, were you satisfied with the nursing care you received from your nurse? Why or why not?
3. Did you receive the kind of nursing care you expected from your nurse?
4. If your expectations were not met, please describe in your own words, why not?

Validity

Face validity for the original PSNCQQ was established by Laschinger et al. (2005) through feedback by using face-to-face nurse focus groups. The authors of the instrument wrote that the focus group participants thought the instrument “accurately reflected what nurses do, and they repeatedly commented on the clarity of the language used in the instrument” (p. 225).

To establish the construct validity of the PSNCQQ, the authors conducted both exploratory and confirmatory factor analysis on the instrument. The results of the former showed a 1-factor solution with factor loadings greater than 0.70 (0.754 to 0.890). The 1-factor model was confirmed using the confirmatory factor analysis.

To provide additional support for the construct validity of the PSNCQQ, the authors measured the sensitivity of the instrument by dividing the responses to the overall satisfaction with care into two groups. They found that the “excellent/very good” group had significantly higher scores on the PSNCQQ than the “poor/fair” group. The results demonstrated the ability of the instrument “to discriminate between high and low levels of overall patient satisfaction....” (Laschinger, et al., 2005, p. 227).

Laschinger et al. (2005) found “strong support for the predictive validity of the PSNCQQ” (p. 227). They examined the predictive validity of the PSNCQQ by testing the survey’s ability to predict frequently used health care research validation outcomes. After adjusting for four patient attributes (length of stay, gender, age, and self-rated health), the

researchers found that (64%) of the variance in the overall quality of care and services, 73% of the variance in the overall quality of nursing care, and 55% of the variance in the intent to recommend the hospital to family and friends was explained by the survey.

Reliability

The reliability of the PSNCQQ was tested across small community and teaching hospitals. The authors estimated the reliability of the instrument using Cronbach's alpha. Item correlations were high (0.61 to 0.89). Reliability estimates were excellent (.97) across all hospital settings. "This suggests that patients in different types of hospital systems were interpreting the items on the PSNCQQ in a consistent manner" (Laschinger, et al., 2005, p. 226). The authors acknowledged that due to funding constraints, they were unable to conduct a second series of studies to obtain test-retest reliability data.

Data Analysis

For the first research question (Can a patient's expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?), the data analysis was conducted using the concordance correlation coefficient (CCC). The CCC measures the agreement between two variables. Assessing agreement, rather than difference, allows researchers the ability to evaluate the similarity of measurements produced by different subjects, or different methods (e.g., tests or questionnaires) on the same subjects. Thus, in terms of the first research question, the CCC can determine the level of agreement between the PENCQQ and the PSNCQQ taken by the same subjects.

The CCC was estimated, along with its 95% confidence interval, to assess the level of agreement between the patient's expectations (using the PENCQQ) and the patient's satisfaction (using the PSNCQQ). There are no rigid guidelines as to what values of the CCC constitute

strong, moderate or weak agreement and consequently, researchers use their own judgment. A CCC between 0.7 and 1.0 is normally considered strong; between 0.3 and 0.7 is considered moderate, and between 0.1 and 0.3 is considered weak (V. Chinchilli, personal communication, April, 2009). The researcher constructed a scatterplot diagram of the patient expectations and patient satisfaction to graphically display the level of agreement.

While the CCC provides a method for analyzing the degree of agreement between any two questionnaires, the Cohen kappa allows for comparisons of the individual items on the questionnaires. Weighted kappa coefficients were used to determine whether there was agreement between any two items from the PENCQQ and the PSNCQQ. A kappa of 1.0 would indicate perfect agreement.

The second research question (After having worked with a patient, are nurses able to assess what the patient's expectations for nursing care were at the time of admission?) was also analyzed using the concordance correlation coefficient (CCC) using the same confidence interval described above. The CCC was used to assess the level of agreement between the nurse's assessment of her or his patient's expectations for the care received (using the NAPEQ) and the patient's expectations for nursing care (using the PENCQQ). The same guidelines were used to evaluate the CCC values and a scatterplot diagram was again used to graphically display the level of agreement. The Cohen kappa was again used to compare the individual items on the NAPEQ and the PENCQQ. Agreement was evaluated to determine if it was strong, moderate or weak.

The CCC and its 95% confidence interval was similarly employed with the third research question, i.e., Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge? The data analysis was

conducted to assess the level of agreement between the nurse's assessment of the patient's expectations for the care received (using the NAPEQ) and the patient's satisfaction of the nursing care received (using the PSNCQQ). The same guidelines were used for employing the CCC as were described above. Similar to the first two research questions, the Cohen kappa was used to compare the individual items on the NAPEQ and the PSNCQQ.

Descriptive statistics were computed for all of the demographic variables. Some of the demographic variables that were common to patient- and nurses were analyzed by comparing the percentages of the two subject groups. This was accomplished using p-values from either the chi-square test or the 2-sample t-test. For the demographic data that were unique to either the patients or nurses, data were given to show the frequency of the subjects' various responses (if the data were nominal data) or the means and standard deviations (if the data were ordinal).

The responses to the Patient Qualitative Questions (PQQ) were collected simultaneously with the core quantitative data for the patients in the qualitative subgroup but analyzed quite differently. As the patients' responses were collected and recorded, they were transcribed and reviewed regularly by the researcher. A manifest content analysis was used to sort the data to see if any meaningful categories, or classes, emerged. "When using manifest content analysis, the researcher surveys the scripts for words, phrases, descriptors, and terms central to the research" (Morse & Field, 1995, p. 136). Summarizing the interviews leads to "the themes that appear to be significant concepts that link substantial portions of the interviews together" (Morse & Field, 1995, p. 140). The themes appear from a linguistic or semantic analysis, i.e., analyzing the language. In coding themes, the first task was to "read and reread the interviews in their entirety" and then "step back and reflect on the interview as a whole" (Morse & Field, 1995, p. 140). The responses were studied to see if any meaningful categories, or classes, emerged.

Qualitative data generally describe qualities, properties, or attributes rather than discrete numerical scores so they are not analyzable via statistical analyses. However, the qualitative information was reviewed and categorized until saturation was reached. Even though there is a methodology for analyzing the qualitative data, Boswell and Cannon (2007, p. 176) pointed out, “Subjectivity is an expected trait of a qualitative study.” Nonetheless, the identified categories were then studied to determine if they were consistent with the items in the questionnaires.

Summary

This chapter described the correlational mixed-method design that was used to examine the relationships between certain predictor variables associated with nursing care and patient satisfaction. Questionnaires were employed prior to admission to measure patients’ expectations of their nursing care and employed again at the time of discharge to measure their satisfaction with their nursing care they received. A questionnaire was also given to the patients’ nurses, and it provided information about the nurses’ assessments of their patients’ expectations of care.

The convenience sample for the study consisted of patient-nurse dyads with each dyad comprised of one patient and one nurse. The target population from which the patients were drawn consisted of English-speaking inpatients with an anticipated hospitalization of two or more days at a large not-for-profit, tertiary and quaternary care academic medical center. The nurses in this study were the nurses who cared for the patients and were willing to participate. While patients could only participate once in the study, nurses could participate multiple times by being paired with more than one patient.

Data on patient satisfaction were gathered using the PSNCQQ developed by Laschinger, McGillis Hall, Pedersen, and Almost (2005). Data on patients’ expectations were collected using a modification (the PENCQQ) of the PSNCQQ. Data on nurses’ assessment of patients’

expectations were gathered using a different modification (the NAPEQ) of the PSNCQQ. Both modifications were made by the researcher with permission of Dr. Laschinger. All three instruments consisted of 19 items and used the same 5-point Likert scale for the rating scales.

The study included a qualitative portion which was conducted with a subgroup of the initial patients. It provided information regarding the patients' experience of their nursing care in their own words and was used to enhance the interpretation of the quantitative data from the questionnaires.

The data analysis relied on the concordance correlation coefficient. Scatterplots were employed to graphically display the level of agreement between different variables. Additionally, the 19 items on each of the questionnaires were examined by calculating weighted Cohen kappa coefficients for each item. Descriptive statistics were computed for all of the demographic variables.

Chapter 4

RESULTS

This chapter presents the findings related to the three research questions and is divided into six sections: (1) a description of the research sample, (2) descriptive statistics related to the sample background data, (3) the findings by each of the three research questions, and (4) an examination of the influence of the same nurse submitting data multiple times, (5) a presentation of the means and standard deviations of the items on the questionnaires and the four “overall” items, and (6) an analysis of the supplementary quantitative data. The researcher used SAS Version 9.2 software to analyze the data in this study.

The three research questions were the following:

4. Can a patient’s expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?
5. After having worked with a patient, are nurses able to assess what the patient’s expectations for nursing care were at the time of admission?
6. Is a nurse’s assessment of the patient’s expectations for nursing care a predictor of that patient’s satisfaction with nursing care following discharge?

Description of the Sample

This study used a convenience sample consisting of 109 patient-nurse dyads. The target patient population consisted of inpatients with an anticipated hospitalization of 2 or more days. A total of 184 patients participated. Each patient could participate only once. Nurses, on the other hand, could participate more than once. Forty six nurses participated, 24 of them multiple times. Seventy-five of the patients’ nurses failed to complete the NAPEQ so those patients were not paired with a nurse, resulting in a total of 109 patient-nurse dyads. The data were collected

between February 9 and May 9, 2010 at Penn State Hershey Medical Center in Hershey, Pennsylvania.

A total of 369 patients were approached to participate in the study to gather data on their expectations for their nursing care upon entering the hospital and their satisfaction with nursing care when they were leaving. A total of 258 patients agreed to participate (70%). A total of 184 patients of the 258 who agreed to participate (71%) completed the study, meaning they completed the PENCQQ, PSNCQQ, and the Patient Background Questionnaire. The first 57 patients also answered four qualitative questions, Patient Qualitative Questions (PQQ).

Seventy-four patients of the 258 patients who agreed to participate and took the PENCQQ were either dropped from the study or failed to complete the second questionnaire (PSNCQQ). Seven patients who agreed to participate and completed the initial round of data collection were dropped from the study because they did not complete the PSNCQQ after they were discharged. Seventeen were dropped because they were hospitalized less than 2 nights. Fifty were dropped either because their surgeries were canceled or rescheduled outside of the parameters of the research timeline, they were discharged the same day as their surgery, or they were moved to the Surgical Intensive Care Unit following their procedure.

The nurse of each patient who completed the PSNCQQ was asked to participate in this study and complete the NAPEQ and Nurse Background Information Form (NBIF) on the day of the patient's discharge. One hundred and eighty-four patients completed the PSNCQQ and therefore, 184 times nurses were asked to complete the NAPEQ. In 109 instances nurses successfully completed the NAPEQ after being requested to do so. Some of the nurses who completed the NAPEQ did so only after additional prodding and follow up by the RA. These 109 NAPEQ were completed by 46 nurses. In 75 of the 184 instances nurses were asked to complete

a NAPEQ but did not respond. These 75 instances in which nurses were asked to complete the NAPEQ but did not respond, account for the “missing” NAPEQ data and were the result of an unknown number of nurses who did not respond to the request to complete the questionnaire. The exact number of nurses is unknown because some of these nurses were asked to complete a NAPEQ on more than one patient.

The 109 NAPEQ’s were completed by a total of 46 nurses because some of the nurses were paired with more than one patient. Thus, several nurses were part of multiple patient-nurse dyads. Twenty-two nurses were involved in the study with one patient; 10 were involved with 2 patients; 5 were involved with 3 patients; 4 were involved with 4 patients; 2 were involved with 6 patients; 1 was involved with 7 patients; 1 was involved with 8 patients; and 1 was involved with 9 patients. In several instances the RA tried to follow up with nurses who did not complete the NAPEQ before the end of the shift, and tried sometimes for several days to encourage them to complete the questionnaire but sometimes without success. This brought the total number of patient-nurse dyads down from a possible 184 to 109. Thus there were 109 patient-nurse dyads in this study. Data from the dyads were used to address research questions two and three. The 75 patients’ PENCQQ and PSNCQQ data were able to be used in addition to the data from 109 patients when analyzing the first research question. The analysis of the first research question was not dependent on having their nurses complete the NAPEQ.

Demographics of the Sample

The study contained two related subject samples: patients and nurses. In one sense, the two samples are independent. Patients could participate in this study and take the Patient Background Information Questionnaire (Appendix F), the PENCQQ and the PSNCQQ without the nurse taking the NAPEQ. In fact, the nurses typically took the NAPEQ and filled out their

Nurse Background Information Questionnaire (Appendix G) only after the patients had completed all of their questionnaires and had been discharged. In that sense, the patient data were independent of the nurse data. This meant that when the researcher ran statistical tests on the demographic data, she could use all of the 184 patients. The fact that some patients' nurses failed to complete their questionnaires had no affect on the patients' responses since they had already completed all of their questionnaires. The first research question involves only patients and their responses to the PENCQQ and PSNCQQ. Even though their answers are related to a particular nurse, the patients' data on these two questionnaires can be analyzed regardless of whether or not their nurse's complete their NAPEQ. Therefore, the size of the sample for the patient demographic data and Research Question One is based on 184 patients.

The two samples were related in the sense that nurses were tied to their patients. If a patient dropped out or did not complete his or her PSNCQQ, the nurse data could not be analyzed.

This section provides demographic data on both samples that were derived from analyzing the responses to the Patient Background Information Questionnaire (Appendix F) and the Nurse Background Information Questionnaire (Appendix G).

Eight items were common to both patients and nurses: gender, marital status, race-ethnicity, country of birth, cultural identification, preferred language, age, and years in the US. These common items allowed for direct comparisons between the patients and nurses. The comparisons were made using either a chi-square test or a two-sample t-test. Both tests demonstrated if the two samples differed with respect to the item in question.

The specific test used to determine whether or not there was a difference between the two groups of subjects on the background items was dictated by the type of background questionnaire

item. Most items were multiple-choice (e.g., gender, income level) and subjects had to choose among the few possibilities. The responses to these items of a nominal (categorical) type were summarized as percentages and frequencies and analyzed using the chi-square test. Other items allowed the subjects to fill in the blank (e.g., number of hospitalizations, years in nursing). The responses to these ordered- or ratio-type items were summarized as means and standard deviations and analyzed using the two-sample t-test.

Of all of the subjects who completed the above-mentioned background questionnaires items, only 1 patient and 2 nurses failed to answer any questions. Two nurses and 1 patient failed to answer the marital status question. As a result, the denominators for this item are different than the denominators for other items.

Table 4-1 provides information about demographic variables regarding how the patient and nurses were similar or different in those demographic variables that were measured using multiple-choice items. Table 4-2 shows information about how they were similar or different in those ordinal demographic variables.

Table 4.1 *Frequency Distributions of Multiple-Choice Demographic Variables Common to Patients and Nurses*

Patient & Nurse Characteristics	Patients		Nurses		P-value from chi-square test
	%	Num /Den	%	Num /Den	
Gender					
Male	52.7	97/184	6.5	3/46	< 0.0001
Female	47.3	87/184	93.5	43/46	
Marital status					
Single, never married	9.3	17/183	25.0	11/44	0.03
Sig other, never married	8.2	15/183	11.4	5/44	
Married	63.4	116/183	47.7	21/44	
Widowed	4.9	9/183	0.0	0/44	
Divorced	12.6	23/183	15.9	7/44	
Other	1.6	3/183	0.0	0/44	
Race-ethnicity					
Caucasian	90.2	166/184	97.8	45/46	0.07
African American	5.4	10/184	0.0	0/46	
Hispanic	1.6	3/184	0.0	0/46	
Other	2.7	5/184	2.5	1/46	
Country of birth					
USA	97.8	180/184	97.8	45/46	0.99
Other	2.2	4/184	2.2	2/46	
Cultural identification					
No	7.1	13/184	0.0	0/46	0.08
Yes	92.9	171/184	100.0	46/46	
Language					
English	100.0	184/184	100.0	46/46	0.99
Other	0.0	0/184	0.0	0/46	

Table 4.2 *Means and Standard Deviations of Ordinal Demographic Variables Common to Patients and Nurses*

Patient & Nurse Characteristics	Patients (N=184)			Nurses (N=46)			P-values from 2-sample t-tests
	Mean	Range	Std Dev	Mean	Range	Std Dev	
Age	54.9	19-87	13.4	40.3	23-63	12.9	< 0.0001
Years in the USA	53.8	14-86	13.8	39.0	17-63	13.2	< 0.0001

Gender

The patients were fairly evenly divided between males and females with slightly more males (52.7% to 47.3%). The nurses, on the other hand, were predominantly female (93.5%), which is consistent with the preponderance of females generally in the nursing profession. The difference between the gender makeup of the two samples was statistically significant.

Marital Status

Almost two-thirds of the patients (63.4%) were married at the time they participated in the study and less than 20% had never been married. Less than half of the nurses were married (47.7%), and 25% had never been married. The two samples were significantly different in this dimension.

Race-Ethnicity

Almost all of the nurses in the study identified themselves as Caucasian (97.8%) with the remaining 2.5% identifying themselves as “Other.” Significantly fewer ($p < 0.07$) of the patients identified themselves as Caucasian (90.2%) with 5.4% identifying themselves as African-American, 1.6 % Hispanic, and 2.7% as Other.

Country of Birth and Preferred Language

Both samples were almost totally from the US (over 97%) and all subjects in both samples preferred English over any other language.

Age and years in the US

The mean age of the patients was 51.7 years (Table 4.2) whereas the mean of the nurses was only 40.3 years. The 11.4-year difference was significant ($p < 0.0001$). The responses to the

question about how many years' people have lived in the US made it clear that almost all of the subjects in both groups have lived here all their lives.

Other items on the background questionnaire were unique to either the patients or the nurses. Items that were unique to the patients included difficulty with English, formal education, family annual income, health insurance, health status and the number of times they had been hospitalized. Items that were unique to nurses included children, highest nursing degree, additional nursing degree, specialty certification, current employment, shift, hours of current shift, primary area of practice and number of years in nursing. Since the data for these items were only applicable to one or the other group and therefore collected on just one set of subjects, the two samples could not be compared on these items. The responses to these items are simply compared visually in terms of either frequency distributions (for the nominal data) or means and standard deviations (for the ordinal data). Tables 4-3 and 4-4 present the data that were unique to the patients.

Table 4.3 *Frequency Distributions of Multiple-Choice Demographic Variables Unique to Patients*

Patient Characteristics	%	Num /Den
Difficulty with English		
No	99.5	183/184
Yes	0.5	1/184
Formal education*		
Grade school	2.2	4/180
High school or GED	28.9	52/180
Some college, no degree	16.7	30/180
Trade/technical school	20.6	37/180
College graduate	18.3	33/180
Graduate school	12.8	23/180
Other	0.6	1/180
Family annual income**		
Less than \$20,000	14.8	25/169
\$20,000 – \$39,999	21.3	36/169
\$40,000 – \$59,999	17.2	29/169
\$60,000 – \$79,999	14.8	25/169
\$80,000 – \$99,999	16.6	28/169
\$100,000 – \$150,000	12.4	21/169
More than \$150,000	3.0	5/169
Health insurance***		
None	1.1	2/182
Medicare	13.2	24/182
Medicaid	8.2	15/182
Other private insurance	61.5	112/182
Other	16.0	29/182
Health status****		
Poor	4.4	8/183
Fair	15.8	29/183
Good	52.5	96/183
Very good	21.9	40/183
Excellent	5.5	10/183

* Four patients failed to answer this question, creating a denominator of 180.

** Fifteen patients failed to answer this question, creating a denominator of 169.

*** Two patients failed to answer this question, creating a denominator of 182.

**** One patient failed to answer this question, creating a denominator of 183.

Table 4.4 *Means and Standard Deviations of Ordinal Demographic Variables Unique to Patients*

Patient Characteristics	Mean	Range	Std Dev
Number of hospitalizations (N = 166)	5.4	0-37	5.3
Number of hospitalizations at Hershey (N = 177)	1.1	0-15	1.9
Number of hospitalizations at this Hershey unit (N = 179)	0.5	0-10	1.4

Difficulty with English and Education

Over two-thirds (69.1%) of the patients reported some post-high school educational experience and only one reported having difficulty with English.

Family Annual Income

The reported incomes of most of the patients covered the spectrum fairly evenly from below \$20,000 to up to \$150,000.

Health Insurance and Health Status

Only 1.1% of the patients reported having no insurance and 90.1% reported their health in the fair, good, or very good range. Approximately ten percent reported their health to be at the extreme ends of the spectrum (Poor 4.4% or Excellent 5.5%).

Hospitalizations

There was considerable variability in the number of prior hospitalizations (See Table 4-4). The average was 5.4 (SD = 5.3, range = 0-37). On average, patients had 1.1 prior hospitalizations at the study site hospital (SD = 1.9, range = 0-15) and were hospitalized on their current unit at the study site hospital .5 times (SD = 1.4, range = 0-10).

In answering these items, 18 patients failed to enter the number of prior hospitalizations, 7 the number of previous hospitalizations at Hershey, and 5 patients the number of prior stays on the current unit at Hershey. Fifteen patients did not report their annual income, 4 their education,

2 their health insurance, and 1 his or her health status. These missing data points cause the denominators of these items to be lower than the total number of patients (i.e., 184).

Tables 4-5 and 4-6 present the data that was unique to the nurses. All 46 nursing-subjects answered all of these items except for 1 who did not report their current employment status and 2 who did not report whether or not they had any additional nursing degree.

Table 4.5 *Frequency Distributions of Multiple-Choice Demographic Variables Unique to Nurses*

Nurse Characteristics	%	Num /Den
Children		
No	63.0	29/46
Yes	37.0	17/46
Highest nursing degree		
Associate	30.4	14/46
Diploma	26.1	12/46
Baccalaureate	43.5	20/46
Additional nursing degree*		
No	95.5	42/44
Yes	4.5	2/44
Specialty certification		
No	67.4	31/46
Yes	32.6	15/46
Current nursing employment**		
Full-time	82.2	37/45
Part-time	15.6	7/45
As-needed	2.2	1/45
Current shift**		
Nights	10.9	5/46
Days	71.7	33/46
Evenings	6.5	3/46
Other	10.9	5/46
Hours of current shift		
8-hour	2.2	1/46
12-hour	19.6	9/46
Other	78.2	36/46
Primary area of practice		
Medical	2.2	1/46
Surgical	39.1	18/46
Orthopaedic/trauma	17.4	8/46
Neuroscience	10.9	5/46
Other	30.4	14/46

* Two nurses failed to answer this question, creating a denominator of 44.

**One nurse failed to answer this question, creating a denominator of 45.

Table 4.6 *Means and Standard Deviations of Ordinal Demographic Variables Unique to Nurses*

Nurse Characteristics (N = 46)	Mean	Range	Std Dev
Years in nursing	15.1	0.6-43	13.2
Years in nursing at Hershey	9.5	0.6-33	9.9
Years in nursing at this Hershey unit	6.5	0.25-33	8.9

Children

More than a third (37%) of the nurses had children.

Nursing Degrees and Certifications

Just over a third of the nurses (30.4%) had an associate degree; over a third (43.5%) had a baccalaureate, and 26.1% had diplomas. Only 1 of the nurses who answered the item regarding additional nursing degrees stated she or he had an additional degree. Over a quarter (32.6%) claimed to have a specialty certification.

Employment Status and Shift

They vast majority of nurses were full-time nurses (82.2%). Only 15.6% were part-time and one nurse was as-needed. Almost 80% worked days, 10% worked nights, 6.5% worked evenings and 10% worked “Other (combination of 8 and 12 hour shifts).”

Primary Area of Practice

Almost half of the nurses’ primary area of practice was general surgery (39.1%), greater than fifteen percent identified their practice area as orthopaedic/trauma, 10.9% as neuroscience, 2.2% as medical, and 30.4% as “Other.”

Years Nursing

There was significant variability in nurses’ answers to items asking about their years in nursing (See Table 4.6). The average number of years in nursing was 15.1 (SD = 13.2). Nurses

reported working at the study hospital 9.5 years (SD = 9.9). Finally, they reported working on their specific unit for 6.5 years (SD = 8.9).

The Findings Related to the Three Research Questions

Research Question 1 – Patient Expectations and Patient Satisfaction

Table 4.7 presents the results for the first research question (Can a patient’s expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?). The results demonstrate a moderate relationship between patients’ expectations and patient satisfaction. The concordance correlation coefficient = 0.34.

The nineteen items of the both the PENCQQ and PSNCQQ were averaged and estimated to be continuous (95% confidence interval). The CCC was used to assess the level of agreement between the patient’s expectations (using the PENCQQ) and the patient’s satisfaction (using the PSNCQQ). N = 184 and 95% confidence interval = (0.21, 0.46). The width of the confidence interval is +/- 0.25.

Table 4.7 *Comparison of 19 PENCQQ, PSNCQQ, and “Overall” Items - Research Question #1*

Variable 1 Patient Expectations N = 184		Variable 2 Patient Satisfaction N = 184		Concordance Correlation Coefficient	95% Conf Interval
Mean	Std Dev	Mean	Std Dev		
2.01	0.68	1.80	0.76	0.34	0.21, 0.46

The researcher constructed a scatterplot diagram (Figure 4.1) of the patients’ expectations and patient satisfaction to graphically display the level of agreement between the two variables. The data points, which represent the scores on both the PENCQQ and the PSNCQQ, are somewhat concentrated in an oval shape along the diagonal line representing perfect agreement. Although there is an assortment of outliers, the clustering of the majority of points along the

vertical line indicates a moderate correlation between the patients' expectations and their satisfaction.

The scatterplot also depicts how many patients' scores on each questionnaire (the PENCQQ and the PSNCQQ) fell in the 1 – 3 range (excellent and very good) versus how many were in the 3 – 5 range (fair and poor) . (Patients whose scores were exactly on the midpoint (good) did not fall into either half.)

A total of 97 patients' scores were in the excellent and very good range on the PENCQQ. A total of 13 patients' scores were in the good to poor range on the PENCQQ. (No patients were exactly at the midpoint.) The percentage of patients who were in the higher expectation range was 88% compared to 12% in the lower range on the PENCQQ.

The results on the PSNCQQ were quite similar. A total of 88 patients' scores were in the excellent and very good range on the PSNCQQ. A total of 16 patients' scores were in the good to poor range on the PSNCQQ. (Six patients were exactly at the midpoint.) The percentage of patients who were in the higher expectation range was 85% compared to 15% in the lower range on the PSNCQQ.

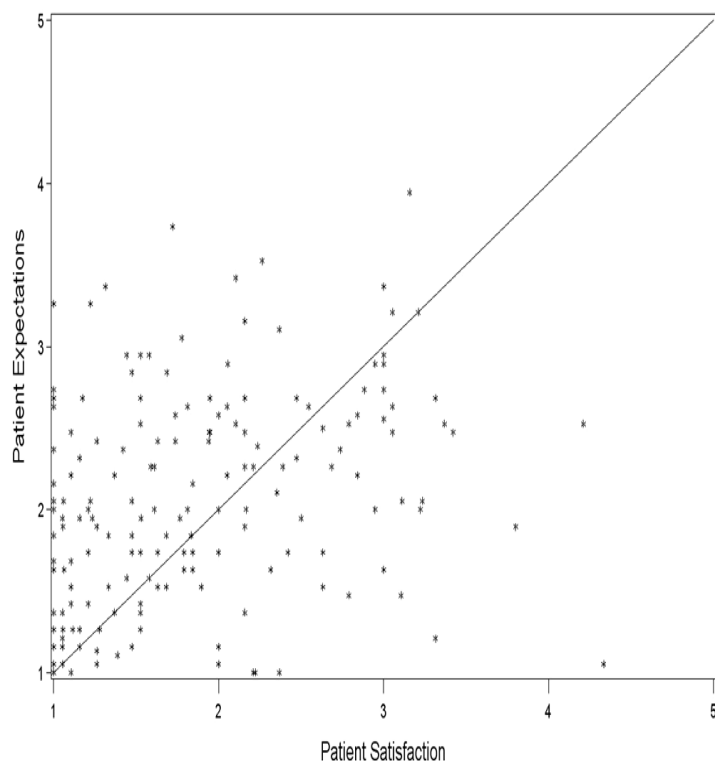


Figure 4.1. Scatterplot of Patient Expectations (PENCQQ) and Patient Satisfaction (PSNCQQ)

Similar to concordance correlation coefficients, Cohen kappa coefficients are used to determine if there is agreement between pre and post scores (e.g., expectations and satisfaction), or between two raters or subject samples such as nurses and patients. The weighted kappa allows for comparisons of items rated by different subjects or items rated at different times by the same subjects. The CCC uses an overall score that average all 19 items on the questionnaires, which is a limitation of the CCC. The weighted kappa does not average the items; instead, it allows the researcher to compare each of the 19 items on one questionnaire with the same item on another questionnaire. Because it looks at the questionnaires item by item, it was also possible to compare the four “overall” items that follow the 19 questionnaire items. In each table, the four

“overall” items are shaded differently to clearly indicate that they are not the 19 actual questionnaire items per se but are additional items.

Table 4.8 contains the weighted kappa coefficients for determining whether there is agreement between any two items from two questionnaires. A kappa of 1.0 would indicate perfect agreement. There are 2 items (“Current health status” and “Recommend this hospital”) that have coefficients that are moderately significant (between 0.3 and 0.7). Kappa values for these two items are 0.41 and 0.30 respectively. Items with coefficients between 0.1 and 0.3 can be considered weakly correlated. The comparison of the items on the PENCQQ and the PSNCQQ shows that the remaining questionnaire items and overall items for the patients fell in this range.

Table 4.8 *Comparison of the 19 PENCQQ and PSNCQQ Items and the 4 “Overall” Items Using the Kappa Coefficient – Research Question #1*

Questionnaire Items	PENCQQ vs PSNCQQ (N=184)	
	Kappa	95% Conf Int
Information	0.28	0.17, 0.39
Instructions	0.27	0.16, 0.39
Ease of getting information	0.21	0.11, 0.32
Information given by nurses	0.21	0.11, 0.31
Informing family or friends	0.22	0.12, 0.32
Involving family or friends	0.25	0.15, 0.35
Concern and caring by nurses	0.15	0.04, 0.26
Attention of nurses	0.15	0.05, 0.26
Recognition of opinions	0.18	0.09, 0.28
Consideration of needs	0.17	0.07, 0.27
The daily routine of the nurses	0.12	0.03, 0.22
Helpfulness	0.18	0.08, 0.28
Nursing staff response to calls	0.14	0.04, 0.23
Skill and competence of nurses	0.19	0.08, 0.30
Coordination of care	0.20	0.09, 0.30
Restful atmosphere provided	0.25	0.15, 0.35
Privacy	0.20	0.09, 0.31
Discharge instructions	0.17	0.05, 0.28
Coord. of care after discharge	0.18	0.07, 0.29
Overall quality of care & services	0.27	0.16, 0.37
Overall quality of nursing care	0.24	0.13, 0.34
Current health status	0.41	0.31, 0.50
Recommend this hospital	0.30	0.17, 0.43

Research Question 2 – Patient Expectations and Nurse Assessment

Table 4.9 presents the results which show no significant agreement between patients' expectations (PENCQQ) and the nurses' assessment of patients' expectations (NAPEQ). The concordance correlation coefficient = 0.18.

The second research question (After having worked with a patient, are nurses able to assess what the patient's expectations for nursing care were at the time of admission?) was also analyzed using the CCC (N = 109 and 95% confidence interval = -0.01, 0.35). The width of the confidence interval is +/- 0.36.

Table 4.9 *Comparison of 19 PENCQQ, NAPEQ, and "Overall" Items - Research Question #2*

Variable 1 Patient Expectations N = 109		Variable 2 Nurse Assessment N = 109		Concordance Correlation Coefficient	95% Conf Interval
Mean	Std Dev	Mean	Std Dev		
1.99	0.70	2.03	0.57	0.18	-0.01, 0.35

A scatterplot diagram (Figure 4.2) of the nurses' assessment of their patients' expectations and patients' expectations for nursing care was constructed to graphically display the level of agreement. The data points representing scores on both the PENCQQ and the NAPEQ fail to cluster in any significant way around the line representing perfect agreement.

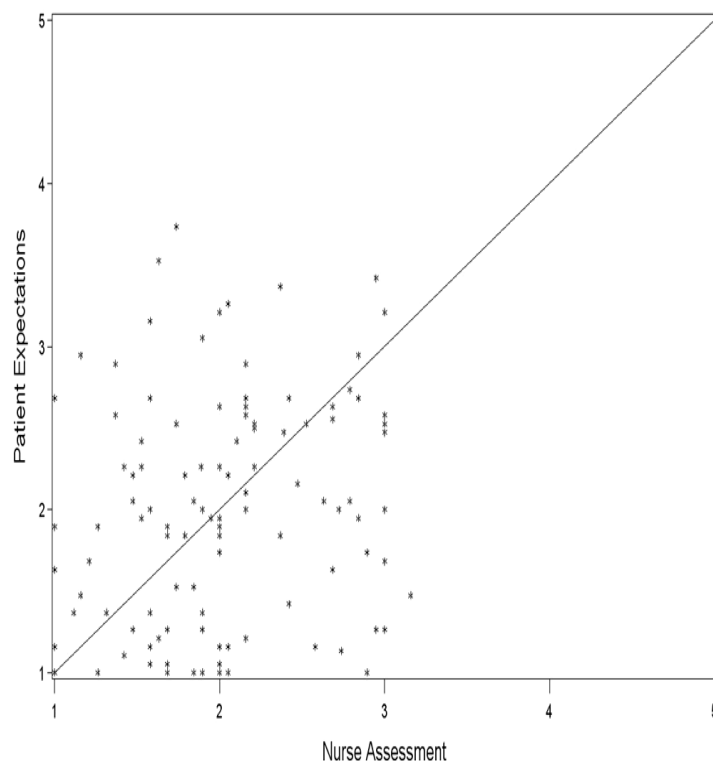


Figure 4.2. *Scatterplot of Patient Expectations (PENCQQ) and Nurse Assessment of Patient Expectations (NAPEQ)*

Table 4.10 contains the weighted kappa coefficients that address the second research question regarding whether there is agreement between any two items from the (PENCQQ) and the (NAPEQ) and the 4 “overall” items. There are 11 items (“Information,” “Ease of getting Information,” “Concern and caring by nurses,” “Helpfulness,” “Skill and competence of nurses,” “Privacy,” “Discharge instructions,” “Coordination of care after discharge,” “Overall quality of care & services,” “Current health status” and “Recommend this hospital”) that have coefficients that are between 0.1 and 0.3. One item (“Discharge instructions”) was over 0.2 ($K = 0.21$).

Table 4.10 *Comparison of the 19 PENCQQ and NAPEQ Items, and 4 “Overall” Items Using the Kappa Coefficient – Research Question #2*

Questionnaire Items	PENCQQ vs NAPEQ (N=109)	
	Kappa	95% Conf Int
Information	0.11	-0.03, 0.25
Instructions	0.07	-0.07, 0.21
Ease of getting information	0.19	0.05, 0.32
Information given by nurses	0.09	-0.05, 0.24
Informing family or friends	0.06	-0.07, 0.18
Involving family or friends	0.06	-0.07, 0.20
Concern and caring by nurses	0.13	-0.02, 0.29
Attention of nurses	0.06	-0.08, 0.20
Recognition of opinions	0.07	-0.05, 0.20
Consideration of needs	0.06	-0.07, 0.18
The daily routine of the nurses	-0.05	-0.16, 0.05
Helpfulness	0.10	-0.04, 0.25
Nursing staff response to calls	-0.01	-0.14, 0.11
Skill and competence of nurses	0.10	-0.05, 0.26
Coordination of care	0.08	-0.05, 0.20
Restful atmosphere provided	0.03	-0.10, 0.16
Privacy	0.19	0.06, 0.32
Discharge instructions	0.21	0.07, 0.34
Coord. of care after discharge	0.14	0.01, 0.26
Overall quality of care & services	0.11	-0.04, 0.25
Overall quality of nursing care	0.06	-0.09, 0.20
Current health status	0.13	0.00, 0.26
Recommend this hospital	0.15	-0.01, 0.30

Research Question 3 – Patient Satisfaction and Nurse Assessment

The third research question (Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge?) was also analyzed using the concordance correlation coefficient (CCC = 0.07). N = 109 and 95% confidence interval = (-0.11, 0.23). The width of the confidence interval is +/-0.34. Table 4.11 presents the results which show no significant agreement between nurses' assessment of patients' expectations (NAPEQ) and patients' satisfaction (PSNCQQ).

Table 4.11 *Comparison of 19 PSNCQQ, NAPEQ, and "Overall" Items - Research Question #3*

Variable 1 Patient Satisfaction N = 109		Variable 2 Nurse Assessment N = 109		Concordance Correlation Coefficient	95% Conf Interval
Mean	Std Dev	Mean	Std Dev		
1.80	0.80	2.03	0.57	0.07	-0.11, 0.23

The researcher constructed a scatterplot diagram (Figure 4.3) of the nurse's assessment of their patient's expectations and patient's satisfaction of their nursing care to graphically display the level of agreement between these two variables. The data points on the scatterplot clearly depict a lack of any significant correlation between the two variables.

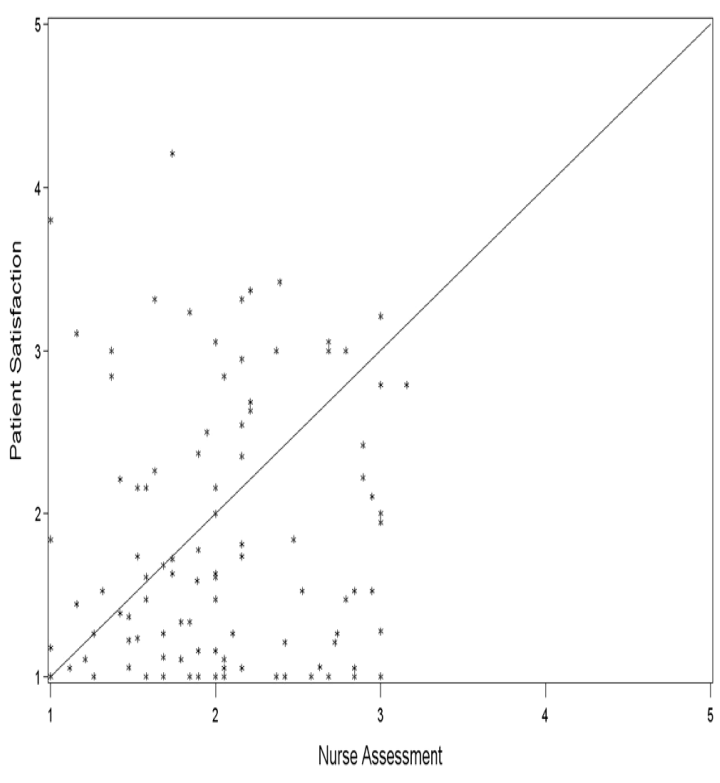


Figure 4.3. Scatterplot of Patient Satisfaction (PSNCQQ) and Nurse Assessment of Patient Expectations (NAPEQ)

The weighted kappa coefficients that address the third research question are shown in Table 4.12. The comparison of the items on the NAPEQ and the PSNCQQ and the 4 “overall” items shows that only 3 (“Informing family or friends,” “Concern and caring by nurses,” and “Recommend this hospital”) demonstrated even weak kappa coefficients, and all 3 were low (between 0.1 and 0.15).

Table 4.12 *Comparison of the 19 PSNCQQ and NAPEQ Items, and 4 “Overall” Items Using the Kappa Coefficient – Research Question #3*

Questionnaire Items	PSNCQQ vs NAPEQ (N=109)	
	Kappa	95% Conf Int
Information	0.01	-0.11, 0.14
Instructions	0.02	-0.10, 0.15
Ease of getting information	0.02	-0.10, 0.14
Information given by nurses	0.09	-0.04, 0.22
Informing family or friends	0.15	0.04, 0.26
Involving family or friends	0.04	-0.08, 0.15
Concern and caring by nurses	0.11	-0.02, 0.24
Attention of nurses	0.09	-0.03, 0.20
Recognition of opinions	0.06	-0.07, 0.18
Consideration of needs	0.04	-0.07, 0.15
The daily routine of the nurses	0.03	-0.08, 0.14
Helpfulness	0.04	-0.09, 0.16
Nursing staff response to calls	0.02	-0.11, 0.15
Skill and competence of nurses	0.00	-0.14, 0.14
Coordination of care	-0.02	-0.12, 0.08
Restful atmosphere provided	-0.01	-0.12, 0.10
Privacy	0.09	-0.04, 0.22
Discharge instructions	0.01	-0.13, 0.14
Coord. of care after discharge	-0.02	-0.16, 0.11
Overall quality of care & services	0.01	-0.11, 0.14
Overall quality of nursing care	0.05	-0.07, 0.17
Current health status	-0.04	-0.15, 0.08
Recommend this hospital	0.10	-0.04, 0.24

Examination of the Nurse Assessment Data

Several nurses participated in the study more than once, which meant they were completing the NPAEQ multiple times over the weeks that data were being collected. If the nurses were simply completing the questionnaire for each patient with the same responses each time, it would suggest the NAPEQ data from the nurses was not valid because it would be highly unlikely that the nurses' patients all had the same expectations for their nursing care. To ensure this was not the case, the researcher went back through the physical NAPEQ forms and compared the different responses by individual nurses. In other words, a comparison was made to see if the responses were the same or different by each nurse who participated in the study more than once.

Twenty-four nurses took the NAPEQ more than once. Over half of those nurses (15) took it 2 or 3 times. Nine nurses took the NAPEQ between 4 and 9 times over the course of the study. Inspecting the raw data revealed that one of the nurses who completed 3 NAPEQs used the same responses for each of the patients she cared for. It could be she or he believed the 3 patients' expectations for their nursing care were identical in all respects or it could be that the nurse was not truly reflecting on the patients and was responding in a "rote" fashion. Inspection of the NAPEQ responses of the 9 nurses who completed the questionnaire between 4 and 9 times revealed that none of these nurses scored their patients' expectations the same. There was variability across patients for these nurses who completed numerous NAPEQs. In summary, it appears that all but one of the nurses who participated multiple times gave unique responses, which suggests they were taking the unique patient into consideration when responding and were not merely answering in a rote manner.

**Presentation of the Means and Standard Deviations of the Items on the
PENCQQ, PSNCQQ, and NAPEQ and the Four “Overall” Items**

Table 4.13 presents the data for the 19 items of the PENCQQ, PSNCQQ, NAPEQ and the four overall items (shown in lighter shading) associated with each questionnaire. The table shows how the patients responded to items on the PENCQQ and the PSNCQQ and the nurses responded to items on the NAPEQ in terms of the means and standard deviations on each item. Lower numbers indicate higher expectations and higher numbers indicate lower expectations. The table shows that the absolute values of the means of many of the patient expectation items scored by the nurses were higher than the patients’ own ratings of their expectations. In other words, the patients’ expectations were higher than nurses’ assessments. This was the case for 14 of the 23 items (including the overall items). Those items were Information, Instructions, Ease of getting information, Information given by nurses, Informing family or friends, Involving family or friends, Skill and competence of nurses, Coordination of care, Restful atmosphere provided, Privacy, Discharge instructions, Overall quality of care and services, Overall quality of nursing care, and Recommend this hospital.

There appeared to be one item that the nurses scored identically to how the patients scored it. That item was Concern and caring by nurses. Eight items were given higher scores by patients on average indicating that patients’ expectations were lower than nurses’ assessment of the patients’ expectations. These items included Attention of nurses, Recognition of opinions, Consideration of needs, The daily routine of the nurses, Helpfulness, Nursing staff response to calls, Coordination of care after discharge, and Current health status.

Table 4.13 *Comparison of the Means and Standard Deviations of the 19 PENCQQ, PSNCQQ and NAPEQ Items and the 4 “Overall” Items*

Questionnaire Items	Patients' Expectations (N = 184)		Patient Satisfaction (N = 184)		Nurses' Assessments (N = 109)	
	Mean	SD	Mean	SD	Mean	SD
Information	1.83	.72	1.72	.80	2.03	0.66
Instructions	1.79	.74	1.73	.83	2.00	0.68
Ease of getting information	1.86	.81	1.58	.80	1.91	0.69
Information given by nurses	1.89	.83	1.69	.89	1.92	0.72
Informing family or friends	2.03	.91	1.82	.94	2.15	0.68
Involving family or friends	2.17	.91	1.79	.90	2.20	0.72
Concern and caring by nurses	1.75	.74	1.55	.87	1.75	0.73
Attention of nurses	1.91	.85	1.81	.06	1.81	0.70
Recognition of opinions	2.28	.95	2.01	.08	2.06	0.73
Consideration of needs	2.18	.91	1.76	.96	1.95	0.69
The daily routine of the nurses	2.43	.94	1.96	.04	2.16	0.66
Helpfulness	1.99	.82	1.63	.84	1.89	0.76
Nursing staff response to calls	2.28	.90	2.09	.26	2.15	0.77
Skill and competence of nurses	1.69	.73	1.68	.90	1.81	0.75
Coordination of care	1.94	.83	1.79	.96	2.20	0.65
Restful atmosphere provided	2.36	.98	2.18	.12	2.39	0.77
Privacy	2.03	.94	1.72	.93	2.07	0.82
Discharge instructions	1.79	.79	1.82	.93	1.95	0.75
Coord of care after discharge	2.20	.94	1.80	.88	2.17	0.71
Overall quality of care & services	1.82	.73	1.64	.85	1.92	0.68
Overall quality of nursing care	1.84	.74	1.65	.89	1.89	0.71
Current health status	2.78	.94	2.57	.98	2.35	0.85
Recommend this hospital	1.50	.78	1.50	.91	1.78	0.83

It is important to note that even though some items have a lower or higher absolute mean value, it is not possible to say that the difference is significant because you cannot statistically compare test items taken by two different groups of subjects on two different tests. Similarly, for the one instance where nurses' appear to assess the patients' expectations exactly as the patients' rate them (Concern and Caring by Nurses), without a statistical test to compare them, it is not possible to validly draw such a conclusion. The Concordance Correlation Coefficient was used to compare the questionnaires completed by different subjects. Using the CCC, though, necessitates averaging the items, rather than comparing individual items, so some data are lost in the process.

Analysis of the Supplementary Qualitative Data

Certain qualitative data were collected on the initial patients in the study in order to enhance the interpretation of the quantitative data from the questionnaires. As described in the Procedure section of Chapter 4, the data were transcribed and reviewed using a using manifest content analysis (Morse & Field, 1995) to search for "themes or recurring regularities" (Polit & Hungler, 1997, p. 386). The researcher had reviewed data from the initial 20 patient interviews. Once themes were found and patterns among the themes had been observed, Dr. Judith Hupcey was consulted to provide a confirming analysis (personal communication, 2010). The researcher and Dr. Hupcey reviewed the initial qualitative data, examined the themes that had been identified and agreed that the method for analyzing the data was correct. The researcher continued collecting and reviewing the data until saturation and informational redundancy was achieved, indicating that further qualitative data were not necessary.

Boswell and Cannon (2007, p. 173) described the importance of the concept of the "adequacy of data," when enough data has been collected to allow the data to be understood, for themes to emerge, and for the researcher to have confidence that themes have not been missed.

Once data reaches saturation, the probability of new themes emerging from additional data collection drops and redundancy occurs. This occurred after 57 patients had been interviewed. The 57 patients produced over 50 pages of transcripts.

The supplementary qualitative component in this study included the following four questions:

1. Please provide us with some specific comments about the nursing care you received from your nurse, especially anything that stands out for you, either positively or negatively.
2. Overall, were you satisfied with the nursing care you received from your nurse? Why or why not?
3. Did you receive the kind of nursing care you expected from your nurse?
4. If your expectations were not met, please describe in your own words, why not?

The categories, or themes, that emerged from reviewing the responses were consistent with the four themes identified in the literature and those found in the questionnaires: responsiveness, interpersonal, technical, and communication. Table 4.14 below outlines the four themes and gives numerous examples from the responses of the 57 patients to the four questions.

Responsiveness

The four open-ended questions about nursing care elicited responses like the following: “very helpful,” “went out of their way,” “they came right away,” “They came when I called them,” “went above and beyond,” “Her care, attention was just phenomenal and made me really, really feel at home and kind of special; I felt very, very comfortable,” “got me what I needed,” and “here whenever I needed anything.” Responsiveness seems to be a descriptor that captures the essence of the replies.

Seven of the questionnaire items seemed related to the theme of responsiveness. They were 3 (Ease of getting care), 8 (Attention of nurses to your condition), 10 (Consideration of your needs), 11 (The daily routine of the nurses), 13 (Nursing staff response to your calls), 16 (Restful atmosphere provided by nurses) and 19 (Coordination of care after discharge).

Several of the comments seemed very closely related to question #13 (Nursing staff response to your calls), including, “It just seemed like when I pushed my button that I needed something or had a question, they were there as soon as possible,” “They were always on top of everything, if you needed anything they were always there, if you pushed the call button they had someone here in less than a minute,” and “They came whenever I rang the bell, if I had a concern or if I needed something they would take care of it pretty much right away.”

Interpersonal

Many of the qualitative patients described the nurses as personal, “friendly,” very thoughtful, showing compassion, considerate, respectful, having a sense of humor, professional, and being kind (“they were good to me”). While they were describing the nurses, they were also speaking about the quality of the interpersonal interactions. Many of the interview responses had an clearly interpersonal theme, such as “they all seemed like they all had a genuine concern for people and helping people,” “they are very caring, you really can’t teach that in a book, that has to come naturally, the caring part,” and “I felt like I had my own personal nurse.”

Six items on the questionnaires seemed to pertain to the interpersonal theme. They include items 6 (Involving family or friends in your care), 7 (Concern and caring by nurses), 9 (Recognition of your opinions), 12 (Helpfulness) and 17 (Privacy).

Technical

Most often the patients' comments related to the technical theme focused on the nurses' "IV skills", but additional comments addressed their level of knowledge, e.g., "you know that they pretty much know what they are doing," "technically competent," and very professional and confident.

On the questionnaires, the technical theme is touched upon in a total of four items: 1 (Information you will receive), 2 (Instructions), 14 (Skill and competence of nurses) and 18 (Discharge instructions).

Communication

In their qualitative responses to the interview, patients made comments related to the kind and quality of communication that they experienced while hospitalized. Several patients described the communication as "She was very informative; I asked a few questions about what would happen the next day and she knew the answers," and "They would sit and talk." Another patient stated, "...the nurses not only [would] give you some pills, they explained each and every one of them – what it's for." One commented, "If they didn't have the answers and they had to go check with doctors – if it would take some time – they would come back in a reasonable amount of time to let me know they were still waiting to hear back from the doctor..." Many of the comments regarding communication with nurses were related to issues between nurses and physicians, such as "Doctors were in and out like a shot. They didn't tell anybody anything. There's little communication between the doctors and the nurses."

The communication theme was identifiable in six of the questionnaire items: 1 (Information you will receive), 2 (Instructions), 3 (Ease of getting information), 4 (Information given by nurses), 5 (Informing friends or family) and 15 (Coordination of care).

Morse and Field (1995, p. 177) pointed out “One of the most difficult tasks in writing qualitative results... is... ‘remaining true to your data’ and to include the negative, uncomplimentary, *critical* things from your data”. There were patients who did have negative things to say in response to the open-ended questions. Overall, the vast majority of the qualitative comments from patient interviews were positive. Only 8 patients shared any negative comments, however even those patients had other things to say, some of which were positive. In fact, even for those 8 patients, there were more neutral and positive comments than negative comments.

Importantly, the negative comments related to these four themes (i.e., the negative comments were related to responsiveness, interpersonal, technical, and communication) and included things such as “Doctors were in and out like a shot. They didn’t tell anybody anything,” “There’s little communication between the doctors and the nurses,” “[...awful] noise levels at night,” one nurse was very negative, staff were too busy, “There’s not enough help,” “It would have been nice to have the call light answered immediately,” poor staffing, “I had a different nurse every shift,” response to pain “Care was not what they expected compared to other hospitalizations,” poor [IV] technique, and “They don’t wash their hands properly.”

Table 4.14 *Themes and Examples of Responses to the Qualitative Questions Sorted by Themes*

Responsiveness
<ul style="list-style-type: none"> • attentive • prompt • “they came when I called them” • went above and beyond • “her care, attention was just phenomenal made me really, really feel at home and kind of special, “got me what I needed” • “here whenever I needed anything” • “they went out of their way”
Interpersonal
<ul style="list-style-type: none"> • friendly • personal • compassionate • considerate • respectful • professional • kind • having a sense of humor • positive attitude
Technical
<ul style="list-style-type: none"> • having great “IV skills,” • “pretty much know what they are doing,” • references to nurses’ confidence
Communication
<ul style="list-style-type: none"> • “Explained everything they were doing.” • issues between nurses and doctors • “a little communication problem between the doctors and the nurses” <p style="text-align: center;">1.</p>

One of the qualitative questions asked, “Overall, were you satisfied with the nursing care you received from your nurse? Why or why not?” Patients’ responses to this qualitative question were overwhelmingly positive along the lines of “The nursing care here was excellent,” “It was

everything I would have hoped for,” “It was better than I expected,” exceeded my expectations,” “I had high expectations coming in and they certainly met them,” and “I was really overwhelmed with the nursing care.”

The first 57 patients (31% of the patient sample) supplied sufficient information regarding the patients’ experience of their nursing care in their own words to achieve the desired outcome and confirm that the items on the questionnaires were getting at the issues that were important to the patients.

Summary

This chapter presented the study’s findings. The research sample was described and descriptive statistics related to the sample background data were provided. The findings related to each of the three research questions were then provided. Finally, the chapter gave an analysis of the supplementary quantitative data.

A total of 369 patients were asked to participate in the study to gather data on their expectations for their nursing care upon entering the hospital and their satisfaction with nursing care when they were leaving. Of that total, 70%, or 258 patients, agreed to participate. Of those that agreed to participate, 184 patients actually completed the PENCQQ, PSNCQQ, and the Patient Background Questionnaire. The first 57 patients also answered four qualitative questions. Nurses who worked with the patients were asked to complete NAPEQs on all 184 patients. Nurses completed only 109 NAPEQs so the study used a convenience sample consisting of 109 patient-nurse dyads. Some of the nurses worked with more than one patient in the study so they completed a NAPEQ on the different patients they cared for.

Demographic data on both patients and nurses were derived from analyzing the responses to the Patient Background Information Questionnaire (Appendix F) and the Nurse

Background Information Questionnaire (Appendix G). Some background questionnaire items were common to both subject samples and some were unique. The common items allowed for direct comparisons between the patients and nurses using either a chi-square test or a two-sample t-test. Other items on the background questionnaire were unique to either the patients or the nurses and therefore the two samples could not be compared on these items. The answers to these items were simply compared visually in terms of either frequency distributions or means and standard deviations.

The chapter presented the results for the three research questions. Using the CCC to analyze the data related to each question, the results showed a moderate relationship between patients' expectations and patient satisfaction for the first research question (Can a patient's expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?). The results failed to show any significant relationship for either the second research question (After having worked with a patient, are nurses able to assess what the patient's expectations for nursing care were at the time of admission?) or the third (Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge?).

The analysis of the supplementary qualitative component of the study was based on data from the first 57 patients and showed that the categories, or themes, that emerged from reviewing their responses were consistent with the four themes identified in the literature and those found in the questionnaires. The study's qualitative component provided sufficient information regarding the patients' experience of their nursing care to achieve the desired outcome and confirm that the items on the questionnaires were getting at the patients' most important concerns.

Chapter 5

DISCUSSION

This chapter examines the study's findings and considers how they relate to the results of other pertinent studies on patient satisfaction with nursing care. It examines patient- and nurse-sample characteristics, the subjects' responses to the three quantitative questionnaires and one qualitative questionnaire, and the findings related to the three research questions. The study found no relationship between nurses' assessments of patients' expectations and actual patients' expectations, or between nurses' assessments of patients' expectations and patients' satisfaction. There was, however, a moderate relationship between patients' expectations and satisfaction. This chapter discusses these results, explores the research implications, and describes the study's limitations.

Summary of the Study

The aim of this study was to advance the understanding of patient satisfaction, and specifically patient satisfaction with nursing care, by examining three variables: (1) patients' expectations of their care as they begin their hospitalization, (2) nurses' assessment of their patients' expectations, and (3) patients' satisfaction with their nursing care at the end of their hospitalization. Specifically, it sought to answer the following research questions:

1. Can a patient's expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged?
2. After having worked with a patient, are nurses able to assess what the patient's expectations for nursing care were at the time of admission?
3. Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge?

This study utilized an innovative way to measure patients' expectations with nursing care. It did this by making slight modifications to an established instrument that measures patients' satisfaction with nursing care. It also developed a tool for use with nurses to try to determine if they can reliably assess the expectations of their own patients.

Sample Characteristics

This research studied 109 pairs of patients and nurses. Certain background information was collected on both samples (i.e., both patients and nurses) and these items provided information that described each sample and indicated ways the two samples were similar or different. Other background information was collected only on one or the other sample and those items provide details of the patients or nurses without comparing the two.

The nurse sample, with 6.5% males, was almost identical to the population of nurse professionals nationwide, which was comprised of 6.6% males in 2008 (U.S. Department of Health and Human Services, Health Resources and Services Administration, 2010, p. 13).

In the study sample, 48% of the nurses had a baccalaureate degree or higher. Nationwide, "half of the RN population had a baccalaureate of higher degree in nursing or a nursing-related field" (United States Department of Health and Human Services, 2010, p. 5).

Among the nurses in the study sample, 97.8% are Caucasian and 2.5% listed themselves as "Other." While the nursing population nationwide is predominantly white and female, the national RN population is gradually becoming more diverse. The largest non-white group of nurses in the U. S. is comprised of Non-Hispanic Asians (5.5%). Black African Americans make up 5.4% of the population (United States Department of Health and Human Services, 2010, p. 11).

Almost two-thirds of the patients were married; slightly less than half (48%) of the nurses were married. This is probably partly a result of the nurses being younger overall than the patient sample ($p < 0.03$).

The mean age of the patients was 51.7 years whereas the mean of the nurses was only 40.3 years. While it is a statistically significant difference, the difference in the average ages of the two samples is slightly over ten years. The average age of all licensed nurses nationwide is 47.0 years (United States Department of Health and Human Services, 2010, p. 8), almost 7 years older than the nurses at the study hospital site. The younger age of nurses at the study site hospital may be in part due to the fact that the study site hospital is an academic medical center affiliated with a school of nursing.

The typical nurse in this study has worked as a nurse for 15 years, has been at the study hospital for over half of that time and has worked in her current unit for 6.5 years.

Discussion

Research Question 1 – Patient Expectations and Patient Satisfaction

Can a patient's expectations for nursing care at the time of admission predict his or her satisfaction with nursing care when being discharged? This study, using the concordance correlation coefficient, demonstrated a moderate level of agreement between the patients' expectations for their nursing care as measured by the PENCQQ and their satisfaction with their care as measured by the PSNCQQ (see Table 4.7 and also scatterplot in Figure 4. 1).

For the first research question, it is important to understand exactly what the moderate correlation means. To do this, it is helpful to break the scatterplot of the correlation between expectations and satisfaction into four quadrants, as in Figure 5.1. If the CCC were extremely significant (p approaching 1.0) then a clear and simple relationship would exist. The higher a

patient's expectations for their care, the higher would be their satisfaction. The lower a patient's expectations, the lower their eventual satisfaction. All of the data points, which represent individual patients' scores on the two questionnaires, would fall on or close to the diagonal line that represents a perfect correlation. In this "perfect" case all of the subjects' data points would fall in the lower left quadrant (high expectations and high satisfaction) or the upper right quadrant (low expectations and low satisfaction). The reality of patient expectations and satisfaction with nursing care will never be that simple, of course.

In the current study, some patients entered the study hospital with low expectations and left feeling quite satisfied – perhaps the ideal outcome because the “customer” left not only feeling satisfied with the care they received but also felt pleasantly surprised. These are the 9 subjects found in the upper-left quadrant, or the Low Expectations and High Satisfaction Quadrant. Nurses know some patients will enter the hospital with low expectations and they want to change those expectations over the course of the patients' hospitalization. Thus, these “outliers” on the scatterplot are highly desirable. However, they will always depress the correlation between expectations and satisfaction. This point, about the “undesirability” of a strong correlation between patients' expectations for nursing care and their satisfaction, has not been appreciated well in the earlier writing on this subject (Kovner, 1989; Swan, et al., 1985; Wagner & Bear, 2009).

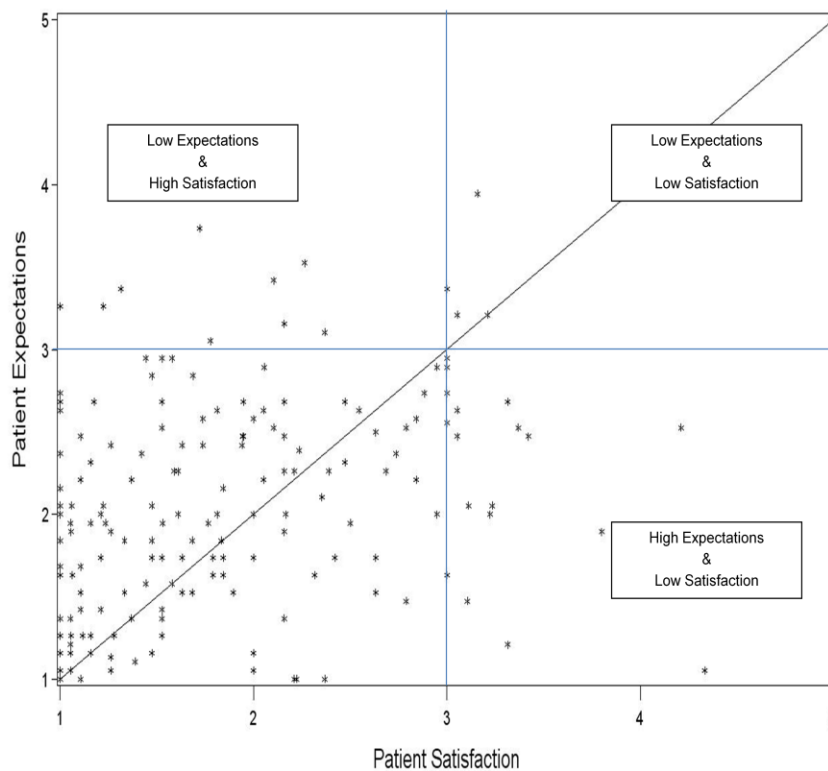


Figure 5.1. Scatterplot of Patient Expectations (PENCQQ) and Patient Satisfaction (PSNCQQ) Showing the Four Quadrants

Other patients in this study hospital entered with low expectations and appeared to depart with those expectations reinforced. These subjects are the 3 in the Low Expectation and Low Satisfaction Quadrant in the table (upper-right). Patients who fall in this quadrant along the diagonal line signifying a p-value of 1.0 help produce a high correlation but are not ideal patients. While expectations are met in these patients, no hospital hopes to have people be admitted with low expectations for nursing care and leave having those expectations met!

Of the 184 patients in this study, 13 entered the hospital with high expectations for their nursing care and left feeling less satisfied. These subjects can be found in the High Expectation

and Low Satisfaction Quadrant in the table. These subjects lowered the correlation and are definitely undesirable from the hospital's point of view.

The vast majority of the current patients fall into the lower-left quadrant because they entered the hospital with fairly high expectations and left feeling highly satisfied. The number of subjects in this category is 153 (83%). This number excludes all of those in the other three quadrants as well as the 6 subjects who fell exactly on the "Good" mid-point of the five-point Likert Scale (the vertical mid-line in the table). The study found a moderate correlation between patient expectations and satisfaction so we know many of these subjects fell reasonably close to the diagonal line in the scatterplot. Nonetheless, many lie a distance from the line and do not enhance the correlation. Some of these are still desirable in terms of outcomes, e.g., those in the upper left corner of the quadrant who came in with moderate expectations and left with high satisfaction. It is this closer inspection of the correlation between patients' expectations and satisfaction that is critical to understanding the statistical results.

The concordance correlation coefficients for the questionnaires are based on the *average* of each subject's 19 responses to the questionnaire items, not the scores on the individual items themselves. As described in Chapter 4, the Cohen kappa was performed because it allows for a comparison between the two different questionnaires based on each subject's responses to the 19 items of the questionnaires and in addition, the 4 overall items. Regarding the first research question and the PENCQQ and the PSNCQQ questionnaires and 4 overall items, the Cohen kappa results (Table 4.8) showed that not only were the overall scores on the two questionnaires related, but all of the specific items were also correlated, if weakly (i.e., between 0.1 and 0.3), as well. The test was run to add confirmation to the CCC findings and they did, in fact, do that.

Two items, “Current health status” and “Recommend this hospital” had coefficients that were moderately correlated (between 0.3 and 0.7).

Research Question 2 – Patient Expectations and Nurse Assessment

After having worked with a patient, are nurses able to assess what the patient’s expectations for nursing care were at the time of admission? This study’s findings did not demonstrate agreement between the patients’ expectations for their nursing care as measured by the PENCQQ and nurse assessments’ of patient expectations (NAPEQ) (see Table 4.9 and also scatterplot in Figure 4. 2). This means that the nurses’ assessments of patients’ expectations and the patients’ reports of their own expectations did not correlate.

The lack of a correlation was evidence that the nurses were unable to accurately assess their patients’ expectations in this research study. It does not prove, however, that nurses cannot accurately assess patients’ expectations. The present results could have been a result of a flaw in the study design or the procedures, for example. Other factors that could explain the lack of a correlation between patients’ expectations and nurses’ assessments of those expectations will be discussed further in the discussions below of both the study’s limitations and how the results relate to the theoretical framework for the study.

The findings regarding the second research question also relate to previous studies on patient-nurse congruence which suggests that patients will be more satisfied if there is agreement between patient expectations and nurses’ understanding of patient expectations (Mahon, 2001; A. Parasuraman, et al., 1985; A. Parasuraman, et al., 1988; A. Parasuraman, Zeithaml, & Berry, 1991; Zeithaml, Parasuraman, & Berry, 1990). Previous research regarding congruence has focused on patients and nurses agreeing on their respective assessments of the *ideal* nursing care,

not the nurses' and patients' actual expectations about the specific care they are about to give and receive during a specific hospital episode.

Similar to the first research question, the second research question used the Cohen kappa to dig deeper into the questionnaire results and investigate the level of agreement between each of the 19 items on the questionnaires (in this case, the PENCQQ and the NAPEQ) and the four overall questions. In this case, while the CCCs, which used averages of the scores of the 19 items, showed no agreement or relationship between the PENCQQ and the NAPEQ, the Cohen kappa did show a relationship between 11 items. The significance of the relationships was very weak, however, with kappa coefficients between 0.1 and 0.21. For example, "Information" had a coefficient of 0.11; "Ease of getting information" and "Privacy" had coefficients of 0.19). It is possible to find a low level of significance in the agreement between some of the items on one test and the same items on a different test (the PENCQQ and the NAPEQ) and not find agreement when the scores are averaged and compared overall (V. Chinchilli, personal communication, May, 2010). This was the case in these findings.

Research Question 3 – Patient Satisfaction and Nurse Assessment

Is a nurse's assessment of the patient's expectations for nursing care a predictor of that patient's satisfaction with nursing care following discharge?

This study's findings did not demonstrate agreement between the patients' satisfaction for their nursing care as measured by the PSNCQQ and nurse assessments' of patient expectations (NAPEQ) (see Table 4.11 and also scatterplot in Figure 4. 3). This means that the nurses' assessments of patients' expectations and the patients' reports of their satisfaction did not correlate. There was no agreement between these two variables.

This research question addresses a gap in the literature that has not been investigated before. Previous research suggests that if nurses are aware of what patients expect then patient satisfaction with nursing care will be greater (Kovner, 1989; P. A. Larson, 1987; Lynn & McMillen, 1999). The design of this study added a different variable, i.e., nurses' assessments of patients' expectations of actual care about to be delivered, not care that might be delivered at the ideal hospital. As important as patients' expectations and perceptions of their care are, little is known about how aware nurses are of their patients' expectations regarding the care they will receive and if it makes a difference to patients' perceptions of their care if nurses are aware of their expectations. The rationale behind the need for this component was the following: If patients' expectations influence their satisfaction, it would be helpful to know if nurses are able to assess their patients' expectations. If nurses are able to accurately assess patients' expectations for their care, for example, they might be able to influence or shape those expectations. Care that identifies, educates, and helps patients develop realistic, positive expectations of nursing care may influence patients' perception of care resulting in genuinely greater patient satisfaction.

Using Cohen's kappa in order to further investigate the third research question by examining agreement between individual items on the PSNCQQ and the NAPEQ did not produce any noteworthy results. Three items on the two questionnaires were only weakly correlated ("Informing family or friends," "Concern and caring by nurses" and "Recommend this hospital"), with kappa values between 0.1 and 0.15.

The Supplementary Qualitative Questions

Because the study involved the development of two new assessment tools, the research design utilized a mixed-method research strategy that included a qualitative portion. The qualitative supplementary component made it possible to obtain information regarding the

patients' experience of their nursing care in their own words. By collecting subjective data, analyzing it in a holistic manner using content analysis (Morse & Field, 1995) for "recurring regularities" (Polit & Hungler, 1997, p. 386) in themes, or categories, and then comparing those themes with the themes found in the research questionnaires, it was possible to conclude in a qualitative, non-statistical way that the questionnaires appear to be gathering what they purport to gather.

The themes that are found in the literature and in tests of patient satisfaction with nursing care include responsiveness, interpersonal, technical, and communication. Part of the objective of the study's qualitative strategy was to ensure that all of the themes that would emerge from the subjective responses of the patients to the open-ended questions of the interview could be identified in the 19 items of the questionnaires (especially the two questionnaires – the PENCQQ and the NAPEQ – that were developed for this study from Laschinger's PSNCQQ [Laschinger, et. al., 2005]). If themes were found in the patients' interview responses that were not covered by the questionnaire items, then we might conclude that the questionnaires were not sufficiently robust to capture all of the concerns patients with respect to their nursing care. The researcher examined the 19 items on the questionnaires to see if they appear to be associated linguistically, or contextually, with the four themes.

Responsiveness

Promptness in responding to a patient's need or call has recently been identified as a new dimension (separate from the interpersonal dimension) of patient satisfaction with nursing care (Kee et al., 2005; Liu & Wang, 2007; Wagner & Bear, 2009; Yellen, 2003a). Many of the study patients' responses in the interviews related to how prompt the nurses were to their needs or requests. (See Table 4.13 in Chapter 4.) Responsiveness to pain has been suggested as a possible

subset of responsiveness in general (Kee, et al., 2005), however, only a few patients in this study mentioned the management of their pain relief. The questionnaire items pertaining to the responsiveness theme include items 3 (*Ease of getting care*), 8 (*Attention of nurses to your condition*), 10 (*Consideration of your needs*), 11 (*The daily routine of the nurses*), 13 (*Nursing staff response to your calls*), 16 (*Restful atmosphere provided by nurses*) and 19 (*Coordination of care after discharge*).

Interpersonal

There is satisfaction with care when patients perceive their care to be individualized, personal, friendly, meeting their needs and focused on them (Ahmad & Alasad, 2004; Dozier, et al., 2001; Elder, et al., 2004; Eriksson & Svedlund, 2007; Gonzalez-Valentin, et al., 2005; Johansson, et al., 2002; Liu & Wang, 2007; Martin, et al., 1998; O'Connell, et al., 1999; Schmidt, 2003; Sitzia & Wood, 1999; Wagner & Bear, 2009; Zimlichman et al., 2003). In addition patients also seem to indicate satisfaction when describing nurses as caring, respectful, helpful, supportive and empathetic (Larrabee, et al., 2004; Liu & Wang, 2007; Martin, et al., 1998; Sitzia & Wood, 1999; Wagner & Bear, 2009; Wolf, et al., 1998). The patients in the study offered comments about the nurses that were consistent with those identified in the literature. These behaviors strongly correlate with patient satisfaction with nursing care (Elder, et al., 2004; Gonzalez-Valentin, et al., 2005; Larrabee, et al., 2004; Lynn, et al., 2007; Wagner & Bear, 2009). The questionnaire items pertaining to the interpersonal theme include items 6 (*Involving family or friends in your care*), 7 (*Concern and caring by nurses*), 9 (*Recognition of your opinions*), 12 (*Helpfulness*) and 17 (*Privacy*).

Technical

Technical competencies are referred to by patients as the nurses' skills and knowledge provided when caring for patients. Some patients perceive nurses as 'expert technicians' (Merkouris, Papathanassoglou, & Lemonidou, 2004; Mrayyan, 2006). Patients report satisfaction with nurses who are knowledgeable about tests, procedures, medications and clinical information (Liu & Wang, 2007; Martin, et al., 1998; Merkouris, et al., 2004; Mrayyan, 2006; Sitzia & Wood, 1999; Wagner & Bear, 2009). Several patients in the study commented about nurses they perceived as knowledgeable about their tests and procedures. There were also comments about difficulty and inserting IV's. The questionnaire items pertaining to technical theme include items 1 (*Information you will receive*), 2 (*Instructions*), 14 (*Skill and competence of nurses*) and 18 (*Discharge instructions*).

Communication

Several patients in the study commented about nurses taking time to talk with them and listen. This correlates with the literature regarding the importance of communication and satisfaction with nursing care. Ervin (2006, p. 129) wrote, "Because the results of numerous studies, both about patient satisfaction and other topics, indicate that providing information is very important among the factors related to satisfaction, enhancements of communication processes would pay off in terms of keeping patient satisfaction at a high level." Allowing patients time to talk and really listen to them characterize patient satisfaction with nursing care (Merkouris, et al., 2004). In addition, patients value information about their care, explanations about tests and procedures and overall condition (Ahmad & Alasad, 2004; Aiello, et al., 2003; Eriksson & Svedlund, 2007; O'Connell, et al., 1999; Schmidt, 2003; Sitzia & Wood, 1999; Wagner & Bear, 2009; Yellen, 2003a). The questionnaire items pertaining to the communication

theme include items 1 (*Information you will receive*), 2 (*Instructions*), 3 (*Ease of getting information*), 4 (*Information given by nurses*), 5 (*Informing friends or family*) and 15 (*Coordination of care*). Sixteen of the questionnaire items seem to fit with one of the four themes; three of the items – 1 (*Information you will receive*), 2 (*Instructions*) and 3 (*Ease of getting information*) – seemed to fit into two themes. The responsiveness theme had the most items related to it, i.e., 7 items; communication had 6; Interpersonal had 5 and technical had 4 items associated with it.

When the responses from 57 patients were transcribed, reviewed and analyzed for recurring themes, it was determined that the test of the “adequacy of the data” had been achieved (Boswell & Cannon, 2007, p. 173). At that point, it was observed that the same themes emerged from the data as are contained in the questionnaire items. Most importantly, patients’ qualitative responses did not appear to contain themes that were not included in the questionnaires. For this reason, the researcher concluded that qualitative data did support the assumption that the questionnaires were assessing qualities important to patient satisfaction with nursing care.

One of the reasons for gathering qualitative data in this study was to see if the qualitative findings would be consistent with and confirm the quantitative findings. One of the main observations from the qualitative data is the overwhelmingly positive reports of the patients’ experiences. It is clear from the quantitative data as well that the patients’ responses are very positive. This can be seen most easily when examining the data (Figure 4.1) that depicts patients’ scores on the PENCQQ and the PSNCQQ questionnaires using a scatterplot. It illustrated that 88% of patients were in the 1 – 3 range (excellent and very good) on the PENCQQ and 85% of patients were in the 1 – 3 range (excellent and very good) on the PSNCQQ. Thus, the qualitative

comments were consistent with the quantitative results and both types of data support the same conclusion about the patients' experiences.

Theoretical Framework

The source of the theoretical underpinnings of this study was King's Theory of Goal Attainment (TGA) (King, 1981, 1997). That theoretical framework evolved from King's general systems framework, holism, and the social and behavioral sciences. It is applicable and appropriate to the concept of patient satisfaction because it focuses on patient-nurse interactions. It views patient-nurse interactions as a series of functional components connected by communication links that exhibit purposeful, goal-directed behavior (King, 1997).

Social psychologists have demonstrated repeatedly that people's first impressions shape their attitudes toward others and their expectations about how people will act. Both parties in dyadic interactions are simultaneously forming expectations of the other person and processing data that might shed light on the other person's expectations of them.

Transactions between nurses and patients operate the same way according to King. Nurse-patient transactions lead to patients attaining their goal – satisfaction – depending on the nature of those transactions. Expectations, communication, and the interactions that occur between nurses and patients all help determine the outcome variable, patient satisfaction. In her theorizing, King emphasized that professionals have a responsibility to assess data about the perceptions of patients so that both providers' and patients' goals are congruent (King, 1992). This study expands on the concept of expectations and asks if it is important for providers to assess the expectations of patients. This would put providers in a better position to align their shared goals related to the patient's experience and satisfaction. The second research question asks specifically if nurses, after having worked with a patient, are able to ascertain what their

patients' expectations for nursing care were. The question is an important one because to the degree that nurses are able to assess their patients' expectations and then coordinate their care to meet the unique needs of the patients, they should be able to have a direct impact on both patient outcomes and patient satisfaction.

The theory would suggest, then, that the patient-nurse relationship would be enhanced by the nurses' understanding of patients' expectations. The relationship could be further enhanced by the nurses being able to talk about these expectations with patients. A relationship between patients' expectations as measured by the PENCQQ, and nurses' assessments of their patients' expectations as measured by the NAPEQ, was not demonstrated in the answer to the second research question. Not finding a correlation, or agreement, on the second research question, while perhaps disappointing, does not necessarily mean the theory is flawed or that it needs to be changed. It could be related to a flaw in the study design, the procedures, how the procedures were executed, or the specific questionnaires. For example, more time with patients may be required in order for nurses to adequately understand patients' expectations. To better understand the nurses' experience, the researcher had the RA go back and informally interview some of the nurses after the study ended. She reported hearing from some of the nurses that they did not really feel they knew the patients well enough to assess their expectations. Others said they felt like they were guessing about what the patients' expectations were. This may have been a result of not knowing the patients long enough. It may also be that it is too difficult a task to ascertain patients' expectations. Alternatively, it may be that some nurses can do it naturally and others cannot. This may require future investigation.

TGA was applied to patient satisfaction with nursing care based on patient-nurse interactions and is very helpful from a nursing perspective. It provides a framework for nurses to

analyze the uniqueness of the nurse-patient interaction, the nurse-patient relationship, and the outcome, patient satisfaction. Patients approach their relationships with nurses with expectations about the care they are about to receive. Research has shown that they choose their hospitals partially based on those expectations. Once inside the hospital, they begin honing their expectations based on their new perceptions. When admitted to a particular unit, they continue gathering perceptions and modifying their expectations and judgments. This process continues when they meet the nurse who will primarily care for them. Some of this occurs consciously, some of it unconsciously.

Nurses have beliefs about the expectations patients have regarding how they will be cared for. Before meeting a particular patient, those beliefs about patients' expectations are generalizations based on countless experiences with past patients and all they have learned about patient behavior and psychology. Upon meeting a new patient, nurses begin shaping and modifying those beliefs about the particular patient's expectations. They conduct their initial assessment and begin factoring in information such as the person's age, nationality, religion, appearance, and demeanor. As they communicate and interact with the patient, they gather more information and perceptions, all of which has the potential to modify the nurse's beliefs, expectations and judgments about that specific patient's expectations regarding his or her care. Importantly for this study and using this model, nurses' awareness of patients' expectations may have an influence on the outcome, patient satisfaction. This happens according to the model's feedback loop (see Figure 1.3).

Consistent with Mahon's (1996) work, recent literature continues to point out the importance of the interpersonal aspects of nursing care, or nurse-patient interactions, as important attributes of patient satisfaction with nursing care (Ahmad & Alasad, 2004; Aragon,

2003; Dozier, et al., 2001; Elder, et al., 2004; Eriksson & Svedlund, 2007; Gonzalez-Valentin, et al., 2005; Johansson, et al., 2002; Liu & Wang, 2007; Martin, et al., 1998; O'Connell, et al., 1999; Schmidt, 2003; Sitzia & Wood, 1999; Wagner & Bear, 2009; Zimlichman, et al., 2003). The way King's model was adapted supports this idea of the importance of the interpersonal aspects of nursing care and helps explain the critical role of patients' expectations and nurses' assessment of those expectations.

Expectations of Nursing Care

A significant outcome of this study was to develop a measure that allows patients to rate their expectations for nursing care and another measure was developed that allows nurses to give their assessment of patients' expectations. By doing so, this study takes a step toward a different understanding of a critically important concept in the study of patient satisfaction. That concept is patient expectations. Prior to this study, researchers have relied on a research definition of patient expectations that is not really about patients' expectations for the care they are about to receive. It was a definition that was dependent on the way the SERVQUAL instrument defined patients' expectations, namely, "...think about the kind of hospital that *would deliver excellent quality of care*" (Mahon, 2001) (Appendix D, emphasis added). This instrument, which has been the standard for measuring patients' expectations, was not actually attempting to measure the level of care that patients anticipated receiving. Immediately after completing the SERVQUAL patient expectation questionnaire, if patients were to be asked if their answers represented the care they expected to receive in the days ahead, they would likely have replied, "No, I answered the what I think is *ideal*, not what I think I am about to receive."

In contrast, the PENCQQ that was developed for this study clearly asks patients to respond with their expectations for the nursing care they are actually about to receive from real –

not idealized – nurses. It states in the instructions (emphasis is in the instructions): “Please describe the expectations you have for the nursing care you will receive during your hospital stay. By ‘expectations’ we mean the care YOU THINK YOU WILL RECEIVE; we do NOT mean the care YOU IDEALLY WOULD LIKE.” The researcher believed it was necessary to steer patients away from any tendency to shift to the ideal when being asked about their expectations in order to ensure that patients kept their mindset on their present reality, i.e., the nurses they were about to meet in the hospital they had just walked into.

Similarly, this study redefined the concept of measuring expectancy congruency and what it means to have nurses provide their assessment of patients’ expectations. The concept of expectancy congruency had been defined as follows: “Expectancy congruency is the degree of similarity between patient and nurse expectations of the anticipated care situation and care required” (Mahon, 2001, p. 4). Again, expectancy congruency in the patient-nurse dyad has traditionally been measured with the SERVQUAL expectation scale (Mahon, 2001; A. Parasuraman, et al., 1985; A. Parasuraman, et al., 1988, 1991; Zeithaml, et al., 1990). Typical instructions for nurses were the following: “Upon admission of a patient to whom you have been assigned, you will be asked to complete a questionnaire asking about your expectations of care you are about to render” (Mahon, 2001, p. 167). There are three problems with operationalizing nurses’ expectations that way. First, even though nurses were asked to complete the questionnaire when they were assigned to a particular patient, the nurse’s responses had nothing to do with that particular patient. The nurse knew virtually nothing about the particular patient. They had not spent any time with the patient. Second, their responses to the questionnaire were not about patients’ expectations; they were about the nurses’ expectations. The instructions asked nurses to rate their expectations of the care they were “about to render” (Mahon, 2001, p.

167). Third, nurses were not responding with information about themselves; they were describing the situation in the “kind of hospital that would deliver excellent quality of care.” Thus, similar to measuring patients’ expectations with the SERVQUAL, the nurses’ expectations were not expectations at all but rather what an ideal hospital would offer.

To address this conceptual shortcoming, the researcher developed a variation of the patient expectation questionnaire for nurses so each nurse could provide her or his assessment of a particular patient’s expectations. Again, the instructions were written to help the nurses understand that they were to report on patient’s actual expectations (emphasis is in the instructions):

Please rate your assessment of this patient’s expectations for nursing care when he or she was admitted to the hospital in terms of whether you think it was Excellent, Very Good, Good, Fair or Poor. Rate the items in terms of what you think were the patient’s expectations when he or she was admitted, NOT his or her evaluation at the end of the hospitalization.

While more research is clearly needed on both of these new measures, the PENCQQ holds promise for being a conceptual improvement over previous methods of assessing patients’ expectations. While patient satisfaction has been defined in terms of patient expectations for a long time (Carr-Hill, 1992; P. D. Cleary & McNeil, 1988; Mrayyan, 2006), now researchers can look at patients’ expectations, nurses’ assessments of patients’ expectations, and patient-nurse congruency in a new light.

Even though patients’ expectations and nurses’ appreciation of those expectations may seem like fine details in the large picture, the fine details have become increasingly important in this age of razor-thin health care budgets and unprecedented competition for patients.

Understanding the factors that influence patient satisfaction has become a major focus in the health care industry. Hospitals today feel great pressure not only to measure patient satisfaction but to positively influence it.

Of the studies that have examined patient satisfaction, only a small percentage has examined patient satisfaction specifically with nursing care. The work done by Laschinger (Laschinger, et al., 2003; Laschinger, et al., 2005) is largely responsible for addressing this deficiency. Laschinger and her colleagues developed an instrument that focuses exclusively on nursing behaviors. Laschinger's research, however, did not address the issue of patients' expectations with nursing care, only patient satisfaction. Of the relatively few studies that have examined patients' expectations, there are no studies that have examined patients' expectations specifically about nursing care. To study patients' expectations of nursing care, this researcher had to develop a tool to do so because no tool was found.

Limitations

Certain aspects of the current study place some restrictions and caveats on interpreting the results and the ability to generalize the findings and conclusions. Although this study expands our understanding of patient satisfaction [with nursing care], there are several limitations.

1. A clear methodological limitation was sampling bias. The patient sample was identified from a list of patients scheduled for evaluations in the Anesthesia Preoperative Evaluation Clinic 1 to 30 days prior to admission to the hospital. Using this procedure excluded several other patient groups. One group of patients excluded from the study was individuals in good health because they do not require an evaluation in the Anesthesia Preoperative Evaluation Clinic and simply arrive to the hospital the morning of their

procedure. Other groups excluded were patients admitted from the Emergency Department, patients receiving care in an Intensive Care Unit, and patients admitted to the hospital for reasons other than surgery. This study included patients having elective, non-urgent, or emergent surgical procedures. Thus, as a result of the study procedures, all of the patients were surgery patients or those having an invasive radiologic procedure.

2. Missing data may adversely affect the findings. Several patients skipped items. The RA did notice the missing elements and followed up with the patients' to complete the information. Some of the patients stated that they did not want to answer some background questionnaire items. It might have been helpful to more clearly explain to patients exactly how all of the data elements were going to be used.
3. Patient attrition was problem. Although anticipated, it resulted in some types of patients not participating in the study. Patients were identified based on their anticipated Length of Stay, but several patients were discharged earlier than expected and therefore had to be dropped (e.g., they were there only 24 hours). Some Women's Health/Gynecology patients and others who were transferred to Intensive Care Units are examples of this problem.
4. The timing of the questionnaire completion was a cause for concern. Some of the NAPEQs were not completed by the end of the nurse's shift on the same day the patient was discharged. Several nurses did complete the NAPEQ the next day after follow-up and encouragement to complete the questionnaire from the RA. Several of the nurses took more time to complete the NQPEQ because of their schedule, or they forgot. Other nurses completed the questionnaire several days after caring for the patient because they left without completing it and their next scheduled shift was two or three days later. In

addition, the RA placed additional copies of the NAPEQ in the nurse's mailbox if they had not submitted a completed one. Some nurses did not check their mailbox on a regular basis and the questionnaire went unnoticed. Delayed completion raises the question of whether or not nurses could accurately remember patients and assess patients' expectations for nursing care so many days after caring for them.

5. The sample size of 109 patient-nurse dyads was less than ideal and smaller than the targeted sample size of 200 patient-nurse dyads. However, the sample of 109 patient-nurse dyads with 184 patients was considered sufficient to provide a 95% confidence interval for a Pearson correlation coefficient and the concordance correlation coefficient (CCC).

Some of the reasons patients spontaneously offered to the RA for not participating in the study included timing (they were late for their next appointment or their ride was waiting for them), fatigue (they were tired), disinterest, not wanting to be bothered (too much paperwork), and a few said English was not their primary language. One individual initially read the questionnaire and then refused to continue because he said he did not like the questionnaire design.

A total of 184 patients completed the PENCQQ, PSNCQQ, and Patient Demographic Background Form, but nurses completed only 109 NAPEQs. If more nurses had completed their NAPEQs, the number of dyads would have increased without any need for additional patients. The response rate by the nurses might have improved if the RA had waited for the nurses to complete the NAPEQ or returned sometime during or prior to the end of the nurse's shift or possibly met with the nurses just prior to the

patients' discharge. She could have directly requested they complete the questionnaires at that time and not waited until the end of their scheduled shift.

6. Certain assumptions in the design related to the use of patient-nurse dyads may not be safe assumptions to make. The dyadic research design in this study makes an assumption regarding patients, namely that they can accurately identify the nurse that cared for them during their hospitalization. This was not always the case. Several patients reported they could not identify their nurse. They were not sure who was a nurse and who was an aide assisting with their care.

The design also assumes the nurse identified as the patient's nurse was the specific nurse the patient was thinking about when she or he completed the PSNCQQ. Patients could be asked to name the nurse they were thinking of when they completed their PSNCQQ.

7. Certain assumptions related to the dyadic design relate to the nurses. There is an assumption that the nurse member of the dyad worked with the patient for enough time during the patient's hospitalization so that the nurse had sufficient opportunity to get to know the patient well enough to make an assessment of the patient's expectations. This was not always the case either. Several nurses did not work with their patients for more than one day or they worked with the patient for one shift or less and did not spend a lot of time with the patient, making it difficult for them to complete the NAPEQ for that specific patient.
8. A final limitation was the repeated exposure of the nurse to the NAPEQ. The nurses were purposely not given a detailed description of the study at the start to try to keep them naïve with respect to the study's goals. While the study design used each patient only once, several of the nurses were used more than once. The number of times a nurse was

used ranged from 1 to 9 depending on the nurse's schedule and the availability of patients. As nurses were exposed to the NAPEQ repeatedly, they developed a familiarity with the tool which could have biased their responses. It might have been preferable to use each nurse only once (Munro, 2005) but, of course, that complicates data collection. An additional concern with using nurses repeatedly is that it could change their behavior with the patients. They know what the researcher is studying. Although nurses were told their participation would not reflect on their jobs or evaluations in any way, it is possible, especially given the nature of the questionnaire items, that nurses may have felt encouraged to be more responsive, caring, etc., thus biasing the patients' responses. While this could be a desirable outcome for the study hospital, it would be a complication for the researcher

Implications and Future Directions

In order to consistently achieve patient satisfaction, data about what a patient expects should be obtained before care is delivered, not at the end of a care episode (Ervin, 2006). Nurse-patient conversations about expectations should be focused on identifying and assessing patient's expectations for nursing care before and during the hospitalization. If we have sufficient evidence to conclude that patients' expectations do affect their eventual satisfaction, then perhaps we need to be more methodical in assessing those expectations. Assessing patients' expectations and preferences should be a major component of the nursing assessment. Rather than consciously or unconsciously assuming what patients' expectations are, nurses could screen patients with the PENCQQ. Then, if a patient scores high or low in their expectations for nursing care, the nurse could ask during the initial interview, "I understand you've been hospitalized before, could you tell me about that experience..." or, "I see you have never been hospitalized

before, could you tell me about what you're thinking this hospitalization will be like?" or the nurse could inquire about specific responses on the questionnaire. In this way, nurses can strive to understand the needs and perceptions of the patients they serve and continually improve the structure of care, process of care, and outcome of care (Ludwig-Beymer, et al., 1993).

The difference between using the summary score on the PENCQQ (the average of the 19 questionnaire items) and inspecting the individual scores is important. As with most assessment tools, if the purpose is to collect large amounts of data for research, then using summary scores may be appropriate and the loss of specific data may be acceptable. However if the purpose is to know a particular patient, critical information will be lost if a nurse attends only to a new patient's summary PENCQQ score. For example, a patient could score 3.0 overall and that score could be a result of the patient rating her expectations "Good" on all items. The patient could have produced the same overall 3.0 if she had checked "Good" on 17 items and "Excellent" on "SKILL AND COMPETENCY OF NURSES" and "Poor" on "PRIVACY." Identical overall scores would mean very different things depending on the individual item scores. One caveat, therefore, is to ensure that users of the PENCQQ understand that how the questionnaire will be used will depend on the intended purpose.

With information about patients' expectations for their care, hospital leaders should be better able to monitor patients' needs and consider designing and implementing strategies for addressing specific areas of concern for improvement and enhancing nurses' awareness of patient expectations. These findings reinforce the importance of understanding patients' expectations, patient satisfaction, and the critical role that nursing care plays in achieving patient satisfaction (Bacon & Mark, 2009).

Inquiring about patients' expectations for their nursing care could lead to a number of possible beneficial results. One could think of high or low results from the PENCQQ administered to a patient like the results of a single medical test that are outside the normal limits. For example, it could alert nurses to patients who have low expectations and they could then inquire about the source of those expectations. That could result in allaying patients' fears or correcting misunderstanding about what will happen during the hospitalization. They flag the patient for more inquiry. It could alert nurses to patients who have unrealistically high expectations. Hearing of expectations that are unlikely to be met, nurses could skillfully correct expectations that could lead to disappointment. Upon further examination, questioning, or testing, it may be concluded that the high or low reading is perfectly acceptable and no cause for concern.

Some patients who come into the hospital with low expectations will leave with high satisfaction. These patients would be those most likely to be pleasantly surprised by their hospital experience and most likely to talk positively about it and possibly most likely to recommend the hospital to friends and family. Research could focus on subjects with this profile and examine if their "Recommend" scores actually rise significantly.

It is critical that nurses and other health care providers understand what patients expect from their care and then communicate to patients and their families about those expectations. It is important to identify what patients expect of hospital nursing care before measuring their satisfaction with it. This study may help nurses, health care providers, administrators, and organizations better understand what patients think of their nursing care and services in order to make improvements to the systems and processes engaged in care. In addition, with this information, nursing administrators and managers can educate patient-care staff to the

importance of seeing care through the patients' eyes (Gerteis, et al., 1993) and heighten caregivers' sensitivity to patient satisfaction issues.

One of the major advantages of measuring patients' expectations instead of, or in addition to, measuring satisfaction is the message it sends to patients. Regardless of whether it is expectations or satisfaction, the fact that someone is asking another person to take time to respond to questions is a communication that sends a message. The type of questions being asked of the patient is nearly identical, the only difference is timing. The difference in timing – before or after the fact – makes all the difference in the world regarding the message the patient receives. When the communication goes out after the fact, as patient satisfaction surveys are, the message to the patient is that the health care providers want information *about themselves*. “We’d like to know how we did. Then, we’ll be able to improve the services we provide to others (and you if you return), and we’ll be able to use the information to tell others – about us.” When administered beforehand, the message to the patient is that the providers want information *about them*. “We’d like to know more about you. Then, we may be better able to improve the services we provide – to you during your hospitalization.” The same type of content sends a completely different message depending on the timing of the delivery.

Proponents of satisfaction surveys believe that one of the ways they create value is they give patients “the impression that the hospital cares enough to ask their opinions and suggestions for improvement” thereby generating greater loyalty (MacStravic, 2004, p. 12). Giving that impression certainly has value, but perhaps more value is created by giving patients the impression the hospital wants to improve their nursing care. MacStravic (2004, p. 15) went so far as to suggest that health care organizations, “rather than focusing just on past experiences” with patient satisfaction surveys, may serve themselves better by shifting to asking them about their

“future expectations.” That is an interesting strategy and could be useful in many different respects, from generating loyalty, as MacStravic describes, to being more ready to receive and treat a patient when they are admitted. It would become part of their medical record alongside other important information related to their future care.

Ludwig-Beymer et al. (1993, p. 50) wrote succinctly, “Patient perceptions of caring behaviors influence patient satisfaction with the care received and decisions to return to a particular institution for care.” It may be that one of the best demonstrations of caring behavior nurses can easily provide would be to ask a patient about his or her expectations, especially if they have some reason to believe there may be a cause for concern, either because their expectations are too high or too low.

A distinct advantage of employing the PENCQQ is that it is a pre-test, not a post-test like satisfaction questionnaire. It is helpful, as many researchers and theorists have maintained, to know what patients think as they are walking out the door (Gerteis, et al., 1993; Lynn, et al., 2007; MacStravic, 2004). How much better, though, to have a fast and easy way to ascertain if a patient is *likely* to have a lower satisfaction score.

These findings suggest another area of research, namely the need for nurses to have an appreciation of patients’ expectations for their care. A better understanding of patient satisfaction with nursing care could result in better patient experiences in hospitals, greater satisfaction, and improved outcomes. Investigators have claimed that patient satisfaction is not only a direct indicator of the quality of care patients receive (Aragon, 2003; Ervin, 2006; Lynn, et al., 2007; Tomlinson & Ko, 2006; Woodring et al., 2004) but also an indicator of the efficiency and effectiveness of the organizations that manage the care providers. Future research should

replicate the current study in other health care units (e.g., emergency departments, intensive care units) and other hospitals (Otani, Kurz, Burroughs, & Waterman, 2003).

Future research could try to identify nurses, by using the NAPEQ, who are exceptional at accurately assessing patients' expectations and then, through interviews, learn more about how they do this intuitively. This research could inform educators about what skills to teach other nurses. Nurses could be trained to interview patients about their expectations and heighten nurses' awareness and sensitivity to patient satisfaction issues.

A qualitative study of patients' expectations could begin by assessing patients' expectations and then interviewing subjects to try to determine how they formed their expectations.

Summary

If the likelihood of patient satisfaction is improved when nurses tailor their interactions to the unique needs of the patient, as suggested by Bear and Bowers' research (1998), then it should prove helpful to discover how well nurses assess patients' expectations. The purpose of this study was to gain a better understanding of one of the key factors influencing patient satisfaction with nursing care, i.e., patients' expectations.

Through diligent research in this area, nursing knowledge about patients' expectations and satisfaction with nursing care will grow, the discipline will continue to mature, and patient satisfaction will be increased.

Appendix A: Quantitative Studies of Patient Satisfaction
Showing Author, Purpose, Design, Sample, Instruments, and Findings and Conclusions

Author (yr)	Purpose	Design	Sample	Instruments	Findings and Conclusions
Jacox, Bausell, & Mahrenholz (1997)	To develop & test a new instrument Patient Satisfaction with Nursing Care Questionnaire based on the dimensions originally appearing in Risser's study of patient satisfaction	Instrument development	Pilot studies Randomly selected patients N=100 completed questionnaires N=200 randomly selected patients Randomly selected discharged patients from five Midwestern Hospitals N=2892; 50.2% response rate	PSNCQ tool Author-developed items 21-item instrument 19-item instrument	No difference between male & female response. Statistically significant relationship involved caring dimension of instrument $p < .001$ Caring, nursing skill & patient education are distinct dimensions of nursing care
Williams (1997)	To assess patients' perception of the extent to which holistic care was received & to assess the relationship between patients' perceptions of holistic care & satisfaction with nursing care; determine if patient variables influence perceptions	Descriptive	N=94 Random sample of medical patients > 18 yrs old able to read & write English	Demographic Data Form Holistic Caring Inventory (HCI-Latham) Pain Thermometer (PT-Johnson et al.) Patient Satisfaction Inventory (PSI-Risser, revised by Hinshaw & Atwood)	Mean age 50.5 yrs 45 men; 49 women 80% rated pain at <50 on Pain Thermometer with 34% rating pain at 0 Significant positive/negative correlations of HCI scores & subscales with global PSI & PSI subscale scores Significant positive correlations between patient age & perceptions of global HCI $r = .28, p < .05$

Neidz (1997)	To examine hospital patients' perceptions of service quality in relation to four independent variables: Nurses' perception of human resource practices, autonomy in practice, patient satisfaction with nursing care & patients' perception of organizational climate for service	Descriptive	Convenience sample of registered nurses matched with a convenience sample of adult patients in their care N=102 nurse-patient dyads in an acute care hospital	Modified Health Care Service Performance (SERVPERF) 15-item tool Employee Turnover Diagnostic 24-item tool Dempster Practice Behaviors Scale (DPBS) 30-item tool Revised LaMonica-Oberst Patient Satisfaction Scale (LOPSS) 28-item tool Organizational Climate for Service Semantic Differential (OCSSD) 8-item tool	Two of the four correlational hypotheses were supported There was a positive relationship between patient satisfaction with nursing care & service quality as perceived by patients, $r=.74$, $p<.001$ There was a positive relationship between organizational climate for service & service quality as perceived by patients, $r=.71$, $p<.001$ Patient age, level of education, & gender were unrelated to perceptions of service quality
Irurita (1999)	To identify adult patient's perspective of quality nursing care in acute care hospital setting in Western Australia	Grounded Theory	23 patients following discharge from hospital	Individual interviews	Patients perceived different levels of care delivered in terms of quality. The level of quality care was found to depend on certain contextual & intervening conditions in the environment, the organization & personal factors of the nurse & patient
Lynn & Mc-Millen (1999)	To investigate comparability of nurses' and patients' perception, but based on an instrument developed from the patients' perspective	Descriptive	448 patients & 350 nurses from the medical surgical units in seven hospitals in southeastern United States. Nurse participants were required to be employed in one of the hospitals Patient participants >18 yrs of age, understand English & be hospitalized on a study unit for minimum of 2 days.	Patient's Perception of Quality Scale-Acute Care Version (PPQS-ACV) 90-item questionnaire	Patients ranked the items from their perspective & nurses as they perceived the patients would rank them. The rank order of items was similar across patients & nurses. Nurses consistently underestimated the extent to which patients valued most aspects of good nursing care

Middleton & Lumby (1999)	To examine the outcomes of care from the patients' perspective	Qualitative	16 male patients following a recent orthopaedic admission at a teaching hospital in Sydney, Australia	Focus groups	The participants identified five nursing activities that made a positive difference to patient outcomes & three activities that made a negative difference to their outcome. In addition, seven activities not performed but would have made a positive difference to their outcome
Wilde Larsson, (1999)	To identify if differences exist between patients of different ages regarding their preferences of care & how they rate actual care conditions	Descriptive	All patients receiving care during three months in 1996-97, in the medical & surgical departments of three county hospitals in Sweden. Each were =>16yrs of age, be communicative, understand Swedish, LOS min two days & be willing to participate. N=1590 Responses were obtained from 1056 for 66% response rate	Questionnaire: Quality from the Patient's Perspective (QPP) 64-items Sense of Coherence Questionnaire (SOC) 13 items	Subjective importance ratings were found to be unrelated to age. Patients' perceptions of the care they actually received were more positive with increasing age. Categories identified include: physical & technical care; medical-technical competence; identity oriented approach to caregivers; sociocultural aspects of the care setting. Age was not a variable.
Chang, Hancock, Chenoweth, Jeon, Glasson, Gradidge & Graham (2003)	To determine whether elderly patients' perceived nursing needs and satisfaction with care varied as a function of gender, age, cultural identity or the type of ward	Descriptive	Patients were selected from geriatric & medical wards at five hospitals in the Sydney, Australia area. N=231 subjects consented to participate out of 393 invited (59%)	Questionnaire: Mini-mental State Examination (MMSE) Caregiving Activities Survey (CAS)	Results demonstrated that patients who were older (aged >80 years), female and from aged care wards perceived that physical aspects of nursing care were more important than did younger patients (65-80yrs), male & from medical wards. Older patients were more satisfied with physical care. Conclusions: Nurses need to be aware of these differences & focus on the physical aspects of care to ensure patient satisfaction.

Schmidt (2003)	To discover patients' perceptions of the nursing care they receive in the hospital setting	Grounded Theory	Eight medical-surgical patients recently discharged from an academic medical center in the south-eastern United States.	Individual interviews. Verbatim transcripts analyzed using the constant comparative method	Four categories of patient perceptions of their nursing care emerged from the data: 'Seeing the individual', 'Explaining', 'Responding' and 'Watching over'. These categories identified may be used to further develop a formal theory of patient satisfaction with nursing care.
Aiello, Garman & Morris (2003)	To examine the extent to which satisfaction with nursing care in a specific academic medical center is affected by influences at multiple levels	Descriptive	Patients admitted to a general medical or surgical unit at a Midwestern academic medical center between January 2000 & September 2001 N=141 Patients <18 yrs excluded	Questionnaire: Press Ganey Inpatient Patient Satisfaction Survey (PGSS) 91 items	Patient satisfaction with nursing care is significantly & substantially influenced by factors at two levels: the episode of care & the individual patient.
Wichowski, Kubsch, Ladwig & Torres (2003)	To determine whether there is a difference in the perceived importance of nursing activities from patients and nurses perspectives	Quantitative non-experimental comparative design	Convenience sample of 30 nurses & 30 patients on a medical-surgical unit N=60	Investigator developed survey questionnaire 41 items	There was a significant difference in the perceived importance of nursing activities by nurses & patients in the psychosocial & safety categories. These should be clarified for the patients. In addition, this insight may increase patient satisfaction with nursing care.
Vahey, Aiken, Sloane, Clarke & Vargas (2004)	To examine the effect of the nurse work environment on nurse burnout, & the effects of the nurse work environment & nurse burnout on patients' satisfaction with their nursing care	Cross-sectional surveys of nurses & patients from 40 units in 20 urban hospitals across the United States	Nurses N=820 Patients N=621	Questionnaires Nurses: Nursing Work Index (NWI-R) Maslach Burnout Inventory (MBI) Patients: La Monica-Oberst Patient Satisfaction Scale (LOPSS)	Improvements in nurses' work environments in hospitals have potential to reduce nurses' high levels of job burnout & risk of turnover while increasing patients' satisfaction with nursing care

<p>Larrabee, Ostrow, Withrow, Janney, Hobbs & Burant (2004)</p>	<p>To evaluate the contributions of RN job satisfaction, context of care, structure of care, patient-perceived nurse caring, & patient characteristics on patient satisfaction in a group of adults hospitalized in an acute care hospital</p>	<p>Predictive non-experimental study</p>	<p>Convenience samples of patients N=362 & RNs N=90 From two medical units, two surgical units, & three intensive care step-down units</p>	<p>Questionnaire: Patients' Judgments of Nursing Care Caring Behaviors Inventory (CBI) Self-Reported Health Status (SF-12) Quality of Life Index (QLI) Rapid Estimate of Adult Literacy in Medicine (REALM) Nurses: Work Quality Index (WQI) Multifactor Leadership Questionnaire (MLQ-5X Short) Nurse Collaborative Practice Scale (CPS)</p>	<p>Patient-perceived nurse caring and nurse-physician collaboration identified as major/direct predictor of patient satisfaction Strategies to achieve & maintain patient satisfaction should address the enhancement of patient perceived nurse caring & RN/MD collaboration</p>
<p>Laschinger, Hall, Pedersen & Almost (2005)</p>	<p>To test a newly developed patient-centered measure of patient satisfaction with nursing care</p>	<p>Descriptive</p>	<p>N=1041 Random sample of 14 hospitals in Ontario, Canada</p>	<p>Questionnaire Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) Author developed 19 item instrument with 3 additional questions</p>	<p>Reliability estimates were excellent (.97) Majority of patients rated their satisfaction as either very good or excellent</p>

Appendix B: Patient Expectations for Nursing Care Quality Questionnaire (PENCQQ)

Code: _____

Please describe the expectations you have for the nursing care you will receive during your hospital stay. By “expectations” we mean the care YOU THINK YOU WILL RECEIVE; we do NOT mean the care YOU IDEALLY WOULD LIKE. Respond to the items in terms of whether you anticipate the care will be Excellent, Very Good, Good, Fair or Poor. Please check only one rating for each statement.

	Excellent	Very Good	Good	Fair	Poor
INFORMATION YOU WILL RECEIVE: How clear and complete the nurses’ explanations will be about tests, treatments and what to expect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTRUCTIONS: How well nurses will explain how to prepare for tests and operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EASE OF GETTING INFORMATION: Willingness of nurses to answer your questions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMATION GIVEN BY NURSES: How well nurses will communicate with you, your family and doctors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMING FAMILY OR FRIENDS: How well the nurses will keep them informed about your condition and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INVOLVING FAMILY OR FRIENDS IN YOUR CARE: How much they will be allowed to help in your care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONCERN AND CARING BY NURSES: Courtesy and respect you will be given; friendliness and kindness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATTENTION OF NURSES TO YOUR CONDITION: How often nurses will check on you and how well they will keep track of how you are doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RECOGNITION OF YOUR OPINIONS: How much nurses will ask you what you think is important and give you choices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONSIDERATION OF YOUR NEEDS: Willingness of the nurses to be flexible in meeting your needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THE DAILY ROUTINE OF THE NURSES: How well they will adjust their schedules to your needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Excellent	Very Good	Good	Fair	Poor
HELPFULNESS: Ability of the nurses to make you comfortable and reassure you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NURSING STAFF RESPONSE TO YOUR CALLS: How quick they will be to help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SKILL AND COMPETENCE OF NURSES: How well things will be done, like giving medicine and handling IVs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE: The teamwork between nurses and other hospital staff who will take care of you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESTFUL ATMOSPHERE PROVIDED BY NURSES: Amount of peace and quiet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRIVACY: Provisions for your privacy by nurses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISCHARGE INSTRUCTIONS: How clearly and completely the nurses will tell you what to do and what to expect when you leave the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE AFTER DISCHARGE: Nurses' efforts to provide for your needs after you leave the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OVERALL EXPECTATIONS					
	Excellent	Very Good	Good	Fair	Poor
Overall quality of care and services you expect to receive during your hospital stay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall quality of the <u>nursing</u> care you expect during your hospital stay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, would you say your health is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Given the nursing care you anticipate receiving here, would you recommend this hospital to your family and friends.	Strongly agree <input type="checkbox"/>	Somewhat agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Somewhat disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>

THANK YOU FOR TAKING THE TIME TO FILL OUT THIS SURVEY.

Appendix C: Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ)

Code: _____

Please rate some things about the nursing care you received during your hospital stay in terms of whether they were Excellent, Very Good, Good, Fair or Poor. Please check only one rating for each statement.

	Excellent	Very Good	Good	Fair	Poor
INFORMATION YOU WERE GIVEN: How clear and complete the nurses' explanations were about tests, treatments, and what to expect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTRUCTIONS: How well nurses explained how to prepare for tests and operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EASE OF GETTING INFORMATION: Willingness of nurses to answer your questions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMATION GIVEN BY NURSES: How well nurses communicated with patients, families, and doctors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMING FAMILY OR FRIENDS: How well the nurses kept them informed about your condition and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INVOLVING FAMILY OR FRIENDS IN YOUR CARE: How much they were allowed to help in your care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONCERN AND CARING BY NURSES: Courtesy and respect you were given; friendliness and kindness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATTENTION OF NURSES TO YOUR CONDITION: How often nurses checked on you and how well they kept track of how you were doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RECOGNITION OF YOUR OPINIONS: How much nurses ask you what you think is important and give you choices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONSIDERATION OF YOUR NEEDS: Willingness of the nurses to be flexible in meeting your needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THE DAILY ROUTINE OF THE NURSES: How well they adjusted their schedules to your needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Excellent	Very Good	Good	Fair	Poor
HELPFULNESS: Ability of the nurses to make you comfortable and reassure you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NURSING STAFF RESPONSE TO YOUR CALLS: How quick they were to help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SKILL AND COMPETENCE OF NURSES: How well things were done, like giving medicine and handling IVs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE: The teamwork between nurses and other hospital staff who took care of you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESTFUL ATMOSPHERE PROVIDED BY NURSES: Amount of peace and quiet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRIVACY: Provisions for your privacy by nurses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISCHARGE INSTRUCTIONS: How clearly and completely the nurses told you what to do and what to expect when you left the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE AFTER DISCHARGE: Nurses' efforts to provide for your needs after you left the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OVERALL PERCEPTIONS					
	Excellent	Very Good	Good	Fair	Poor
Overall quality of care and services you received during your hospital stay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall quality of <u>nursing</u> care you received during your hospital stay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, would you say your health is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Based on the nursing care you received, would you recommend this hospital to your family and friends?	Strongly agree <input type="checkbox"/>	Somewhat agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Somewhat disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>

THANK YOU FOR TAKING THE TIME TO FILL OUT THIS SURVEY.

Appendix D: Nurse's Assessment of the Patient's Expectations Questionnaire (NAPEQ)

Code: _____

Please rate your assessment of this patient's expectations for nursing care when he or she was admitted to the hospital in terms of whether you think it was Excellent, Very Good, Good, Fair or Poor. Rate the items in terms of what you think were the patient's expectations when he or she was admitted, NOT his or her evaluation at the end of the hospitalization. Please check only one rating for each statement and remember that your answers are coded and will not be viewed by anyone on your unit at the medical center.

	Excellent	Very Good	Good	Fair	Poor
INFORMATION THE PATIENT WILL RECEIVE: How clear and complete the nurses' explanations will be about tests, treatments and what to expect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTRUCTIONS: How well nurses will explain how to prepare for tests and operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EASE OF GETTING INFORMATION: Willingness of nurses to answer questions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMATION GIVEN BY NURSES: How well nurses will communicate with this patient, the patient's family, and doctors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INFORMING FAMILY OR FRIENDS: How well the nurses will keep them informed about this patient's condition and needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INVOLVING FAMILY OR FRIENDS IN THE PATIENT'S CARE: How much they will be allowed to help in this patient's care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONCERN AND CARING BY NURSES: Courtesy and respect this patient will be given; friendliness and kindness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATTENTION OF NURSES TO THE PATIENT'S CONDITION: How often nurses will check on this patient and how well they will keep track of progress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RECOGNITION OF THE PATIENT'S OPINIONS: How much nurses will ask this patient what he or she thinks is important and give the patient choices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONSIDERATION OF THE PATIENT'S NEEDS: Willingness of the nurses to be flexible in meeting this patient's needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THE DAILY ROUTINE OF THE NURSES: How well they will adjust their schedules to this patient's needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Excellent	Very Good	Good	Fair	Poor
HELPFULNESS: Ability of the nurses to make this patient comfortable and reassure him or her.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NURSING STAFF RESPONSE TO THE PATIENT'S CALLS: How quick they will be to help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SKILL AND COMPETENCE OF NURSES: How well things will be done, like giving medicine and handling IVs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE: The teamwork between nurses and other hospital staff who will take care of this patient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESTFUL ATMOSPHERE PROVIDED BY NURSES: Amount of peace and quiet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRIVACY: Provisions for this patient's privacy by nurses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISCHARGE INSTRUCTIONS: How clearly and completely the nurses will tell this patient what to do and what to expect when leaving the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COORDINATION OF CARE AFTER DISCHARGE: Nurses' efforts to provide for this patient's needs after leaving the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OVERALL EXPECTATIONS					
	Excellent	Very Good	Good	Fair	Poor
Overall quality of care and services you think this patient expected to receive during his or her hospital stay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall quality of <u>nursing</u> care this patient expected to receive during his or her stay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, upon admission, do you think this patient would have said his or her health was:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think this patient would have recommended this hospital to his or her family and friends, <u>given the expectations</u> you think the patient had regarding nursing care when they were admitted?	Strongly agree <input type="checkbox"/>	Somewhat agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Somewhat disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY.

Appendix E: Patient Qualitative Questions

The following open-ended questions will be presented verbally by the Research Coordinator to a subset of the patient-subjects and their answers will be recorded and later transcribed. She will remind them before asking the questions that their answers will be confidential and are for research and will NOT be shared with any of the nurses on the unit:

1. Could you tell me about the nursing care you received from your nurse, especially anything that stands out for you, either positively or negatively?

2. Overall, were you satisfied with the nursing care you received from your nurse?
[*Their answer...*] Can you tell me [more] about it?

3. Did you receive the kind of nursing care you expected from your nurse?

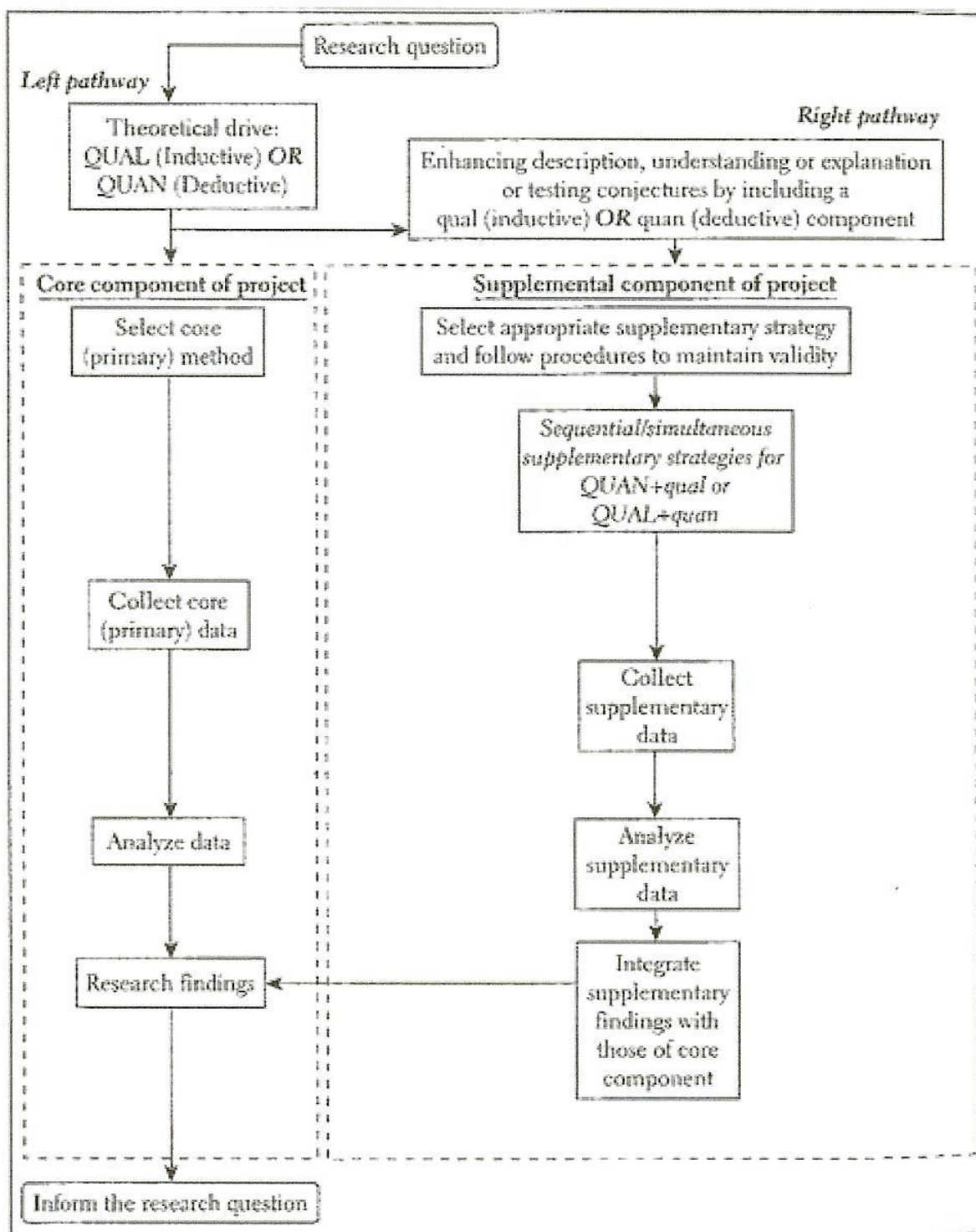
4. [*If not...*] Can you tell me in your own words, why not?

- | | |
|---|--|
| <input type="checkbox"/> No formal education | <input type="checkbox"/> College graduate |
| <input type="checkbox"/> Grade school | <input type="checkbox"/> Post graduate |
| <input type="checkbox"/> High school or GED | <input type="checkbox"/> Other_____ (please specify) |
| <input type="checkbox"/> Some college but no degree | |
| <input type="checkbox"/> Trade or technical school graduate | |

11. Describe your occupation or profession: _____
12. What is your family's annual income?
- | | |
|--|--|
| <input type="checkbox"/> Less than \$20,000 | <input type="checkbox"/> \$60,000 - \$79,999 |
| <input type="checkbox"/> \$20,000 - \$39,999 | <input type="checkbox"/> \$80,000 - \$99,999 |
| <input type="checkbox"/> \$40,000 - \$59,999 | <input type="checkbox"/> \$100,000 - \$150,000 |
| | <input type="checkbox"/> Over \$150,000 |
13. What type of health insurance do you have?
- | | |
|-----------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Medicaid |
| <input type="checkbox"/> Medicare | <input type="checkbox"/> Other private insurance |
14. In general, how would you rate your health?
- | | |
|-------------------------------|------------------------------------|
| <input type="checkbox"/> Poor | <input type="checkbox"/> Good |
| <input type="checkbox"/> Fair | <input type="checkbox"/> Very Good |
| | <input type="checkbox"/> Excellent |
15. Why are you in the hospital? _____ (list diagnosis or type of surgery)
16. Have you ever been in any hospital before?
- No Yes (number of admissions before now)
17. Have you ever been in this hospital before?
- No Yes (number of admissions before now)
18. Have you ever been a patient on this unit before?
- No Yes (number of admissions before now)

Thank you for answering these questions.

Appendix H: QUAL+ quan'' Mixed-Method Design



This diagram depicts a mixed-method design and was adapted from Morse and Niehaus (2007, p. 548).


Appendix I: IRB Approval Letter

PENNSSTATE HERSHEY
 Milton S. Hershey
 Medical Center

PENNSSTATE HERSHEY
 College of Medicine

DATE: January 4, 2010

TO: Donna L. Reck, MSN, RN, NE-BC, Ph.D. (c), Nursing (HMC)

FROM: Kevin Gleeson, M.D., Executive Chair 
 Institutional Review Board

RE: IRB Protocol No. 32848EM - Patients' Expectations and Satisfaction with Nursing Care, and
 Their Nurses' Awareness of Their Expectations

Confirmation of Exempt Status

Thank you for your application to the Institutional Review Board (IRB) for the above research. The activity was screened for exempt status according to the policies of this institution and the provisions of applicable federal regulations and, as submitted, was found not to require formal IRB review because the research met the criteria for exempt research according to the following category in the Code of Regulations:

45 CFR 46.101(b)(2) - Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified directly or through identifiers linked to the subjects; and (ii) any disclosure of human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to subjects' financial standing, employability, or reputation. *(This category may NOT include children, prisoners or be FDA-regulated.)*

This determination was based on the research as described in the application and the following:

- Protocol Summary (dated 12/07/2009)
- Patient Expectation for Nursing Care Quality Questionnaire (PENCQQ); Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ); Nurse's Assessment of the Patient's Expectations Questionnaire (NAPEQ); Patient Background Information Form (PBIF); Nurse Background Information Form (NBIF); Patient Qualitative Questions (PQQ) The questionnaires may involve only adults.
- No investigators for this research participated in the review determination.

Retain this letter as evidence of IRB review and determination of exempt status for this research. Annual review of this research is not required provided the investigation is conducted as proposed. Therefore, no progress reports or IRB annual review letters will be issued.

The IRB requires notification and review in the following circumstances.

- Report any unanticipated problems involving risk to subjects or others that occur as a result of participation in this research.
- Report any proposed changes in the research activity that may affect the exempt status, outlined above. Prior IRB review is needed before such changes are initiated except where necessary to eliminate apparent immediate hazards to the subject.

Please include the IRB protocol number on any future documentation submitted for this research. The Board appreciates your efforts to conduct research in compliance with the institutional policies and federal regulations that have been established for the protection of human subjects.

KG/kml



Appendix J: Summary Explanation of Research: Nurses

Penn State College of Medicine
The Milton S. Hershey Medical Center

Title of Project: Patients' Expectations and Satisfaction with Nursing Care,
And Their Nurses' Awareness of Their Expectations

Principal Investigator: Donna Reck, MSN., RN., NE-BC, PhD (c)

Other Investigator: Martha Grigsby, M.S.W

You are being invited to volunteer to participate in a research study. Research studies include only people who voluntarily choose to take part. This summary explains information about this research. Please ask questions about anything that is unclear to you.

The purpose of this research is to help nurses better understand the factors that influence patients' satisfaction with nursing care and possibly give future patients a better hospital experience. We are inviting you to take part in this research because you may be caring for a patient who will be eligible to participate. Patients will be able to participate only if the nurse they are assigned to has agreed to take part as well. You are unlikely to benefit directly from participating, except that some nurses find it interesting to be involved in clinical research.

If you agree to participate in this study, there are only two items for you to complete. First, you will be asked to answer a few general, professional background questions taking less than a couple of minutes. Second, when a patient in the study under your care is discharged, you will be asked to complete a questionnaire about the patient. The questionnaire usually takes 5-10 minutes to complete.

Your name will not be written on your background information or the questionnaire you answer about the patient. Only the patient-subject's code will be associated with the questionnaire you complete about the patient. The link between names and questionnaires will be securely stored and not available to anyone except the research investigators, who will pool patients' and nurses' answers anonymously with other patients' and nurses answers.

Participation in this research is voluntary and will, in no way affect your job, your employment, or your performance appraisal. The data will be seen only by the researchers. Feedback about the results will be done through reports of the study in the literature. This type of research is usually published in journals that are read by clinical nurses as well as by nursing administrators. Thank you considering participating in this

study. If you choose to participate, we thank you in advance for your help with this research endeavor.

You have the right to ask any questions you may have about this research. If you have questions, complaints or concerns, contact Donna Reck at 717-531-4218. If you have questions regarding your rights as a research participant or you have concerns or general questions about the research, contact the research protection advocate in the HMC Human Subjects Protection Office at 717-531-5687. You may also call this number if you cannot reach the research team or wish to talk to someone else.

You do not have to participate in this research. Taking part in this research study is voluntary. If you choose to take part, you have the right to stop at any time. If you choose to decline participation now or later, it will not result in any penalty or loss of benefits to which you are entitled. Answering the background questions and your completion of the patient-related questionnaire implies your voluntary consent to participate in the research.

Appendix K: Summary Explanation of Research: Patients

Penn State College of Medicine
The Milton S. Hershey Medical Center

Title of Project: Patients' Expectations and Satisfaction with Nursing Care,
And Their Nurses' Awareness of Their Expectations

Principal Investigator: Donna Reck, MSN., RN., NE-BC, PhD (c)

Other Investigator: Martha Grigsby, M.S.W

You are being invited to volunteer to participate in a research study. Research studies include only people who voluntarily choose to take part. This summary explains information about this research. Please ask questions about anything that is unclear to you.

The purpose of this research is to help nursing administrators better understand the factors that influence patients' satisfaction with nursing care and possibly give future patients a better hospital experience. You are being offered the opportunity to take part in this research because you will be a patient here at Hershey Medical Center and your experience here is important to us. You are unlikely to benefit directly from participating, except that patients sometimes find the questions interesting and some enjoy expressing their opinions.

If you agree to participate in this study, you will be asked to answer a few background questions taking less than 5 minutes and then complete a questionnaire about the expectations you have regarding the care you will receive from the nurses here at the hospital. Thousands of patients in hospitals everywhere have taken questionnaires like this one. They usually take 5-10 minutes to complete.

Your name will not be written on anything you answer and none of the information you provide will be shared with anyone working with you at the hospital or anyone outside of the hospital. Your answers will be seen only by the researcher and research assistant, who will pool your answers anonymously with other patients' answers. Your answers and your participation in this research will not affect your treatment in any way.

After answering the questionnaire, you will receive the care and treatment for whatever condition you were admitted to the hospital for. Before you are discharged, you will be

asked to take a similar short questionnaire about your experience in the hospital. Thank you considering participating in this study. If you choose to answer the questionnaires, we appreciate your help in this important project.

You have the right to ask any questions you may have about this research. If you have questions, complaints or concerns, contact Donna Reck at 717-531-4218. If you have questions regarding your rights as a research participant or you have concerns or general questions about the research, contact the research protection advocate in the HMC Human Subjects Protection Office at 717-531-5687. You may also call this number if you cannot reach the research team or wish to talk to someone else.

If you do not wish to, there is no obligation for you to take part in this research study. Participating is completely voluntary. Your choice will not affect your treatment in any way. If you choose to take part, you have the right to stop at any time. Your completion of the questionnaires implies your voluntary consent to participate in the research.

Appendix L: Summary Explanation of Research: Patients with Four Questions

Penn State College of Medicine
The Milton S. Hershey Medical Center

Title of Project: Patients' Expectations and Satisfaction with Nursing Care,
And Their Nurses' Awareness of Their Expectations

Principal Investigator: Donna Reck, MSN., RN., NE-BC, PhD (c)

Other Investigator: Martha Grigsby, M.S.W

You are being invited to volunteer to participate in a research study. Research studies include only people who voluntarily choose to take part. This summary explains information about this research. Please ask questions about anything that is unclear to you.

The purpose of this research is to help nursing administrators better understand the factors that influence patients' satisfaction with nursing care and possibly give future patients a better hospital experience. You are being offered the opportunity to take part in this research because you will be a patient here at Hershey Medical Center and your experience here is important to us. You are unlikely to benefit directly from participating, except that patients sometimes find the questions interesting and some enjoy expressing their opinions.

If you agree to participate in this study, you will be asked to answer a few background questions taking less than 5 minutes and then complete a questionnaire about the expectations you have regarding the care you will receive from the nurses here at the hospital. Thousands of patients in hospitals everywhere have taken questionnaires like this one. They usually take 5-10 minutes to complete.

Your name will not be written on anything you answer and none of the information you provide will be shared with anyone working with you at the hospital or anyone outside of the hospital. Your answers will be seen only by the researcher and research assistant, who will pool your answers anonymously with other patients' answers. Your answers and your participation in this research will not affect your treatment in any way.

After answering the questionnaire, you will receive the care and treatment for whatever condition you were admitted to the hospital for. Before you are discharged, you will be asked to take a similar short questionnaire about your experience in the hospital. You will also be asked by the research assistant to answer 4 additional questions about your hospital experience. Thank you considering participating in this study. If you choose to answer the questionnaires, we appreciate your help in this important project.

You have the right to ask any questions you may have about this research. If you have questions, complaints or concerns, contact Donna Reck at 717-531-4218. If you have questions regarding your rights as a research participant or you have concerns or general questions about the research, contact the research protection advocate in the HMC Human Subjects Protection Office at 717-531-5687. You may also call this number if you cannot reach the research team or wish to talk to someone else.

If you do not wish to, there is no obligation for you to take part in this research study. Participating is completely voluntary. Your choice will not affect your treatment in any way. If you choose to take part, you have the right to stop at any time. Your completion of the questionnaires implies your voluntary consent to participate in the research.



**Appendix M: Laschinger Permission to Use
PSNCQQ**

**Patient Satisfaction With Nursing Care Quality Questionnaire (PSNCQQ)
Request Form**

I request permission to copy the Patient Satisfaction With Nursing Care Quality Questionnaire as developed by Dr. Heather K. Spence Laschinger et al (2005). Upon completion of the research, **I will provide Dr. Laschinger with a brief summary of the results**, including information related to the use of the PSNCQQ used in my study.

Please complete the following information:

Date: February 28, 2009
 Name: Donna Reck MSN, RN, PhD(c)
 Title: Doctoral Student and Chief Nursing Officer
 University/Organization: Pennsylvania State University
 Penn State Hershey Medical Center
 Address: 500 University Drive
 Hershey, PA 17033 USA
 Phone: Work 717-531-8766
 Cell 717-319-3973
 E-mail: dreck@hmc.psu.edu

Description of Study: This is my dissertation research. I talked with Dr. Laschinger today and described the study to her. She thought it was very interesting. I plan to survey 300 adult patients pre and post procedure. I talked with Dr. Laschinger about the need to re-phrase the questions so the questionnaire can be used pre-procedure and then post procedure. I will send the revised questions to Dr. Laschinger for her review prior to use. If there is any way you can expedite sending the questionnaire to me I would appreciate it. I need to revise the questions and send them back to Dr. Laschinger before I can proceed.

Permission is hereby granted to copy and use the Patient Satisfaction With Nursing Care Quality Questionnaire (PSNCQQ).

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