CLINICAL DECISION MAKING AMONG NURSING STUDENTS:

AN INTERPRETIVE STUDY

by

ANN HANSON WHITE

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ABSTRACT

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Clinical decision making has been identified as one of the most important contributions made by the professional nurse in the care of patients. Yet as a discipline, we continue to question what factors influence the development of clinical decision making skills. The purpose of this study was to identify how nursing students learn clinical decision making. Heideggerian phenomenology and hermeneutical analysis provided the framework and method for the study.

A convenience sample of 17 senior nursing students, 16 females and 1 male, participated in this study. All students were completing their last semester of baccalaureate nursing courses. Fifteen of the students had no previous experience working in the health care environment prior to enrollment in this nursing program. Sixteen students were of European-American descent with one student of African-American descent.

Data were generated through individual interviews that were transcribed verbatim and analyzed using the constant comparative method. Five themes associated with learning clinical decision making were identified: gaining confidence in skills, building a relationship with staff, connecting with the patient, gaining comfort with self as a nurse, and coming to understanding the clinical picture. A beginning graphic depiction of the relationship of the five emergent themes with learning clinical decision making among nursing students was proposed. Implications for nursing practice, education and research were identified. Based upon findings, recommendations for changing the current teaching strategies for nursing students were proposed. Recommendations for future nursing research on how nursing students learn clinical decision making were also identified.

To my family

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CHAPTER 1

INTRODUCTION

Effective clinical decision making has been identified as one of the most important contributions made by health professionals in the care of patients (del Bueno, 1990; Eddy, 1996; Hughes & Young, 1992; Radwin, 1995). Hughes and Young (1990) stated that decision making is the clinical function that differentiates the nursing professional staff from the technical ancillary staff. The professional nurse gathers and processes critical patient information to implement nursing actions and to report findings to the physician and other health care professionals. The effectiveness of this decision making process significantly influences the achievement of positive patient outcomes.

The importance of clinical decision making has also been recognized in nursing education. In a review of literature conducted by Tanner and Lindeman (1987), nurse educators identified teaching strategies that develop decision making skills as the second highest priority. Nurse educators continue to question what skills are necessary for clinical decision making and what education strategies should be used to enhance these clinical decision making skills (Boney & Baker, 1997). Nurse researchers continue to investigate clinical decision making, what situational variables influence decision making, and how to educate and evaluate students in the skill and art of clinical decision making.

Statement of the Problem

As the coordinator of care, the professional nurse, contributes to quality patient care. The

coordinator of care role assumes many responsibilities which include assessing the patient situation, educating the patient and family, monitoring for complications, and alerting health care professionals when interventions are needed. Decisions made by the nurse throughout the hospital stay influence patient outcomes during that hospitalization and upon discharge.

Nursing scholars have investigated clinical decision making among experienced nurses. Researchers have found that the experienced, expert nurse develops a kind of knowing that leads to pattern recognition of patient symptoms and responses. This kind of knowing also leads to early intervention by the nurse and is thought to be associated with positive patient outcomes (Tanner, Benner, Chesla, & Gordon, 1993).

Minimal research has been conducted on clinical decision making among nursing students, that is, how nursing students perceive clinical decision making and how they learn the clinical decision making process. Through research nursing educators will gain insight and understand the process of clinical decision making as perceived by the nursing students. If nurse educators understand more about how nursing students learn the clinical decision making process, successful teaching strategies to further develop and enhance decision making skills required in the clinical environment can be developed.

Purpose

The purpose of this study was to identify how nursing students learn clinical decision making. This study was the initial step in developing a research program that will outline teaching strategies to enhance clinical decision making among nursing students.

Research Questions

The research questions guiding this investigation were:

1. What clinical decision making situations are identified by senior nursing students?
2. What essential components are associated with learning clinical decision making among senior nursing students?

Significance to Nursing

Financial imperatives are the driving force in health care today. The financial decisions made by most health care organizations focus on decreasing costs and maintaining the system's market share. In an effort to contain costs, nurses are being replaced by personnel with less education (LPNs) or by unlicensed personnel. The few nurses remaining are being asked to care for highly complex patients in a shorter period of time with fewer resources while maintaining quality (Blegen, Goode, & Reed, 1998; McCloskey, Bulechek, Moorhead & Daly, 1996).

In response to these changes, the nurse must adapt by becoming an effective delegator and self-directed clinician with emphasis on clinical decision making (Boney and Baker, 1997; Buerhaus & Staiger, 1997). While these characteristics have always been valued in nursing, the current health care environment has placed renewed emphasis on these skills.

The challenge for nurse educators is to prepare future nurses with well-developed delegation and clinical decision making skills. Discovering how students gain critical decision making skills is the first step in this process. Research to investigate the nursing students' understanding and perception of clinical decision making will facilitate the development and implementation of teaching strategies that will enhance the clinical decision making skills required in the current health care environment.

Philosophical Approach

Heideggerian phenomenology and hermeneutical analysis provided the philosophical perspective and research design for this study. Because clinical decision making is embedded in the day-to-day world of the nursing student, this phenomenon is best revealed by examining the experiences of the nursing students.

Phenomenologists believe that phenomena can not be separated from the way in which the human being experiences the phenomena. Human beings are considered participants in life situations in which they are free to select options rather than having someone pre-select for them. Phenomenologists believe human beings experience meaning and value in these life situations which shape individuals as well as the environment. They also acknowledge the distinctive characteristics of each human being, understanding that each individual participates in and learns from life experiences while recognizing that being a part of the world is what shapes reality for that individual (Smith, 1991). Being-in-the-world or existence implies that human beings are "tied to their world" and can be understood only within that context (Boyd, 1993, p. 103).

Phenomenology is a holistic approach to studying a concept. All of the experience is important to the phenomenologist: to study the parts of a phenomenon breaks down the reality of the phenomenon and distorts the truth about the phenomenon. The phenomenologist's intent is to "describe the experience as it is lived" (Oiler, 1982, p. 178). In order to holistically describe these experiences, the phenomenologist must identify the human beings who have had that life experience and capture each individual's experience through human expression (Van Manen, 1990).

Martin Heidegger, a German philosopher, was strongly influenced the development of hermeneutic phenomenology. During Heidegger's era (1889-1976), positivism was the

predominant philosophy guiding research. Researchers believed that everything could be quantitatively explored and explained. Fundamental to the positivist exploration was the separation of the object of study from external influences (Kellett, 1997). Heidegger challenged the positivist method of inquiry, believing the person and her/his world could not be separated. Because a person exists in the world, that person is a part of the world through participation and involvement. Through these lived experiences, the person comes to understand possible meanings of life instead of knowing about life. Heidegger believed that the meaning of the experience was not based with the individual alone or with the situation alone, but instead, the meaning of the experience was interwoven between the individual and the environment. Heidegger referred to this person-world unit as co-constitutionality (Heidegger, 1926/1996; Koch, 1995).

Heidegger used the term *Dasein* to describe the human being relating to the everyday world and other people in this world through concern for, and caring about, both the environment and the people. In German, the word *Dasein* means "existence". Dreyfus describes this entity as the everyday existence of humans. *Dasein* also means "being-there", which Dreyfus described as an being part of the situation (Dreyfus, 1987, p. 263). *Dasein* is also that part of us which ponders who we are, what we are, and why we exist (Heidegger, 1926/1996; Van Manen, 1990). Heidegger's notion of *Dasein* introduced a new meaning and understanding of what it is to be human (Annells, 1996).

Heidegger referred to the everyday world of *Dasein* as being-in-the-world. While considered by Heidegger as one consolidated phenomenon, there are many phenomena inherent with being-in-the-world. This term implies that the individual exists, that existence is in an environment with interrelationships between language, practices, and personal relationships.

(Walters, 1994). According to Heidegger, the person's world is the "meaningful set of relationships, practices and language that we have by virtue of being born into a culture" (Leonard, 1994, p. 46). The world is constituted by and constitutive of the person. Heidegger believed that we become the persons we are by the incorporation of these "meanings, linguistic skills, cultural practices and family traditions" (Leonard, 1994, p. 47). Heidegger believed that because this world is so common that much of the meaning remains hidden to the person. According to Heidegger, the challenge for each person is to bring to a conscious level the meaning in life.

For Heidegger, understanding and interpretation are the methods used to gain insight into the significance and true meaning in life (Kondora, 1993). Understanding is having insight into the possibilities within the context of the lived world. Interpretation leads to understanding through the use of language which not only represents the world but also provides an avenue to disclose what it is to "be" (Rather, 1992, p. 48). Benner and Wrubel (1989) stated a "person is not a mind-body duality, but a self-interpreting human being, who is an embodied intelligence brought up in a world of meaning, who has concerns, all of which provide embeddedness in a situation grasped in terms of its meaning for the self" (p. 112). The interpretation of the lived experiences of each person leads to greater understanding of the meaning of life.

Heidegger believed ontological hermeneutics (the way of being in the world) was a useful approach to fully understand an individual's experience. Ontological hermeneutics became a method to interpret the lived experiences of human beings and to explore what it is to "be" in the world (Woolfolk, Sass, & Messer, 1988). Foundational to ontological hermeneutics is the belief that human beings interpret their daily experiences. Equally as important is the belief that the

interpretations of feelings, things and activities in our daily life are important to the person (Benner, 1985).

Embedded in these interpretations of our daily life are the background influences of language, culture, and history (Benner, 1985). Heidegger referred to the influence of language, culture, and history as "the background or historicality". According to Heidegger, the background is foundational to "all inter-laden practices and self understanding that are handed down through language and culture" (Benner, 1985, p. 6). Heidegger believed that the individual may never be able to fully realize or explicate her/his background nor understand the full influence this background has on the individual. Heidegger's background establishes that what the person identifies as available options influences the perception of her/his experiences, and ultimately her/his actions. Benner refers to this as not being a "radically free arbitrator" (Benner, 1985, p. 5). We are situated in a world and are able to see only those possibilities that become apparent within our language, culture and history.

Benner used Heideggerian phenomenology and hermeneutical analysis as a framework for research on clinical nursing practice (Benner, 1984; Benner, 1994b; Benner, Tanner, & Chesla, 1996). Clinical practice is the everyday world of the nurse. To reveal the meaning of this world to nurses, Benner investigated the nurses in the clinical situations by using hermeneutics which was congruent with the philosophical stance of Heidegger (Benner, 1985). This same framework is applicable for research on clinical decision making among nursing students. Senior nursing students in the last semester of nursing courses have had patient care experiences. Studying how nursing students learn clinical decision making will provide new insight on how students learn the process within the context of the experience.

Conceptual Definition of Clinical Decision Making

In order to study how nursing students learn clinical decision making, I must first define what I believe is clinical decision making. I am conceptually defining clinical decision making as a dynamic and complex thinking process which results in independent and interdependent nursing interventions.

Assumptions

The researcher using hermeneutics attempts to interpret the "concealed meanings in the phenomena that are not immediately revealed to direct investigation, analysis and description" (Omery, 1983, p. 53). The researcher's prime responsibility is to be true to the meaning of the experience as presented by the participants. Heidegger believed that the researcher can never be totally separated from the lived experience by virtue of being human. The researcher comes to the research environment with a set of preconceived beliefs and prejudices termed by Heidegger as "throwness" (Spiegelberg, 1982). Plager described throwness as "approaching a situation with a point of view, from the perspective of a particular interpretive lens that orients us globally toward a phenomena in a particular way" (1994, p. 57).

The researcher must be aware of her/his own throwness and by doing so increases the awareness of these preconceived beliefs. This increase of personal awareness will assist the researcher in discovering the true meaning and understanding for the participants of the lived experience. I have attempted to explicate my preunderstanding or throwness of the concept, clinical decision making among nursing students, through the identification of my assumptions.

1. I believe the clinical environment is the everyday world of nurses and nursing students.

2. I believe clinical decision making must be context laden, because making a decision that is context free does not capture the needs of the patient, significant others, or the nurse.

3. I believe the methodology to investigate clinical decision making must acknowledge and incorporate the context as a part of the whole process of clinical decision making. I can not separate the person (nursing student) making the decision from the environment (clinical situation) in which the decision was made.

4. I believe by encouraging nursing students to share their stories of a clinical decision making situation, the students will gain insight into their perceptions, interpretations, and actions.

5. I believe the major contribution made by the nursing profession is the humanistic and holistic approach to caring for and identifying with the patient. Clinical decision making is an aspect of this contribution.

6. I believe nursing education programs must respond to the current health care environment by preparing nurses who can demonstrate flexibility and expertise in this ever changing environment.

7. I believe nursing education must embrace a new paradigm of education and create an environment that provides creative and expanding education opportunities for student nurses.

8. I believe in a holistic method of teaching clinical decision making which incorporates the perceptions of all participants, encourages an intrapersonal and interpersonal assessment of the situation, and expands the possible options beyond the obvious.

9. I believe that as nursing students are exposed to progressively broader clinical learning experiences, they will gain greater understanding and insight into clinical decision making.

10. I believe the nursing students, the members of the research team and I come to this study with our own background of language, culture, and experiences.

I have identified these assumptions as I continue to search the literature on clinical decision making. Additional assumptions may become apparent to me as I continue to investigate clinical decision making among nursing students.

Summary

In this chapter, I have presented an overview of the statement of the problem, the purpose of this study, and the significance of investigating clinical decision making among nursing students to the discipline of nursing. I have presented Heideggerian phenomenology and hermeneutical analysis as the philosophical approach for the study. Within this discussion, I presented my rationale for using Heidegger's philosophy and phenomenology as the framework and method for this study. I concluded this chapter with an explication of my assumptions associated with clinical decision making among nursing students and nursing education.

CHAPTER II

REVIEW OF LITERATURE

Many research studies focusing on clinical decision making have been reported in the literature. The complexity of clinical decision making and the variables that influence the effectiveness of clinical decision making are reflected by the vast number and types of studies conducted in nursing and other health related professions. Through a review of literature, I have examined the concept of clinical decision making including definitions identified by various nurse researchers. I have also presented additional issues raised by researchers, academicians, and service personnel in nursing and other health related disciplines. I concluded with a summary of what we know and need to know about clinical decision making in the discipline of nursing.

Definitions of Clinical Decision Making

A review of literature conducted by Hamers, Abu-Saad, and Halfens (1994) concluded that there was no one universal definition of clinical decision making. Furthermore, they could not identify any agreement in the literature of the terminology associated with this concept. Terms such as "clinical decision making," "clinical judgment," "diagnostic reasoning," and "clinical inquiry" have been used synonymously in nursing literature (pp. 154-155). The difficulty seems to be created by the use of terms that may be interpreted as both a process and an outcome. An example is the term "clinical judgment" which implies both the process required to come to a conclusion as well as to the outcome itself.

Even with this confusion, several nurse researchers have attempted to define clinical decision making or its synonyms. Lipman and Deatrick (1997) defined clinical decision making as "the process nurses use to gather information, evaluate it, and make a judgment that results in the provision of care" (p. 47). Tschikota (1993) defined clinical decision making as the "formulation of hypotheses and/or the selection of nursing interventions, and included the thoughts that precede choice" (p. 389). Thiele, Holloway, Murphy, Pendarvis, and Stucky (1991) defined diagnostic reasoning as a " complex process that begins with cue recognition and results in clinical judgments" (p. 618). del Bueno described clinical decision making as a "complex skill involving several cognitive phases and an integrative process" (1990, p. 290). Further, del Bueno stated that time in the clinical environment was required to develop competence and confidence in one's ability to make decisions. Whatever the definition, clinical decision making is a complex process with many interwoven variables.

Clinical Decision Making

Clinical Decision Making in Health Related Disciplines

Much of the health related literature on clinical decision making has been characterized by the use of scientific inquiry based on modernist philosophy (Baird, 1996). Laws have been used to explain phenomena, research hypotheses are postulated to find the answer, and scientific inquiry often isolates and investigates only one aspect of the whole phenomena with the modernist philosophical perspective. However, recent literature in selected health related disciplines demonstrates a move from the modernist approach in education and research with the introduction of postmodern philosophical beliefs and the use of naturalistic inquiry in conducting research.

Baird (1996) presented a pilot study which examined how radiography was taught to students in a clinical practicum. Using postmodernism as the philosophical framework and participant observation as the research methodology, the researcher identified the multifaceted experiences that occur in the clinical environment. The results of this study indicated that in the clinical setting, preceptors and students holistically integrated information and did not use a linear process to make clinical decisions. Further research is currently being conducted by the researcher using the same design and methodology.

Occupational therapy is also recognizing the complexity of clinical decision making or clinical reasoning. Much of the Occupational Therapy literature and research has been based on the works of Fleming and Mattingly (Gitlin & Burgh, 1995; Hooper, 1997; Kautzmann, 1993; Neistadt, 1996; Schell & Cervero, 1993). Fleming's landmark study on clinical reasoning suggested that there are "multiple modes of thinking that are for different purposes or in response to particular features of a clinical problem" (1991, p. 1007). Fleming identified procedural, interactive, and conditional reasoning as components of clinical reasoning. According to Fleming, the therapist used procedural reasoning to break a situation into pieces to systematically gather and interpret data. He identified interactive reasoning as the process used by the therapist to learn about the patient as a person. Fleming described conditional reasoning as the therapist's awareness of the social environment and how this environment influenced the patient and clinical problem. Mattingly (1991) added narrative reasoning as a fourth component of clinical reasoning. He described narrative reasoning as the therapist's use of patients' stories to implement an individualized program of treatment. By hearing each patient's story, Mattingly felt the therapist had a better understanding of what the illness meant to the patient. This facilitated the development of a treatment program specifically for the patient. Current research in occupational

therapy has begun to integrate the use of narrative stories to identify patient needs and to link the use of narrative stories with clinical reasoning (Gitlin & Burgh, 1995; Hooper, 1997; Kautzmann, 1993).

A Delphi study identifying the educational needs of respiratory therapy listed critical thinking abilities (defined as analytical skills, problem solving, judgment, and decision making) as one of the five important future cognitive skills required by respiratory therapists (O'Daniel et al., 1992). Building upon the results of the Delphi study, Adams (1995) developed a respiratory therapy curriculum which integrated critical thinking. Meredith, Pilbeam, McCarthy, and Stoller (1996) conducted a study on critical thinking using case study analysis and respiratory therapy driven protocols. Sixty-two respiratory therapy programs and ten acute care facilities were randomly selected from national listings. Individual packets containing six case studies, instruments, and informed consent information were mailed to students and instructors in the respiratory therapy programs and to the respiratory therapy staff in the acute care facilities. Thirty-four respiratory therapy educators, 69 staff members, and 488 students returned usable completed instruments. The results of the study indicated that educators had the highest rate of correct responses with students having the lowest rate of correct answers to the case studies. The researchers suggested that the lack of work related experience and education in the use of the protocols could have influenced the outcome of the study. The researchers urged the continued use of protocols and case study analysis to investigate critical thinking abilities of respiratory therapists.

Mishoe's (1994) qualitative study identified and described the critical thinking skills and traits of expert respiratory therapists. For this study, eighteen registered respiratory therapists were observed in the clinical environment. Upon completion of the observational experience, the

participants were interviewed by the researcher as a means of identifying and describing critical thinking skills used during that time. Using a constant comparative method between field notes and transcribed interviews, Mishoe concluded that clinicians needed a solid knowledge base and critical thinking skills that include "logical reasoning, problem solving, judgment, decision making, scientific reasoning, reflection, and lifelong learning" (Mishoe & MacIntyre, 1997, p. 78). Mishoe suggested that as the role of the respiratory therapist is modified and/or expanded, these cognitive skills are essential for effective clinical practice.

In a recent publication on clinical decision making in medicine, Eddy (1996) developed the premise for the book by introducing the "anatomy and pathology" of a decision (p. 10). He viewed decision making as a linear mechanistic process divided into steps and presented an in depth discussion of the potential pathology in each of these steps. Eddy raised concerns about approaching clinical decision making as a linear process but did not present other alternatives to explain the decision making process.

Clinical Decision Making in Nursing

A wealth of nursing literature can be found on clinical decision making. Relevant studies on clinical decision making in nursing using quantitative and qualitative methodologies are described on the following pages.

Quantitative research on clinical decision making in nursing.

Quantitative research on clinical decision making has been based on the use of decision analysis and information processing theories. These theories divide the process of clinical decision making into linear steps. The research using these theories typically investigated only selected steps in the decision making process.

As early as 1966, studies investigating aspects of clinical decision making can be found in nursing literature. Hammond, Kelly, Schneider, and Vancini (1966a; 1966b) studied the cognitive tasks associated with clinical inferences. In a two part study Hammond and colleagues attempted to identify the types and number of cognitive tasks associated with clinical problems, the cues that differentiated these cognitive tasks from other nursing tasks, and the association between the identified cues and the nursing actions taken in the clinical situation. The results of the study indicated that there was a large number and wide variety of cognitive tasks. The researchers also found that there were no clear relationships between the nursing actions taken and the cues identified. The researchers concluded that there was no one single task or pattern of cues that described the process nurses used to come to a conclusion in the clinical environment.

Westfall, Tanner, Putzier, and Padrick (1986) conducted a study which compared experienced nurses to nursing students. Twenty eight baccalaureate prepared nurses with at least two years of experience and rated as excellent nurses by supervisors participated in the study. Two groups of students, 15 students beginning their junior year and 13 students beginning their senior year, also participated. The three groups were asked to view simulations and to identify the relevant information that lead them to a conclusion about each patient. The results indicated that the experienced nurses identified more complex inferences in each scenario than the students. In discussing the results, the researchers warned against simplifying this complex process. The researchers suggested that in directing the study toward specific aspects of the clinical decision making process (identification of inferences and generation of hypotheses), the complexity of the decision making process may have been lost.

Pardue (1987) studied the clinical decision making ability of 121 female Caucasian nurses practicing in two acute care facilities. The participants were randomly stratified by

educational levels and varying years of experience. Pardue focused on the nurses' self-reporting of frequency of making decisions, perceived difficulty in making a decision, and factors that influenced the decision. The researcher was unable to establish educational level and years of experience as discriminating variables related to clinical decision making. Pardue acknowledged additional research using data gathering methods other than self-reporting by the participants should be conducted.

A study by Holden and Klinger (1988) also attempted to establish the effect of nursing education and experience on decision making by comparing experienced nurses with nursing students. The researchers looked at four different groups of nurses and at how they responded to a computer generated problem on why an infant was crying. Twenty six junior nursing students in their first semester of nursing made up the first group, 23 senior nursing students in their last semester of nursing the second group, 15 nursing students who also had children comprised the third group, and 30 baccalaureate prepared nurses with at least two years of experience in pediatric nursing made up the fourth group. The researchers found that the experienced nurses were the most efficient in solving the problem, while the students with children were the most accurate. There were no differences in the junior and senior nursing students' responses. The researchers found that practical experience, the "know how" in a clinical situation, did influence decision making.

A study conducted by Itano (1989) examined the type and number of cues elicited and the process in making clinical judgments. Thirteen senior nursing students in their last semester of nursing education and 13 experienced nurses participated in this study. Each participant was asked to review clinical data about a patient. An interview between the patient and nurse was taped after the review of the clinical data. Each participant was then asked to listen to the tape

and add any further thoughts to the information collected during the interview. Using the transcribed interviews and the additional information collected, three nurse educators rated the judgment process of each participant. The results indicated that the experienced nurses collected significantly more cues, grouped the cues into similar cue types, and were significantly more accurate in their conclusions than nursing students. While the results of two of the three directional hypotheses were found to be statistically significant, the researcher did caution that external validity may be threatened due to the use of different patient situations and recommended that further research be conducted.

Thiele et al. (1991) investigated the perceived and actual decision making among nursing students through the use of cues. A total of 82 junior nursing students in a baccalaureate program voluntarily agreed to participate by identifying cues they used to make a clinical decision in a perioperative simulation. The researchers found that the nursing students in the study used a high percentage of what had been classified by expert nurses as nonrelevant cues. As with Itano's study, the researchers found that the nursing students were unable to sort or cluster cues into patterns that would assist in making decisions. The researchers concluded that the nursing students did not have a sufficient knowledge base and therefore had difficulty discriminating what information was relevant. The researchers stated that the use of case studies was new to the students which may have influenced the results. Thiele and colleagues suggested further research was necessary after students had sufficient time to become familiar with the use of case studies as a clinical application tool.

Shamian (1991) studied decision making by having participants answer questions about three clinical case studies. Sixty eight nursing students were randomly divided into two groups. One group received a four hour presentation on decision analysis theory and interactive problem

solving. The second group was also involved in a four hour presentation but on an unrelated topic. The researcher found that those students who participated in the decision analysis presentation made significantly more consistent decisions than the group who did not participate. The decision analysis group was also more closely aligned with how expert nurses responded to the three case studies. Shamian also suggested that further research was necessary on the validity of the use of questionnaires to assess clinical decision making and the use of mutually exclusive responses to the questions considering the complexity of nursing practice.

Task complexity and stability as a part of clinical decision making has also been investigated (Catolico, Navas, Sommer, & Collins, 1996; Hughes & Young 1990; Hughes & Young 1992). One hundred one paid volunteer medical surgical nurses with varying levels of education and years of medical and surgical experience from three community hospitals participated in the Hughes and Young studies. Participants were randomly stratified by level of educational preparation. Each nurse was asked to complete a questionnaire which included three simulated patient cases. Results indicated that a majority (55%) of the nurses made stable and consistent decisions. However as the level of complexity of the tasks increased, the level of consistency and stability of the decisions decreased. The researchers found a statistically significant difference between practice setting and stability of decision making. Nurses working on the same clinical unit for an extended period of time made more consistent decisions.

Catolico et al., (1996) conducted a similar study with 26 registered nurses practicing in medical, surgical, and critical care units of one acute care facility with varying levels of educational preparation and years of experience. The researchers found that there were no differences in willingness, frequency, and ability to make decisions between the levels of education but found a positive correlation between a consistent clinical practice setting and

frequency of decision making. The results of both studies indicated that nurses working on a clinical unit for an extended period of time made more stable and consistent decisions.

While these studies added to the body of knowledge about clinical decision making, they all attempted to quantify one aspect of what has been agreed upon as a complex process, a process that was not easily divided into specific sections. Tanner and Lindeman's review of literature on clinical judgment also identified that much of the nursing research has been based upon an assumption that there was a "single process or set of procedures" that can describe, measure and teach clinical judgement/clinical decision making (1987, p. 168). By attempting to look at only one component of the decision making process, the studies may have placed the participants at a disadvantage. The participants may have not been able to gather all of the information necessary to make a decision or to fully understand the information provided. Because of the potential lack of information or lack of understanding of the information, the participants may have been unable to gather all of the data a natural environment would present. By presenting this limited artificial view of the clinical situation, the conclusions made about clinical decision making may not reflect the participants' actual ability to make clinical decisions.

The use of simulations may compound this difficulty in gathering all of the necessary information. The above cited studies used various types of simulations and case studies. While the use of these strategies provided the researchers with some level of control, simulations were being challenged as a means to study decision making. A recent study suggested that the way in which information is provided in a scenario or simulation may influence how the information is interpreted (Lamond, Crow, Chase, Doggins, & Swinkels, 1996). Lamond et al. found that nurses use verbal interaction as a main source of gathering information. When a simulation did not provide this opportunity to interact, the participant may have been at a disadvantage to clearly

understand the situation and conclusively make clinical decisions. The researchers concluded that when simulations or scenarios are used in a study, a method to incorporate this verbal interaction must be built into the simulation to allow the participants the depth of information necessary to come to a conclusion. The quantitative studies cited in the literature review did not report the use of verbal interaction when using the simulations.

Qualitative research on clinical decision making in nursing.

Qualitative research methods have also been used in nursing research studies on clinical decision making. Qualitative nursing research is based upon the beliefs of the naturalistic philosophical perspective. Researchers using naturalistic inquiry believe that the nurse identifies patterns of information and makes clinical decisions based on the integrated understanding of the patient, the environment, and the nurse's perspective in that situation (Harbison, 1991).

Benner's (1984) seminal qualitative study focused on identifying and describing clinical learning and knowledge in nursing. Benner's work gave credence to the importance of the learning of practice knowledge and incorporation of this clinical learning into nursing theory. Benner (1984) conducted paired interviews with 21 experienced and newly employed Registered Nurses and interviewed 51 experienced nurses, 11 graduate nurses, and 5 senior nursing students in small groups. Using the Dreyfus Model of Skill Acquisition, Benner identified five levels of nursing expertise: novice, advanced beginner, competent, proficient, and expert. According to Benner the novice nurse had limited experience with situations and relied on the use of rules to govern actions and to make decisions. As the nurse gained additional experience, the nurse progressed through each stage and reached the final level, the expert nurse. The expert nurse had an intuitive understanding of the situation and responded immediately based upon previous learned patterns of clinical data. Benner (1984) asserted that intuition was valid and should be

recognized as part of expert nursing practice. Benner and colleagues viewed the ultimate development of the expert nurse as a series of interrelated steps. Ultimately, the expert nurse acted differently, thought differently and practiced differently. Benner and Wrubel (1989) continued to examine nursing practice by discussing the "hidden expertise in that practice" (p. vii). The premise of this work was to further acknowledge and articulate the "kind of knowing" by nurses in their actual practice settings (Benner & Wrubel, 1989, p. 41). Benner and Wrubel believed clinical decision making and achieving patient outcomes were important parts of this lived experience and must not be taken out of the context of the whole.

Benner and colleagues continued to study nursing practice and further explored the novice to expert model of nursing (Benner, Tanner, & Chesla, 1992; Benner, Tanner, & Chesla, 1996). One hundred thirty practicing critical care nurses working in neonatal, pediatric, and adult intensive care units participated in the most recent study. Ninety-eight percent of the nurses had a baccalaureate degree in nursing and represented various level of practice including advanced beginner, intermediate, and expert nurses. Small group interviews were conducted (groups of four to six nurses) maintaining the practice levels. Each nurse was asked to tell a story about a specific patient care situation. Forty eight nurses were also interviewed individually and observed on the clinical site. Results suggested that the advanced beginners focused on organizing and prioritizing the required patient care. Great anxiety was produced if the care did not coincide with the plan the advanced beginners had developed. As the nurses' skill increased, the ability to respond to change in the environment took on greater importance. Ultimately, the expert nurses had an immediate grasp of the situation based upon previously observed patient patterns. The expert nurse responded appropriately in the clinical situation by quickly implementing the necessary individualized interventions of care.

In the past 25 to 30 years the most extensive research regarding clinical practice and associated clinical decisions have been conducted by Benner and colleagues (Benner, 1984; Benner & Wrubel, 1989; Benner, Tanner, & Chesla 1992; Benner, 1994b; Benner, Tanner, & Chesla, 1996). These scholars found that rules were needed by nurses when placed in an environment where little was known about the patient and the situation. These studies also identified that experience in one clinical practice environment, with numerous opportunities to integrate caring for and about the patient within the clinical situation, was important in the development of the expert nurse. Experience did not equate the number of years spent in a clinical setting with the development of that nurse within the setting. Nurses, who were effective in clinical practice, cared about their patients, and in doing they also were able to identify more subtle cues from the patient and the practice setting (Minick, 1995). Expert nurses did not wait until the textbook signs and symptoms were apparent to consider and/or implement a nursing intervention. These nurses were confident in their own clinical practice to act upon the subtle cues a patient may demonstrate prior to an actual change in their clinical status. The nurses learned about the patient, the environment, and the interrelationship of all of these factors as part of the clinical situation and the clinical decision making process.

Tanner and colleagues studied nursing practice and used "knowing the patient" as a concept that encompasses embodied knowledge (previously referred to as intuition), expert knowledge, and an understanding of the patient (Tanner et al., 1993). In this study, 130 baccalaureate prepared critical care nurses working in neonatal, pediatric, and adult intensive care units participated. The participants were selected based upon their level of practice which was defined by their years of experience and peer or supervisor recommendation. Small group (four to six registered nurses) interviews were conducted. The small groups were created by

maintaining the level of practice which kept the expert, intermediate, and advanced beginner nurses separated. The nurses were asked to tell a story about their every day clinical practice. Approximately half of the participants were also observed in the clinical environment. Data analysis included careful review of the transcripts by the research team, a separate review of all text by two project staff and review of observational notes made during the clinical experience. Nurses in this study described what it was to know the patient which included "getting a grasp of the patient, getting situated, understanding the patient's situation in context with salience, nuances, and qualitative distinction" (Tanner et al., 1993, p. 275). The researchers concluded that "knowing the patient" resulted in an understanding of the patient that was imperative for effective decision making and individualized care.

Radwin's (1993) dissertation research focused on the strategies which expert nurses used to make clinical decision for acutely ill cardiac patients. Thirteen female registered nurses participated in this grounded theory study. All the nurses worked in one acute care hospital with a primary care environment and had a baccalaureate or master's degree in nursing. The researcher and research team analyzed transcribed interviews, field notes, and hospital documents. The results suggested that knowing the patient led to an understanding of the patient and implementation of individualized nursing interventions. Knowing the patient included four strategies used by the expert nurses. These strategies included empathizing with the patient, matching a pattern, developing a bigger picture, and balancing preferences with difficulties. Participants, a research team, and naive reviewers were involved in the identification of these strategies. A model differing from the traditional theories of decision making was identified in this study. Suggestions on the integration of decision making learning opportunities in classroom and clinical experiences as well as clinical assignments were made.

Radwin (1998) continued to investigate the influence of experience on clinical decision making. In this grounded theory study, experience was conceptualized as chronological time spent in nursing and the knowledge gained from practice. Thirteen female registered nurses who were identified as expert decision makers by their nurse manager were interviewed. Data collection included the transcribed interviews, field notes and other documents from the nursing units. Three characteristics of the nurse with experience were identified; the nurse developed a patient focused care; the nurse learned to be confident; and the nurse recognized the precursors and aftermath of patient situations (Radwin, 1998). The nurse became less centered on personal feelings and concerns and more focused on the patient and the needed interventions within the clinical context.

Watkins (1998) investigated decision making in the community health setting. Twenty-eight nurses with a minimum of six years of experience in community health who were considered experts by their peers participated in this study. The nurses were asked to write about a critical decision making experience and to respond to a guided interview of five questions. Content analysis methodology was used to analyze the data. Eight themes were identified which were based on the nurses' perception of their practice. Clinical decision making was identified as both a rational and intuitive process. The nurses described rational decision making as a series of steps that included a thorough assessment of the patient, identification of nursing actions required to assist the patient in meeting their needs, and evaluation of the patient outcomes. The intuitive aspects of decision making included the expertise of the nurse and patient care approach that viewed the total patient experience. In "knowing the patient", the expert nurses were able to rapidly identify a problem when something was wrong (Watkins, 1998, p. 30).

Studies conducted by qualitative researchers including Benner, Radwin, Tanner and colleagues had implications for nursing research investigating clinical decision making by nurses or nursing students. Several consistent themes emerged from the results of these studies. One apparent theme was that nurses who function effectively in the clinical environment no longer strictly follow the rules. Expert nurses did not wait until the textbook signs and symptoms were apparent to consider and/or implement a nursing intervention. These nurses were confident enough in their own clinical practice to act upon the subtle cues patients demonstrated prior to an actual change in their clinical status. The same nurses were also able to connect with the patient in such a way that they knew the patient, a second apparent theme. The nurses learned about the patient, the environment, and the interrelationship of all of these factors as part of the clinical situation and the clinical decision making process. A final theme, experience in one clinical practice environment with numerous opportunities to make clinical decisions, does much to develop this integrated view of the clinical situation.

Qualitative research on clinical decision making among nursing students.

Two qualitative nursing research studies have been found in the literature that investigated students' ability to make clinical decisions. Brooks and Thomas (1997) used a structured interview to identify the perception and judgment used by students when making a clinical decision. Eighteen senior baccalaureate nursing students voluntarily participated in the study. Each student met the criteria for inclusion in the study by having clinical experience as a student nurse and by being enrolled in an accredited program. The students were asked to read a clinical simulation and respond to open-ended questions about the simulation. Each student interview was audiotaped and transcribed. The researchers then completed a content analysis of the interview transcripts. Results indicated that no two students viewed the simulation the same

way. Responses were individualized based upon the intrapersonal characteristics of that student. The researchers identified seven categories of intrapersonal characteristics that influenced how the students perceived the clinical simulation. The seven categories include "experience, personal values and beliefs, personal belief regarding pain, sources of intrapersonal knowledge, culture and lifestyle, religion, and personal knowledge or knowing" (Brooks & Thomas, 1997, p. 56). The results indicated that it was the interrelationship of all of these categories that influenced the perception of the situation and ultimate decisions made by the student. The researchers concluded that nursing education should create and expand learning environments to support and encourage the intrapersonal development of students as they learn to make clinical decisions. The researchers encouraged using teaching strategies other than the nursing process and suggested incorporating the presentation of content as clinical stories. Students and faculty together could discuss and reflect upon the meanings and implications of the clinical situation, and by doing so, would bring a broader perspective to the clinical situation. Faculty could then guide and support students as they develop a greater understanding of the whole clinical situation and the decisions required in that situation.

Haffer and Raingruber (1998) investigated the influence that confidence had on the students' development of clinical reasoning. The total student enrollment and faculty involved in a two hour elective nursing course on clinical reasoning participated in this study. Data collection included the participants' written journals completed during the course, class discussion, and videotapes of class participants. Gaining confidence in oneself in the clinical environment emerged as a major component of the process of clinical reasoning. The results indicated the nursing students gained self-confidence which led to increased confidence in the clinical environment, thus enhancing the clinical reasoning process.

Summary of nursing knowledge on clinical decision making.

Effective decision making is a complex process and critical in the clinical environment. Research conducted in nursing and other health care professions attempted to identify the essential steps in the decision making process. Using quantitative methods, researchers in nursing and other health care professions conceptualized the clinical decision making process as a series of several steps. The purpose of studying each of the steps was to identify methods to create or enhance an educational process that would better educate individuals in clinical decision making. While these studies have added to the body of knowledge on clinical decision making in the discipline of nursing, the inconsistent findings from these studies suggested that the linear approach to decision making did not fully capture the complexity of the process. In addition, the integration of information seemed to be lost when selected components of the process were investigated.

With the use of qualitative research methods, the concept of decision making was viewed as integral to the relationship between the nurse and the patient. The concept of "knowing the patient" represented the interrelationship of the patient, the environment, and the nurse in the clinical situation. The nurse integrated knowledge, experience, and embodied knowledge to quickly assess the situation and implemented interventions based upon previously learned patient patterns. While this approach captured the essence of the clinical situation, the complexity of the situation can be overwhelming.

Minimal nursing research was found on clinical decision making among nursing students. One study investigated the perceptions and judgment used by students when making a decision. A second study looked at the influence of nursing students' self confidence on clinical reasoning. Specific gaps in the literature included research on how nursing students learn and implement the

clinical decision making process. This proposed study on the clinical decision making among nursing students will build upon the current body of nursing knowledge on this concept. Continued nursing research will add to the understanding of the actual process of clinical decision making and to the identification of the educational environments that support the nursing students in developing effective clinical decision making skills. Building upon this body of knowledge, nurse educators will develop learning strategies to enhance clinical decision making among nursing students that is required in the current and future clinical environment.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

The purpose of this study was to identify the essential components associated with learning clinical decision making among nursing students currently enrolled in a baccalaureate nursing program. Heideggerian phenomenology and hermeneutical analysis provided the philosophical perspective and method for this study. Because clinical decision making was embedded in the every-day world of the nursing student, this phenomenon was best revealed by examining the experiences of the nursing students.

In this chapter I present the setting for the study, the participants, participant welfare, the procedure for data collection, and data management. I conclude with a discussion on trustworthiness as defined by Lincoln and Guba (1985). This study was funded in part by a small research grant from Sigma Theta Tau International.

Setting

The university selected for this study was a private, Carnegie level II liberal arts college located in the Midwest with which I had no connections as a faculty member. The baccalaureate nursing program has been in existence since 1953 and has been accredited by the National League for Nursing since 1960. This particular nursing program was selected partly because this is a basic baccalaureate nursing program. There is no registered nurse (RN) completion component offered

through this educational program. I felt the clinical situations presented by nursing students in their first program of study might be influenced if this program had RN students integrated into fourth year nursing courses. Registered nurses, returning to school to complete their baccalaureate degree, bring years of clinical experience to the classroom setting. By participating in classes with the traditional nursing students, the RN student might influence how the traditional nursing student perceive and report the clinical situation. Because this is the first study in my research program, I chose to investigate clinical decision making among senior nursing students who did not participate in classes with RN students.

Participants

All of the senior nursing students in their last semester of nursing courses were asked to participate voluntarily in this study. I sought to recruit students who could articulate their clinical decision making experience and represent racial and gender diversity.

Because this study was the initial study in the development of a research program focusing on clinical decision making among nursing students, only senior students were asked to participate. Future studies in this research program will investigate clinical decision making among students at other levels of the educational process.

The final sample size was determined by the number of students who were willing to participate and by the emergence of themes with the ongoing analysis during data collection. Once no new themes emerged, the data were considered complete, and no new participants were recruited (Morse, 1989).

Participant Welfare

Institutional Review Board approval was obtained from Georgia State University (Appendix A) and the university (Appendix B) where potential participants were enrolled. I

presented my study to the students during a prearranged class time. In order to reduce any undue influence on the students, the nursing faculty member conducting the class was asked to leave while I spoke to the students.

I explained the study, clarified my role of nurse researcher in this study, and communicated my lack of association with this nursing program during the presentation. I communicated to the students that participation in this study had no influence over the grades they would receive for any nursing course or their progression through this nursing program. I also communicated that whether they chose to participate or not participate in this study would not influence their grades or progression in this nursing program. The students were informed they could withdraw from the study at any time without influencing their grade or progression in the nursing program.

The students were not offered money or any other type of incentive for participating in the study. I explained that the benefit of participating in this study was the opportunity to share a clinical experience during their nursing education. This sharing could be beneficial for them and would also provide insight into their perception of the clinical experience. There were no known risks associated with participating in this study.

I obtained a written informed consent from each student who participated. I informed the students that to maintain confidentiality for the students in any study reports or publications, the name of the student participating in the interview would be changed. Clinical sites such as hospital units or clinics would also be changed or not specifically listed. Students were also informed that the names of patients or other health care professionals would be changed or removed to prevent identification of any individuals or institution. A copy of the informed consent may be found in Appendix C.

Prior to beginning each student interview, I obtained a verbal consent from the student. I re-emphasized that student names, clinical sites, patient names, and the names of other health care professionals would be changed in reports to maintain confidentiality. Once the student verbally acknowledged understanding of this information, I proceeded with the interview.

I am the only person who knows the names of the students and which student participated in each interview. The audiotapes of the interviews are kept in a locked file cabinet to which I have the only key. Copies of the transcribed interviews were given to members of the research team. All information that could potentially link a student with a transcribed interview were deleted or changed.

Procedure for Data Collection

After initial introductions, the faculty member left the room, and I explained the reason I was conducting the study to the 32 students who comprised the senior nursing class. After responding to all questions raised by the students, I distributed a written informed consent requesting permission to interview and audiotape to each student. While they were signing the consent forms, I asked the students to write a phone number and times that I could contact them to arrange an appointment for the interview. I provided my office and home phone number to those students who did not sign a consent form at that time. I informed the students that anyone who chose to participate at a later date could contact me to schedule the interview.

I conducted a pilot study with two senior nursing students from this class. The two students had signed informed consent forms and were willing to be interviewed almost immediately after hearing my classroom presentation. Upon completion of the two interviews, I listened to the taped interviews, transcribed some of the dialogue myself, and dictated journal entries about my perceptions of the interviews. From this pilot study, I recognized the difficulty

students were having relating to the interview guide questions. I concluded phrases such as "clinical decision making" or open-ended statements such as "tell me about a time when" created discomfort for the students. With this discomfort, they either had difficulty remembering a time in the clinical environment when they were involved in decision making or continued to ask questions of me to insure they had selected the "right" clinical situation. From these conclusions, I modified how I initially began the interview process. With the remaining interviews I began by asking the students general questions about their current clinical rotation which then led to a discussion about a particular patient situation.

During the pilot study, I contacted the remaining students by phone to schedule a time and place for the interview. I conducted the interview at a site that was convenient and comfortable to the student participant. The sites selected by the students included a small private office area on campus or a conference room in the campus library. I began each initial interview with a verbal consent to be taped and with questions about demographic information. I used the modified sequence of questions to begin the discussion of the current clinical experience which then led to the students telling me about a time when a patient or clinical experience challenged their nursing knowledge and skills. I did not interrupt the telling of the story. Upon completion of the story, I asked follow up questions based upon the situation described to me and questions from the interview guide to insure that the information for the research questions was gathered. This interview guide (Appendix D) was modified from the guide developed by Benner, Tanner, and Chesla (1996).

Throughout the data collection process, I maintained a journal which contained my thoughts while preparing for each interview, my perception upon completion of each interview, and any ideas, decisions, insights, or concerns that I had during the research process (Lincoln &

Guba, 1985). Journal entries were made by dictating into a tape recorder. These entries were then transcribed by me and a copy of relevant written entries placed in each student participant's file along with the written transcript of the interview and the summary I wrote. Names of the students were changed in the journal entries and were consistent with the transcribed interview.

My journal entries also discussed my perceptions and thoughts as I was conducting the interviews. One such documented observation was the use of the word "comfort" to describe the clinical environment. After one-third of the initial interviews were completed, I realized that the students frequently used the word "comfort" when describing how they felt on a clinical unit. I began to use the word "comfort" in the remaining interviews. I began to present an observation to the students by relating that other students had told me being comfortable in the clinical environment was very important. I would then ask the students if being comfortable in the clinical environment was important to them. After hearing the student response, I asked them to describe what being comfortable meant to them and to clarify the components of the clinical environment that aided them in gaining this comfort.

All of the nursing students who participated in the study were sent written copies of selected portions of the interpretations that address the identified themes. Approximately one week after the copies are mailed to the students, I contacted the students by phone. I asked each student to tell me about the interpretations and if the interpretations were true to their perceptions of the clinical experience.

Data Management/Analysis

Hermeneutical analysis is a system of interpretation to describe and to understand human phenomena (Allen & Jenson, 1990). The goal of hermeneutics is to achieve understanding of the significance of the skills, practices, or experiences of the participants while remaining true to the

participants' perception of that experience (Plager, 1994). The data in this study were analyzed by a research team using a hermeneutic interpretive process used in nursing research by Diekelmann and colleagues (Diekelmann & Allen, 1989; Rather, 1992). The research team was comprised of a nurse researcher with expertise in phenomenological research, a doctoral student also using Heideggerian phenomenology and hermeneutical analysis as the methodology for her study, and myself. The research team was used in this study to encourage dialogue, foster insight, and add credibility to the interpretative research study. A nurse, who is an internationally known expert on Heideggerian phenomenology and hermeneutical analysis, served as a consultant for this study.

Each audiotaped interview was transcribed and saved on a computer disk. I listened to each interview with the written transcript to clarify words and verify the accuracy of the written transcription. I was involved in the process of listening to and verifying of interviews already transcribed as I was conducting the initial interviews with remaining student. This process assisted me in improving the depth of the subsequent interviews. A computer software package was used to manage data. Each interview was coded. Upon further review these codes were collapsed and initial themes were identified.

The identification of themes was accomplished through the constant comparative method (Lincoln & Guba, 1985). This method combines the researcher's movement between the whole data, the identified parts of data selected from the whole, and back to the whole data to insure that the interpretation of the pieces remained true to the whole experience as related by the participant. The data analysis for this study was based on the seven step process outlined by Diekelmann and Allen (1989) and extended by Minick (1995) and Harvey (1997).

Stage One: I initially read all of the transcribed interviews. From this reading, I wrote a

summary of each text. Members of the research team and consultant wrote a summary of selected transcribed interviews.

Stage Two: Members of the research team met and read selected summaries aloud. In reading the summaries aloud, members of the research team participated in dialogue about the interpretation of the interviews. The dialogue among the members focused on areas of consensus and discrepancies within each interview. With most interviews members of the research team focused on the same student statements. If the interpretation of these excerpts varied among the members, further sharing and reading of the summaries was completed by the team members to clarify the interpretations. The members of the research team were encouraged to question and challenge each other's interpretations to minimize over interpretation and under interpretation.

Stage Three: Further discussion by the members of the research team was conducted during this stage of the data analysis. Similarities and discrepancies within the summaries were identified. Discrepancies were addressed by returning to the text for clarification and further dialogue by the members of the research team.

Stage Four: With the completion of the first level analysis, I used a computer program to code each interview. A code book was established identifying the codes and a short definition of each code. Once a code was established, that code was used in each interview to mark a section that presented similar information. "Gaining self-confidence" was the title of one code. This code was used in each interview when the students discussed gaining self confidence in the clinical environment. New codes were added as new information was identified. A total of 52 codes were identified for the seventeen interviews.

Stage Five: I printed the interviews segments associated with each code and concentrated on the common meanings among codes. I also returned to the summaries written and the excerpts

from my journal. I also had further dialogue with members of the research team. I used these strategies to assist me in the analysis and collapsing of the codes. I then began to analyze the data across interviews. The 52 codes were initially collapsed to 15 codes. As an example of how the initial codes were collapsed, two codes of the original 52 codes were "student trusting nurse" and "nurse trusting student." I collapsed these two codes into a new code titled "trusting each other". The 15 codes were then collapsed into 5 codes. To continue the example presented above, the code "trusting each other" was then collapsed into a code titled "building relationships with staff" The five final codes are presented as themes in Chapter IV as study findings.

Stage Six: With the identification of the final themes, I wrote the findings of the study using three narrative strategies, paradigm cases, exemplars and thematic analysis, as identified by Benner (1985). A paradigm case vividly portrays a "particular pattern of meanings" (Benner, 1985, p. 10). The whole paradigm case is presented so that important aspects are not lost. Once a paradigm case is identified, other cases not as clearly articulated may be recognized. An exemplar is a short narrative that describes one meaningful experience for the participant. Exemplars are particularly important when looking across text. The reader is able to recognize similarities in situations where the details within the experience might be very different. Thematic analysis is the identification of "meaningful patterns, stances, or concerns" across cases. (Benner, 1994b, p. 115). I used thematic analysis as the final step in presenting the themes or salient patterns for this study.

As I wrote the interpretation, paradigm cases and exemplars were used to support the findings. I also returned to the literature and cited from specific sources to support my findings. The draft of my interpretation was read by the members of the research team. I also had an experienced nurse educator read the interpretation. While not a qualitative researcher, this nurse

educator has had over twenty years of experience in nursing education and has been involved in previous studies on clinical decision making among nursing students. Comments from the members of the research team and the nurse educator were reviewed and incorporated into the final writing. Any discrepancies were discussed and consensus achieved before the integration of the comments.

Stage Seven: Three students who participated in the study read the final draft of the interpretation. As participants of the study, they are the best authorities to identify whether or not the interpretation has remained true to their experience. The students verified that the final writing of the interpretation remained true to their experiences.

Methodological Rigor

Qualitative research has gained acceptance in many of the practice disciplines including nursing (Sandelowski, 1997). In reporting the meaning of the lived experience of the participants, qualitative researchers are ethically responsible to adhere to methodological rigor while conducting the study. This methodological rigor assures that the reader will be able to follow the audit trail established by the researcher while conducting the study and identifying the themes. To maintain rigor and remain true to the participants' experiences, I used the trustworthiness criteria (credibility, dependability, confirmability, and transferability) established by Lincoln and Guba (1985).

Credibility

Credibility is established when the researcher's interpretation reflects the participants' experience. I used several methods to establish credibility for this study including prolonged engagement in which I met with each participant at least twice, during the initial presentation of the study and privately during the initial interview. I also conducted more than one interview

with selected students. I kept a journal during the collection of data which provided further details about each participant and my thoughts about the interviews. I met and had ongoing dialogue with the members of the research team during data analysis. I met and had dialogue with the nurse consultant for this study. Finally, I conducted "member checks" with students to verify that the experiences the students related were captured accurately in the data analysis. Each of these methods was used to insure that the interpretations of the interviews presented the truth as perceived by the participants.

As a nurse educator, I was able to relate to the clinical experiences described to me by the students. My experience as a clinical instructor provided insight into the language and culture of the clinical environment as described by the students. Several students stated they felt I would understand the situation they were presenting because I was an instructor and had experienced similar situations.

Dependability

The second criterion, dependability, is concerned with the documentation throughout the study. One method to establish dependability was creating an audit trail (Koch, 1994). Sandelowski described a study and the findings "auditable when another researcher can clearly follow the decision trail used by the investigator" (1986, p. 33). For this study I maintained a journal throughout the study which documented the evolution of the research project, the decisions made during the project, the supporting evidence and reasons for the decisions I made, and detailed information about how the data were interpreted. I also presented detailed descriptions of the selection of participants, data collection, and data management in this chapter. From this information the reader has insight into the decisions I made during this study.

Confirmability

Confirmability, the third criterion, is concerned with the ability to establish quality of the data and to verify the interpretations. Koch described comfirmability as the "signposts indicating research decisions and influences present throughout the study and the entire study should function as an inquiry audit" (1994, p. 978). Members of the research team and a consultant wrote and analyzed the interpretations, coding, and exemplars in this study. An experienced nurse educator read the study findings and provided feedback. I also contacted three students to verify the themes identified by the research team. I maintained an audit trail to establish confirmability by supplying detailed information about the data gathering and interpretation process.

Transferability

Transferability, the fourth criterion, is concerned with having sufficient data so other individuals reading the study may identify similarities and apply the identified themes between contexts. Because only the consumers of the research can say if the findings will be useful for them, the readers of the research report should always be considered active participants in the study (Rather, 1992). As a qualitative researcher, I am responsible for creating an extensive description of the study that reflected the "meaning which is characteristic of human existence" (Minick, 1992, p. 26). After reading the report, the reader makes the decision to apply the results to other contexts. For this study, I presented full descriptions of the context so that the readers might be able to determine whether the findings could be transferred to their setting.

According to Sandelowski, qualitative research has both scientific and artistic dimensions (1995). To establish scientific validity, the scientific dimension included a systematic "approach to inquiry" that can be documented for the reader while the artistic dimension involves creativity

(Sandelowski, 1995, p. 375). With these dimensions the interpretation of the phenomena should elucidate the experience by "making the familiar more familiar, making the familiar strange, and/or revealing what is hidden" (Sandelowski, 1995, p. 375). The ultimate goal is to remain true to the participants' experiences. The ultimate outcome is to add to the body of nursing knowledge. Lincoln and Guba's four criteria for trustworthiness were used to maintain that systematic approach to inquiry and remain true to the meaning of each participant's experience.

Limitations

Three students who initially signed a consent form to participate in this study withdrew from the study. Upon further consideration, two of the three students felt they did not have the time to participate in the study. The third student was unable to identify a time that we could meet. Their voices and experiences with clinical decision making as a nursing student were not heard.

Another limitation was the homogeneity of the sample. The students who participated in this study were from one baccalaureate nursing program. A majority of the students lived in the same geographic area and were of European American descent. Only one student was of African-American descent. Only one of the students was male. The homogeneity of this group of students limited the diversity of data gathering for this study.

Summary

In this chapter, I presented the setting for the study, the study participants, and the methods used to insure participant welfare. I continued with a description of the data collection and data management process. I concluded with a discussion of the measures implemented in this study to maintain trustworthiness and limitations of the study.

CHAPTER IV

FINDINGS AND DISCUSSION

In this chapter, I present the findings of this study. Five themes were identified through the interpretative analysis of the 17 student participants' interviews. The five themes were: gaining confidence in skills, building a relationship with staff, connecting with the patient, gaining comfort with self as nurse, and coming to understand the clinical picture.

I begin this chapter with a description of the study participants followed by a description of the context of the study. The five themes with exemplars from the student interviews, an interpretation, and relevant nursing literature are then presented. I conclude this chapter with a summary of the five themes associated with clinical decision making among nursing students.

Characteristics of the Participants

Seventeen senior nursing students, 16 female and 1 male, participated in this study. Sixteen students were of European-American descent and one student of African-American descent. Fifteen of the students were between 21 to 24 years of age, one student was 27 years old, another student was 37 years old. None of the students had any type of previous degree in nursing. One student had worked as an Emergency Medical Technician prior to entering this nursing program. Fourteen of the students had worked as a patient care assistant or technician in a hospital or nursing home setting. Only two of the students had worked in these roles prior to entering the nursing program. Three students had no experience working with patients except

during the clinical rotations in each nursing course. Sixteen of the students were from the tri-state (Indiana, Kentucky, and Illinois) area, with one student from Michigan.

Context of the Study

All of the nursing students were seniors completing their last semester of course work in this baccalaureate program. To complete the clinical requirements of this semester, the students were assigned to one of the three acute care hospitals. The students were in a clinical setting for four hours on one evening (3 p.m. to 7 p.m.) and returned the next day to care for the same patients (7 a.m. to 3 p.m.).

Each student had a six week clinical rotation in the critical care units. The student was assigned one patient each week and worked predominantly with the critical care nurse also assigned to that patient. The remaining six weeks was a management clinical rotation. During this clinical experience, the students were expected to ultimately assume responsibility for the care of four patients. The students selected the patients they would care for that week and again worked closely with the nurse assigned to these patients.

In both clinical rotations, ten nursing students comprised the clinical group for one instructor. One to three students were assigned to each nursing unit so the clinical instructor made periodic rounds to check on the students and was also available through a paging system. Because the students were geographically spread throughout the hospital, the clinical instructor could not be present on all of the units during the entire clinical time. As a result, the clinical instructor encouraged the students to work closely with the nurses assigned to the same patients.

The Interview Environment

All 17 of the interviews were conducted on the campus of the university as requested by the students. Fifteen of the interviews were conducted in an office made available to me by the

chairperson of the nursing program. This office was easily accessible for students but was not close to the cluster of offices that were assigned to the nursing faculty housed in the same building. Access to the office was such that no one could monitor which students participated in the study or what the students said during the interview. The fifteen interviews were conducted during the week typically after the students had completed classes for the day. Two students preferred to conduct the interview during the weekend. I met each student outside of the university library where I had arranged to use a small conference room. Both the student and I would then proceed to the conference room together.

I had the audiotaping equipment ready and tested prior to the arrival of the student. I also arranged the room so that the student and I were in comfortable chairs and facing each other. The taping equipment was visible and placed to the side, so that once we were involved in the interview, the equipment did not appear to interfere with the student or myself participating in the interview. I was unable to prearrange the setting in the library, but the conference room used for each interview supported this same arrangement.

Although all of the students expressed interest in assisting me with my research study, every student who participated in the interview initially seemed somewhat uncomfortable. Several students indicated to me prior to the beginning the interview that they hoped they had the right answers for me. Other students told me this was the first time they had ever been interviewed so they hoped they did it right. I explained to the students that each individual story was important and because it was their personal story, whatever they said would be important to my study.

I also talked to the students about how I would probably ask them additional questions during the interview. I explained to them that my questions were intended to clarify certain

statements they may have made or to encourage them to verbalize more about the clinical situation they were describing.

I began each interview with a short review of the purpose for the study and verbal permission from each student to tape the interview. I then began a general discussion of their feelings about completing their last semester and how many days they had left. As the students began to relax, I would move the interview into a discussion about their current clinical rotation. I asked the students to tell me about their assigned patients during the most recent clinical week. From this discussion, I then asked each student to tell me about a patient situation that stood out for her/him during this semester. In some instances, the students continued to relate information about the most recently assigned patient(s). Other students talked about a particular patient they cared for at sometime during the semester.

All of the nursing students were able to relate a story about a clinical experience. Eight students were able to relate a clinical experience with minimal questioning by me. These students described their clinical experience in detail. Following my interview guide, I asked very few questions of these students because they had already provided me with the information. Five students were able to relate a clinical experience to me, but they did not provide as many details about the experience as the eight students described above. Returning to my interview guide, I then asked a series of questions to elicit the details that enriched the sharing of their experience. The students were able to provide the additional information as a result of my questions, or they remembered other aspects of the experience as they were responding to my questions.

Four interviews were more difficult for me. The four students related a clinical experience to me with many of the details not included in their initial discussion. When I began to ask questions to clarify the information in their story, the students could not seem to answer

these questions. They had difficulty remembering the details of the experience. I attempted to ask the same question in different ways hoping that each of the four students would provide the details of the experience. In each case, the student could not remember the details of the clinical experience. One of the four students became agitated when I began to ask questions to elicit additional details. I could sense by her restlessness and loss of eye contact that she was uncomfortable with my questioning. I concluded the interview shortly after I recognized her nonverbal cues. She immediately left the office area after the tape recorder was turned off. I was unable to ascertain what was specific about my questioning that made her so uncomfortable.

As I read and reread the transcribed interview, the details missing from these four interviews became very important. I realized the details provided by the students in the other interviews vividly portrayed the clinical experience when compared to the missing data in these four interviews.

Each of the 17 interviews was transcribed. The data from the interviews were then analyzed by the research team. From this analysis, five themes were identified as components associated with clinical decision making among nursing students.

First Theme: Gaining Confidence with Skills

The importance of feeling confident with their nursing skills in the clinical environment was identified by a majority of the nursing students. When the students were asked to describe what skills they thought were most important, they identified two types of skills: technical and communication skills. The students explained that if they could enter a patient's room and feel confident in completing a technical skill or initiating a conversation with a patient, they could focus on the patient instead of the mechanics of that skill or the guidelines of therapeutic communication.

An important finding in this study was the students' ability to shift their focus from their needs in the clinical environment to the patient's needs when they felt confident with their technical and communication skills. Nurse educators have long recognized the students' need to learn the technical nursing skills required to care for and communicate with a patient. Typically, initial nursing courses introduce the students to the nursing skills required to function in the clinical environment. By introducing these nursing skills early, the students can practice repeatedly in the clinical environment.

In this study an additional aspect of gaining confidence with nursing skills became apparent. When students felt confident in their ability to complete nursing skills, they described a shift from focusing on themselves and what may happen to them in the clinical environment to identifying and responding to the patient needs. Callie described how this confidence in her technical skills allowed her to direct her attention to other patient needs.

> I think I got more practice with my technical skills so I didn't have to think about the steps in doing the skills, I just did them. . .Going into clinical this year, I did not have to worry about these skills; I could concentrate on other treatments and patient care.

Callie described the confidence she gained by continued practice with the technical skills. She did not have to concentrate on the mechanics of the procedure. With this confidence, she could direct her attention to the needs of the patient. Gen described how she felt comfortable giving a bath and making a bed.

> I felt comfortable in clinical, because I knew how to deal with the patient. I had some of the basic fundamental skills that I needed. . .I knew how to give a bath and how to make a bed. . .you are then able to deal with more and focus on the patient problem.

Because Gen knew she had the skills to provide fundamental care such as giving a bath and making a bed, she recognized she could then focus on the patient's needs and concerns. These

students related the need for gaining confidence with the technical skills in the clinical environment. In gaining this confidence, they focused less on the mechanics of the procedure or the protocol of the unit. They were then able to direct their attention to the needs of the patient.

When students lack confidence with completing a nursing skill, they focus on their feelings of anxiety in not knowing what to do, or their concern that they will make a mistake. Because the students become so focused on their feelings and their needs, they are unable to direct their attention to the patient. Gwen described how she felt when she was uncomfortable in a situation.

> If you are uncomfortable you are so preoccupied with "Am I doing something wrong?". . .If you are uncomfortable and nervous or scared, you can make a medication error or you can do anything to potentially hurt the patient or yourself. When you are comfortable, it gives you more time to assess your patient thoroughly.

Gwen described her concern for herself and her fear of making a mistake. Her attention is directed toward her needs and fears. Mindy also was concerned about herself and not making errors in the clinical environment.

> There was one [patient] who had an aorta bypass. They thought she had an ileus and this was her sixth day with a nasogastric tube. . .I didn't want to mess up anything else that had already been started. Anytime before I would go into the room I would ask my nurse questions about the care that needed to be given at that time. I hoped I didn't mess up.

Mindy's concentration on her not making mistakes precluded her from actually seeing the patient. She had difficulty describing the patient in terms other than as a disease process or relating any specific patient information about how the patient felt or what concerns the patient might have had in the situation. When students are so focused on themselves, they can not see the patient. They concentrate on meeting their own needs due to their discomfort in the clinical environment or in completing a technical skill.

Communication skills were also important to the students. To be able to enter a patient's room and begin a conversation with a patient or family was difficult for students. Eve described how it took her two years to be able to walk into a patient room with confidence and know that she could talk to the patients. Gen described how working as a nursing assistant helped her to converse with patients and families.

> As a nursing assistant, I worked in a long term health care facility and oncology unit. Working there has helped me to understand and talk to the patient and family. You get into a variety of situations. . .Families are there with questions and problems, and you are dealing with death and dying. There is a whole magnitude of issues in that setting.

By having had the opportunity to be involved in some of these situations, Gen learned how to effectively converse with the patients and families about their concerns. Gwen also attributed her comfort with patient's to her employment as a nursing assistant in the critical care unit.

> As far as feeling comfortable communicating with the patient and talking with families, I think working really helped me to do all that.

Gaining comfort with their communication skills gave the students the confidence so they could direct their attention to the care of the patient in the clinical setting.

This shift from focusing on their needs to the needs of the patient is critical. Clinical decisions are dependent upon identifying and understanding the clinical situation. If students are so focused on themselves and their needs, they are unable to see the patient or the clinical situation and to understand the significance of the factors or patient needs in that situation.

There is a delicate balance between the students' confidence with skills and their comfort in the environment. Students described the confidence they gain with their nursing skills when in a consistent environment. Andrea explained she had to learn the routine of the nursing unit before she felt confident with the technical skills of vital signs and charting.

> Then I got a good feel for the unit, when do they take their vitals, when do they chart. I know that now, but it took me three weeks to be on that floor to really get the feel of it. It is just repetition and how that floor specifically does things. That has a lot to do with it.

After Andrea was oriented to the unit and learned the culture and expectations of the unit, she felt comfortable in the clinical environment. With that comfort, Andrea was then able to focus on the technical skills including vital signs and charting. Elsa also described the need to have comfort with the technical aspects of the clinical environment while she was in the critical care clinical rotation.

> If you are not comfortable in the clinical unit, you spend the whole time worrying about "am I allowed to do this?" or "can I touch this?" or not touch that. That is how I was the first couple of weeks in Intensive Care. There is so much equipment that you don't really know which ones you can touch, which alarms you can silence, which alarms you can not silence. I think once you are comfortable in your environment you can really spend time on what you need to be focusing on which is the patient rather than the environment.

Elsa recognized that when placed in an unfamiliar environment, she focused on her needs and her fears. Once she was comfortable in the environment, she became less self-focused and could direct her attention to the needs of the patient.

When the clinical environment is changed, the confidence the students have with their technical skills may be lost. Gwen described her loss of confidence in herself and her skills when she moved to a new clinical setting

> When I was moved out on the floor, I didn't know what I could do. I didn't really feel comfortable. It was different. . .I was just as scared and intimidated as everybody else. I thought, "I am going to have four patients; who do I see first and what do I do?". . .I felt really scared and really nervous. I felt really incompetent.

Gwen was placed in an environment where she was not familiar with the expectations and routines of the unit. Because everything felt unfamiliar to Gwen, she doubted her own ability to implement nursing skills. The confidence she had in herself and in her ability to implement

clinical skills was temporarily lost. When the students had confidence in themselves and their skills, the students directed their attention to the care of the patient. Without this confidence, the students focused on their personal fears of doing harm to the patient.

The nursing students' focusing on their needs is consistent with the seminal work by Benner and colleagues on identifying the levels of proficiency (novice to expert) in nursing (Benner 1985; Benner, Tanner & Chesla, 1996). Benner concluded that the novice and advanced beginner rely on context free rules taught in nursing education. When novices or advanced beginners are placed in a clinical environment, they have difficulty identifying the relevant information within the context of the situation. Everything is new and strange to the novice and advanced beginner, so they are unable to sort out pertinent information. As the novice and advanced beginner gain experience and participate in clinical situations, they begin to recognize the importance of specific patient aspects. The novice and advanced beginner can then direct their attention to the patient and the patient needs.

These findings are also consistent with Wilson (1994) who used ethnographic interviewing to study the clinical practice experience as described by 30 senior nursing students. Wilson found that students had six major goals for clinical practice experience. The goal receiving the highest priority was "to cause no harm" (Wilson, p. 83). In Wilson's study, the students' greatest concern was the possibility of causing injury to a patient due to lack of knowledge or skill.

The participants of this study also articulated their concern in making errors and focusing on their needs. By gaining confidence in completing technical skills, the students felt they were better able to function in the clinical environment and assess the patient more thoroughly. The students were able to shift the focus from their needs in the clinical environment to the needs of

the patient. With the identification of patient needs, the students could then care for the patient and implement nursing action that addressed the patient needs.

Second Theme: Building Relationships with the Staff

Students also related the importance of the nursing staff during the clinical rotation. Developing a relationship between the student and the nurse was critical for the student to assume responsibility for patient care. Once the nurse was willing to commit to the relationship, student learning was enhanced and the students continued to gain confidence in themselves and their clinical skills. Two subthemes emerged from the data. These were teaching clinically salient patient patterns and creating a partnership with students.

Subtheme One: Teaching Clinically Salient Patient Patterns

Students emphasized that the nurses from whom they learned were the ones who were willing to describe their thought processes as they were managing a clinical situation. By sharing their perceptions, the nurses were teaching the students to prioritize clinical information into patient patterns. Terry described the process of learning to identify heart rhythms with the assistance of a nurse who explained her process of identification.

> We are studying heart rhythms; I was not feeling comfortable with them. . .I would read about them and I would just get confused. . .I would read every single detail about every single different rhythm. . .I was explaining to the nurse during clinical that I just did not understand these things. She told me the way to understand is to learn one unique characteristic of each heart wave. Nobody ever told me that. I thought I had to know all these different things.

By sharing her method to distinguish abnormal rhythms, the nurse assisted Terry to understand the distinctive characteristics of the abnormal heart rhythms and to recognize the development of patterns which aid the nurse in the clinical environment. Terry also learned to identify and to prioritize essential information.

By prioritizing essential information, the students began to understand the nursing actions implemented in each clinical situation. Sandy described observing two clinical situations where nurses reacted immediately to the clinical picture presented by the patient. At the time Sandy did not understand how the nurses knew to manage each situation as they did. Sandy was unable to discern what patient information was important and which was unimportant. Therefore she did not understand why the nurses knew and how the nurses knew to implement the necessary nursing actions. The nurses talked through the process of what they saw and told how they knew what to do once the patient was stable.

> There were two situations on the Progressive Care Unit where patients returned to the unit after a heart catheterization and started to have heart arrhythmias. The nurses acted quickly and very calmly. I was thinking, "How did they know to give all this medication?" Later on, the nurses went through the situation and told me what they were doing.

Once the immediate crisis was over, the nurses were willing to describe their perception of the situation and why they chose that particular nursing action. Sandy learned about the unique pattern of signs and symptoms for that patient and why the nurses responded to that pattern in both of these clinical events. Sandy described the benefits from having these experiences.

> I have really benefitted from the nurses who have given me explanations for what they were doing. I realized that they weren't going through the necessary steps as described by a textbook, but through their discussions I knew that they were thinking through the process.

Sandy recognized that the nurses were processing the information at a different level than she was as a nursing student. As a novice, Sandy viewed the clinical situation through the context free rules learned in the nursing education courses. Through experience the nurses recognized a different clinical situation which required an immediate response. Because the nurses were willing to describe their thought processes, Sandy gained insight into the clinical situation and

the management of that situation. Diane also described a similar experience with one of the nurses with whom she worked in the Intensive Care Unit.

> She would explain what she saw and what she thought about the patient really well. If I had a question about something and she did not tell me then, she would explain it if I asked her.

The willingness of the nurses to share their expertise was important to the students in understanding and learning about the clinical situation. The nurses sharing their perceptions in the clinical situation assisted the students to gain a beginning level of understanding into the patient patterns of symptoms and responses. The students then understood why the nursing actions were taken in that particular situation.

According to Benner, the novice nurse is unable to differentiate the salient clinical information (1996). The novice is unable to prioritize information because the presentation of clinical information in the classroom setting does not depict the unique components of each clinical experience. With experience the novice begins to recognize the importance of prioritizing clinical information on their understanding of the situation and on their decisions to implement selected nursing actions. As the nurse gained expertise, salient clinical information is identified and placed into patient patterns which guides the nursing actions implemented. In this study, the expert nurses shared their perceptions of the clinical experiences. In doing so, the nurses were teaching the students to prioritize the clinical information into patterns which then directed the implementation of selected nursing actions.

A recent study by Dunn and Hansford (1998) investigated students' perceptions of their clinical learning experience. Results indicated that a major influence in establishing a positive learning experience for students was the willingness of the nursing staff to participate in a teaching relationship with these students. Nurses who were willing to share their observations

and perceptions of a clinical situation with the student were identified as the most supportive in the clinical environment.

In this study if the experienced nurse verbally shared her thought processes while in the clinical situation, the student nurses were able to enhance their level of understanding beyond their textbook picture of the disease process. By listening to the nurses describe the clinical situation, the students began to recognize the patient patterns and appropriate nursing actions within the context of the clinical situation.

Subtheme Two: Creating a Partnership with Students

The students described the importance of the nursing staff working with them in the clinical environment. The students perceived they were valued in the clinical environment if the nurses were willing to commit to working with them. The students believed the nurses had confidence in them and their abilities. When nurses indicated they were confident in the students, their self confidence improved and student learning was enhanced. Gen described how the nurse created this partnership:

> The nurse was real positive and a professional. She would ask me if I would like to do this or learn this; we would do this together. . .It was like a team effort.

The nurse created an environment in which Gen knew she could participate in new experiences and be supported through the process. By working together, the nurse shared her nursing experience and served as a role model for the student. Elsa also identified the support and encouragement received when the nurse and the student work together.

> The nurses I was most comfortable with were the ones who had confidence in me. They didn't tell me "you need to do this", they didn't force it on me but they said "this person needs to be suctioned; would you like to do it? Would you like to learn? I'll help you". . .The nurses who encouraged me and said "I'll be there if you need me" helped a lot. . .I need that resource person just in case.

The nurse having confidence in Elsa encouraged her to actively participate in the clinical experience. Because of her active participation, Elsa broadened her learning opportunities in the clinical environment.

Karen related an experience in which the student, nurse and the patient worked together in caring for the patient. The patient had just had a radical neck procedure for extensive cancer. This was Karen's first experience with this type of surgical procedure and working with a tracheostomy.

> I had been with this nurse other times. . .I told her I really didn't feel comfortable doing trach care. I removed the inner cannula but I was scared to replace it. She went ahead and replaced the inner cannula. She explained all this to me. . .I explained to him [the patient] that I was a nursing student and that the nurse and I were working together. . .The nurse and I joked with him. . .that helped to build our relationship and helped intertwine the three of us together.

Karen and the nurse had created a partnership in which they felt comfortable communicating with each other and sharing information. In doing so, they communicated this comfort and encouraged the patient to join them. By everyone working together, the patient received quality care and Karen expanded her nursing knowledge.

While a majority of the experiences of building a relationship were with the nursing staff, Callie related a situation where she created a partnership with a physician who encouraged and supported her in the clinical environment.

> He is more like a teacher doctor; he likes to teach students. . .I was asking questions when he was not right in the middle of suturing or doing a real delicate procedure. When he was more relaxed I was asking him "what are you doing, why are you doing it that way, what part of the heart are we looking at?" I felt comfortable asking that sort of questions. . .In the Intensive Care Unit, he started to ask me questions about why the patient's blood pressure was up and what should we do. . .He made me feel from the beginning that it was okay, because he was there to teach, I was there to learn, and we were there to work together.

Callie and the physician created a sharing and learning relationship and together they cared for

this patient. Callie learned about the clinical situation and about her own abilities to apply her knowledge in the care of the patient. The physician gained insight into Callie's understanding of the patient and was able to provide a learning environment that broadened her application of her nursing knowledge.

As novices, the nursing students in this study were bound by rules (Benner, 1984; Benner, Tanner, & Chesla, 1996). The students learned these guidelines through reading a textbook and classroom presentations. They did not have the situational experience as described by Benner to recognize what was relevant information or necessary interventions. A majority of the students in this study were able to join with an experienced nurse who was willing to share his or her insight and understanding of the clinical event. In each of these clinical situations, the staff nurse and the student created a partnership in caring for the patient. With this partnership the student learning was enhanced and their level of comfort on the clinical unit increased.

The creation of this partnership was based upon trust by both the nurse and the student. This trust was foundational in creating an environment in which the nurse and student shared in the care of the patients and created learning opportunities for the student. This trust was built between the nurse and the student by working together and learning about each other over a period of time in the clinical environment. Diane described an experience in which the nurse knew her and was comfortable in letting her assume greater responsibility for the care of the patients.

> Last week I worked with a nurse and stayed with her. . .She knew what I was doing. . .She knew right where I was supposed to be and what I needed help with. It helped that the nurse knew what I had done before. . .She was confident about my work.

Diane realized that the nurse trusted her after having worked with her for a period of time. The

nurse and student formed a relationship with each other so the nurse had confidence in Diane. As the nurse became more familiar with Diane, the learning experiences and sharing of information expanded. Callie had a similar experience when she remained with the same nurse for four weeks.

> I had the same nurse four out of the five weeks I was there. It was nice because she knew I needed to start an IV. "We are going to get this done, and you are going to learn how. . .I know you haven't had this sort of a heart patient, and you need to learn how to take care of them, so I am going to give you this person today."

Callie recognized the advantage of having a nurse who was comfortable with her and would plan clinical opportunities for her. By creating a partnership built upon trust, Carrie's learning experience in the clinical unit was enhanced. Karen had a similar experience when she completed a clinical rotation on a nursing unit where she worked as a patient care technician.

> I was fortunate that I had my clinicals at a hospital where I had worked. . .the nurse knew me well enough to know my capabilities. Some of the things they wouldn't let other students do they let me go ahead and do it.

Because the nursing staff was familiar with Karen and had learned the level of care this student was able to provide, they were more comfortable finding opportunities and creating learning experiences for her.

When there is no trust or when the partnership has not been developed between the student and the nurse, valuable learning experiences are lost to the student. Darla and Gwen both related their frustration at not being able to assume responsibility for the care of their assigned patients. Darla spoke of not being able to learn from the clinical experience.

> The nurse I was with that day is kind of skeptical of students. She took charge of a lot of the pain medication...So it worked out but she just took charge of the pain medication as far as administering it...I did not know their process as far as getting him ready for surgery, so I felt a little lost. The nurse had two other patients that had gone bad, so she was stressed....I felt like I was in her way, so I stood back

> and watched the things I didn't know. If there was something I could do, I helped her. If she had not had the other two patients that had gone bad it would have been a better learning experience. I could have done more.

Because Darla and the nurse were unable to create a working relationship, the nurse did not know or trust her to assume the patient care responsibilities. Gwen had a similar experience when she worked with a new nurse her last week of clinical.

> That last week was just kind of a let down for me...I did not feel comfortable that last day when I took four patients because the nurse that I had been working with the first five weeks wasn't there the very last week. I was with a whole different person. She didn't know anything about me. She didn't know what I had been doing in the past or what I was capable of doing so she kind of babied me. Just basically let me give the medicine and chart and that was it. She still took the phone calls from the doctors. She still called the pharmacy, and she did the things that I should have been doing that I should have been comfortable doing.

If the student and nurse can not create a partnership, the richness of the learning opportunities in the clinical environment are lost to the student. The students also do not gain the confidence in themselves or in their clinical abilities.

In both situations, the students attempted to explain what they were capable of doing and what they felt comfortable completing. Darla described how she attempted to assume more responsibility by explaining to the nurse.

> I told her that we could do everything and she could check all of my meds and she could check all my charting. I tried to explain what our [the students] responsibility was in this clinical experience. . .she told me she would take care of all the pain medication.

The nurse was not convinced that Darla could manage the patient care responsibilities. This was the first week that Darla worked with this nurse. Neither the nurse or Darla could find a common ground that provided a foundation to build the relationship that supported Darla's assuming responsibility for the patient care.

Staff nurses are an important component of the clinical experience for nursing students. In a study conducted with sophomore nursing students, nurse researchers found that students relied heavily on the nurses to guide them in the clinical environment, to orient them to the unit culture, and to share their knowledge and understanding of the clinical environment (Neill, McCoy, Parry, Cohran, Curtis, & Ransom, 1998). Dunn and Hansford (1997) found similar results in a study conducted on students' perception of the clinical learning experience. The relationship developed between the students and the nurse or other health care professionals was rated as most influential by the students. The student participants identified three important attributes for the nurse or health care professional in creating a positive clinical learning experience. These attributes were a willingness to develop a rapport with the student, to seek out additional learning experiences for the student, and to engage in a teaching relationship with the students (Dunn & Hansford, 1997).

For the students in this study, the staff nurses were particularly important because of the organization of the clinical experience. The staff nurses and students who were able to develop a partnership, based upon trust and confidence in each other, solidified the relationship. When this partnership was established, the nurse was willing to commit time with the student, sought out additional learning experiences, and engaged in a teaching relationship with the students. From this support the students gained confidence in their clinical capabilities and were able to assume more responsibilities in the clinical environment.

Third Theme: Connecting with the Patient

The students related clinical situations in which they connected with the patient. This connection was created by learning about the patient. Learning to connect meant coming to "know the patient." In knowing the patient, the students learned how to implement independent

nursing care. When the patient and the student connected, the patient taught the student the "how" of nursing.

In the next section, the student stories of connecting with the patient and family are followed by the stories of students who were unable to connect with the patients. The stories in which students were not able to connect with the patient are presented here to provide an understanding of what is missing when that connection does not occur. When the student was unable to connect with the patient, the student had minimal insight into the needs of the patient or understanding of the clinical picture.

Stories of Connection

Karen described how the patient, nurse and student worked together in the Intensive Care Unit to provide his care. The patient had extensive surgery and was unable to talk. Karen was initially afraid to go into the room. Upon completion of the clinical experience, both Karen and the nurse connected with this patient.

> The three of us developed a relationship, and it helped intertwine the three of us together. . .We learned how to communicate with him. . .He had enough gestures that we could figure it out. If he wanted something adjusted, like he would move his hand from the side of his face toward me and that meant he wanted to sit up more. . .The nurse and I learned together, and I think that comforted him too.

Karen learned how to listen to this man through his gestures. After learning his particular gestures, Karen was more confident in the care she provided. By Karen connecting and coming to know the patient and his particular gestures, she learned how to provide individualized nursing care.

In another interview, Gen described two patients in which she identified patients' needs by listening to and understanding what they were saying. The first patient was a young man who was homeless and just diagnosed with insulin dependent diabetes. When describing this

situation, Gen perceived that the nurse was focusing on the recent diagnosis and the need to complete the teaching before the patient was discharged, not on the person. Gen saw a young man who was a newly diagnosed diabetic. In listening to this patient, Gen realized the patient had other concerns that were more important to him and needed to be addressed before he could begin to contend with the treatment of his diabetes.

> He was telling me about his experiences and talking about his life. "I normally don't take help. What am I going to do? I want a place to stay. I am usually working...Being homeless is different for me. I know I need to make some changes in my life, but I also need to get these other issues resolved."

Gen heard the concerns of this young patient. While she recognized that the teaching was important, she realized that his priorities were to find a place to live and support himself. Gen recognized that until he had a sense of resolution with his living arrangements and finding a job, his diabetes was not his priority. Gen learned that following the established protocol for a newly diagnosed diabetic which includes teaching about diet and insulin injections does not always meet the needs of the patient. These protocols can not respond to the complexity of each individual patient situation. Gen also learned that while diet and injections are important for the newly diagnosed diabetic patient, the person who has the disease and their concerns are more important. Through the referrals initiated by Gen, the young man was placed in the community and was able to manage his diabetes.

Gen also related a second experience where she listened to a patient and identified his concern about a scheduled procedure.

> He was a retired farmer with a cellulitis down to the bone. . .He wouldn't sign a consent form for a procedure...He kept saying "I don't want to have this done". I was talking to him, and I found out what he wanted was more information. He wanted the doctor to sit down and explain to him exactly what was going on

> before he signed anything, because his father died of an invasive procedure. He thought this was an invasive procedure when in fact it was not. All he wanted was more information.

For some reason, potentially due to different backgrounds, the nursing staff could not hear the patient concerns. In talking with the patient, Gen discovered that he was afraid to sign the consent because he thought he was going to die like his father from an invasive procedure. Because she connected with this patient, she spent the time with him to discover his concerns and fears. With this discovery, the connection between the nurse and patient became stronger. The patient realized that Gen was concerned about him and heard his fears. In this situation Gen realized her listening to the concerns of the patient, his past, his present, and what he thinks the future might hold is more important than the physical care. Once the patient understood the procedure, he did sign the consent for the procedure.

Sandy related an experience in which there was shared learning which supported the connection between the patient and the student. During this hospital stay, the patient began peritoneal dialysis and assumed responsibility for completing the exchanges. The patient taught Sandy about doing the exchanges.

> He would tell me when to put on my mask. "Now don't forget to put on your mask and you can't touch this." He knew exactly. He told me what to look for in the fluid and what not. He did the exchange without difficulty. He had to change the types of solutions he used depending on his glucose level or his weight.

Sandy understood that the patient was proficient in managing this aspects of his care. As she continued to talk to him, she recognized that he had a problem following the recommended diet. Sandy realized he knew the diet, but he needed assistance with making the diet fit within his life style and family needs.

> He knew what he was supposed to be eating. He would tell us, and we would have the quizzes, and he would repeat back to us what he was supposed to be eating. I

> realized even though he did understand it, he was having a hard time switching over. He had a large family with seven children. He said it was really hard for his wife to cook that much food and hold a little bit aside for him. He was having a hard time following the diet. . .I went down the list of the different foods he could eat rather than the foods he couldn't eat, showed him how he could make the food more palatable, how to add spices to them and even how to prepare them.

Sandy connected with this patient and in doing so was able to identify the subtle difference between the patient's not knowing the diet and the patient's not being able to use the diet. Once she recognized his needs, she was able to focus her teaching to meet his needs.

Andrea also described how she individualized her care for a patient. She discussed a clinical situation with a challenging intubated patient in the Intensive Care Unit. Andrea learned the patient's preferences and the gestures which communicated her needs. As Andrea learned the patient, the patient gained confidence in Andrea and her ability to care for her.

> She got really frustrated at me, because she knew I was a student nurse. "I want the nurse." I could understand that. . .She knew I was just a student nurse, and I went and got the nurse or my instructor. . .My professor still couldn't understand her, but it made her feel better.

As the day progressed and Andrea continued to provide care to the patient, Andrea began to learn the patient gestures. By the end of the day, Andrea knew the patient.

> About the time I left, I got comfortable with her and she got comfortable with me. She knew Ativan decreased her respiration. . .She wanted Tylenol around the clock. So I gave her Tylenol first and then I gave her Ativan. . .after a while I knew what she liked and she liked her tissues by her because of her drainage. I learned what she liked and I got comfortable with her.

By remaining in the clinical environment and eventually learning the patient's preferences and needs, Andrea connected with this patient. Andrea identified methods to demonstrate her caring for this patient such as recognizing where she wanted her tissues placed. The patient also learned about Andrea and began to gain confidence in Andrea's ability to care for her.

In another story of connection, Adele described a situation where she served as a patient advocate. A mentally challenged patient had just returned from surgery. Upon entering the Recovery Room area, the patient was having pain and needed pain medication. The patient became loud and was disturbing the other patients in her request for pain medication. The nurse assigned to recover this patient did not respond to the patient's needs. As a nursing student, Adele felt she needed to intercede so the patient's needs would be met.

> I am working as a student nurse. I was trying to be real gentle, get her warm blankets and be nurturing, because I can't get her pain medication as a student in that type of situation. . .I sat on the edge of her bed and tried to say something that was within my professional limits. I tried to make her feel that everything was going to be okay. . .I talked to another nurse that was working with us that evening and asked her to check on the patient. . .The nurses actually swapped patients. The patient received the pain medication and relaxed.

Adele connected with this patient and recognized the patient's needs. While she was unable to give the pain medication, she did implement nursing actions within her realm of responsibility. As an advocate for the patient, Adele initiated action that resulted in the patient receiving attention and care from another nurse.

Another student, Susan, connected with the family of her assigned patient. The patient had a series of strokes after recovering from a serious myocardial infarction. The strokes suffered by the patient left him unresponsive and near death. Susan cared for the patient by keeping him as comfortable as possible. She cared for the family by serving as their advocate.

> I stayed in there with him [the patient]. . .I just sat right there by the bed talking to him. . .I couldn't help the patient but the family. . .the wife could not stay in there very long. She said it upset her to watch him. I told her "I'll be here. I am not going anywhere. I'll be here." I would go out and get the family when the doctor came in or when something changed. It just made me feel like I was being an advocate for them.

Susan realized that connecting with the patient included caring for the family. In connecting with

a patient, Susan became aware of the clinical situation as a whole. In this situation, the whole meant more than just the patient in the clinical environment. Susan understood the importance of the family and their needs. She recognized that there was little that could be physically done for the patient other than comfort measures; while the family needed an advocate. When the physician prescribed the patient to be extubated, Susan talked to the wife.

> I told her "You do realize that when I extubate him, he may not take another breath?" She said she understood, and she did not want to be in the room. . .I told her I would come and get them when I was done. . ."What ever happens I will come and get you." When it was all over and he had died, they were getting ready to leave, she hugged me. She said "You have been wonderful." The brother said "We couldn't have done this without you." That to me was part of it, I mean that made me feel really good.

Susan connected with the family by remaining with the patient until his death and by giving the wife permission to leave her husband's room. The wife knew that Susan would be there, her husband would not be alone.

The students learned and cared for the patients and families. In doing so, the students connected with the patients and were able to identify their individualized needs. Connecting with the patients meant the students communicated verbally or nonverbally that they cared about the person. Benner's definition of caring "means people, interpersonal concerns and things matter" (Benner, 1994a, p. 44). The students communicated to the patients that they mattered as a person and their concerns were important.

The students came to "know the patient." The concept "knowing the patient" has been described as "the nurse's understanding of the specific patient and the subsequent selection of interventions" (Radwin, 1998, p. 591). Knowing the patient means that the nurse learned the "typical pattern of responses by the patient and learned about the patient as a person" (Tanner, Benner, Chesla, Gordon, 1993, p. 273). The students who related stories of connecting with the

patient learned the patterns for that specific patient. In doing so, the students provided individualized care to the patient and learned the "how" of nursing. The students learned to respond to the unique characteristics and needs of the patient. By identifying these characteristics, the students moved from following the rules in the clinical environment to implementing patient focused nursing care.

A recent study by Wilkes and Wallis (1998) investigated how nursing students actualized caring in the clinical environment. Results indicated that students demonstrated caring by "communicating, providing comfort, being competent, being committed, having conscience, being confident, and being courageous" (Wilkes & Wallis, 1998, p. 586). Haag-Heitman and Kramer (1998) described caring as "a relationship with patients and families that is grounded in 'being with' not 'doing to' a patient (p. 41). As students, the "doing to" is still important by virtue of the expectations of the clinical rotation and the need to gain confidence in their skills. In this study, the students who connected with the patients and families were beginning to have insight into the importance of "being with" the patients and family.

Stories of Not Connecting

In contrast to the stories of connecting with patients, some students told stories of not connecting with patients. The students who did not connect to the patients had difficulty describing the patient other than as a disease process or treatments to be marked off on a chart. The students could not relate to the clinical history of the patients nor could they describe the patient as a person. Terry identified the four patients selected for the previous clinical week.

> Two of them were MIs. When they came in they were short of breath. Just your typical MI symptoms. . .My third patient, she is a pneumothorax. She is going to be very interesting to work with tomorrow. My fourth patient also has congestive heart failure, and she has some kidney failure.

Terry objectified the patient into disease processes. According to the language used by Terry, the patient is the disease. None of the other information about the person seemed relevant. When questioned further about why the one patient sustained a pneumothorax, Terry was unable to provide this information even though the medical record including a patient history had been reviewed.

> I am not exactly sure how she got the pneumothorax. When I was reading her history, I could not pick up on some of the clues that maybe I should have picked up on. . .she was just admitted earlier today, so tomorrow when I am actually with the nurse, I will find out exactly how she got the pneumothorax.

While the patient was a new admission, Terry did not obtain information about what happened to the patient. The history was present in the medical record. In addition, Terry did not ask the patient about how the pneumothorax was sustained. One interpretation of this situation is that Terry was unable to relate this information because the patient was seen only as a disease process, not as a person. Because Terry was unable to connect with the patient, the details of the clinical situation were not relevant to Terry. Another interpretation of why Terry was unable to relate information about the patient may be an attempt by Terry to answer the interviewers questions objectively.

Darla also described her patients in terms of their disease processes rather than as persons with a disease.

> Two of them were pancreatitis and one was a COPD patient and the other was pulmonary fibrosis with an old CVA.

The language used by Darla also indicated that she was unable to provide any information about the patient as a person, because she focused on the disease. Without seeing the patient as a person, Darla is unable to identify the patient, patient patterns and the appropriate nursing actions. Mindy also presented her patients as disease processes.

> There was one [patient] with chest pains who was confused. There was one [patient] who had an aorta bypass, they thought she had an ileus and this was her sixth day with an nasogastric tube. There was one [patient] who had a mass in her stomach. There was one [patient] who had a carotid surgery.

One interpretation of this situation is that Mindy's language demonstrated her inability to view the patients as people with individual needs. Another interpretation is that Mindy perceived this as the expected response to the interviewer's question.

Beth also objectified the patients by creating a chart. In discussing the use of her chart, Beth gave the perception that she was assured that the patients were receiving care they need.

> I have my chart of medication and times; that is how I keep all that organized. So I made sure my two other patients were given their medications and the assessments completed. . .They were not acute and they did not need my attention as much. They did get everything they needed.

Beth's perception is that the patients are not acute, so they are receiving adequate care by marking off the assessments and medications on the chart. When asked, Beth was unable to relate any information about the patient, insight into the potential for complications, or the psychosocial needs of the patients.

After I indicated that most of Terry's story was objective rather than connecting, Terry proceeded to tell a story that he considered caring. During the time Terry was on the unit, the nurse identified that diet teaching was important to the patient and his wife. Terry described how the necessary dietary changes were presented.

> I just told them, "Here is the situation just to be really blunt with you. If you continue eating the way you are, you will have a heart attack, plain and simple, and it will be a massive heart attack". . .The decision in helping them is saying "Look we are eating bad and that is the primary source of his problem; by making a decision to eat healthy you can cut down on that."

Terry is unable to separate himself from the patient: "We are eating bad." As a result, Terry is unable to experience the patient as an individual with individual needs. It would seem that Terry

also did not learn from this patient. Terry's notion of caring and connecting is certainly different than the story told by Gen in caring for the patient who was homeless and a newly diagnosed diabetic.

The students who had difficulty connecting used language that described patients as disease processes or tasks to be completed on a chart. When asked to provide further details about the patient, they were unable to do so. Terry described two patients as "just your typical MI patients." When asked how they made decisions about the care the patients received, Beth referred to her chart of medications and assessments. There is no distinction between patients.

Rubin (1996) described finding nurses who "failed to make distinctions between their patients" which resulted in the nurses "never coming to experience the patients as individuals (p. 176-177). The nurses in Rubin's study concentrated on objective data and were never able to differentiate the meaning of the clinical situation to the patient and the patient response. In a study of early recognition among critical care nurses, Minick (1995) found similar results. The nurses in this study who were unable to connect to the patient had difficulty recalling when they felt they had made a difference in a patient situation.

The stories of not connecting by nursing students suggests a similar type of processing of information. When students see disease processes rather than the individual or the uniqueness of the person, they are unable to learn from the patient. The students who focused on the objective care of the disease by passing medications and completing assessment had minimal insight into their role as caregiver or in their potential to affect patient outcomes.

Fourth Theme: Gaining Comfort in Self as a Nurse

As the students gained confidence in the clinical environment, they also began to gain comfort with themselves in functioning as a nurse in that environment. The students began to see

themselves as a nurse and assumed the nursing role. They recognized they were capable of caring for the assigned patients. Andrea reflected on her feelings as she is beginning to integrate all of the information in the clinical environment.

> I was no longer concentrating so much on the medications, and so much on the assessment, and so much on patient care, and so much on the nursing diagnoses, that had already happened. Now that came together, and now I can put the documentation together and all goes together.

Andrea realized that she was beginning to view the whole clinical situation. In doing so, she understood that there was more to the whole experience than just looking at the pieces.

Karen described an experience in which she was initially uncomfortable with the patient and questioned her ability to care for him. Upon completion of the clinical experience, however, she had gained the confidence of the patient and Karen talked about how much she had gained through the experience.

> I was reading through his chart. I don't know cancer; I have never had to deal with a trach and then I saw him. . .He had staples like all over his face and down his neck and chest. I was like "I don't know if I can do this." I didn't honestly feel comfortable with him that night. I wanted to feel comfortable. . .It wasn't until I was in the room for the first 45 minutes, and I could begin to see what was going on with his care. . .The nurse explained a lot to me, and she said I could do it...the three of us developed a relationship, and it helped intertwine the three of us together. I explained to him that I was a nursing student. "I know the other nurse and I know how to care for you."

Karen initially objectified the patient and focused on her fears in the clinical environment. In her discomfort, she could not relate to the patient as a person. As her comfort and confidence increased, the patient became a person. With the support of the nurse, Karen found within herself the nursing skills and confidence to care for this patient.

In another interview, a student talked about her ability and her confidence to manage a clinical situation in which a patient was to be extubated and would probably die. Susan reflected

that she had been in this experience before, so she was comfortable in assuming the nursing role to implement the physician's orders and to support the family.

> The biggest part of it is that I have just been there. I can honestly say I was in that position before, so I knew what was going to happen when I extubated him. . .The second time you are more comfortable with a procedure or treatment and you can deal with the other things like the family. When you are scared to death yourself, that is all you are concentrating on, and you can't help it really.

Susan recognized that having lived through a similar experience, she knew what to expect. With that knowledge, she knew she could manage this current situation and direct her attention to supporting the family.

Using qualitative methods, Haffer and Raingruber (1998) investigated clinical reasoning among 15 nursing students. The researchers found that developing effective clinical reasoning as students was associated with gaining confidence in the clinical environment and in their nursing abilities. The researchers reported that the students gained confidence in themselves through the relationships, situations, and activities in the clinical environment and classroom setting that is a part of their everyday world.

Six students in this study demonstrated a beginning integration and understanding of the everyday world of nursing. The students began to recognize the activities, skills, and patient patterns in the clinical environment. This understanding supported the students as they assumed responsibility for patient care. These students also began to gain a sense of who they were and began to see themselves as a nurse in the clinical environment. In the exemplars presented in this theme, the students assumed the nursing role. They recognized they were capable of caring for the assigned patients.

Fifth Theme: Coming to Understand the Clinical Picture

As the students gained in knowledge, experience, and self confidence, they demonstrated a greater understanding of the clinical picture. Elsa described a situation on a surgical floor when she finally understood the difference in patient responses and when the nurse should be concerned about those responses.

> I was on a unit where they were all surgical patients. We had a lot of women with hysterectomies that we had to check for residual urine by catheterizing the patient. My first patient had a 60 cc residual, and the nurse was concerned about that. But then the next patient had a 50 cc residual, and the nurse was not concerned. . .I began to go back through the clinical information to understand why the nurse was concerned with the patient who had a 60 cc residual and not the other patient who had 50. . .I went back and looked at the patient the nurse was worried about, the procedure she had done and read the documentation. . .There was a different clinical picture with this patient. I learned to look at the whole patient rather than just the one factor like urinary output.

Through this experience, Elsa began to recognize the salient patterns of patient information that precludes an understanding of the clinical picture. When Elsa was able to recognize the differences between patients, she began to understand the rationale for the different clinical decisions made by the nurse. Callie also began to recognize the importance of thinking about the clinical picture rather than just the current clinical situation. After working with the physician, Callie stated she focused more on thinking about and applying the information to the clinical picture.

> Like now in clinical I focus more. Even in class taking notes I focus on what is this patient going to look like and what am I going to look for. If something develops, what am I going to expect to happen and what am I going to do in response. Whereas before it was kind of memorization. Now it is application of what I have learned. . .We were talking in class about renal failure and different renal problems. That night my patient started having acute renal failure. . .I thought I do know what these values mean, and I do know what will result if not treated.

Callie is beginning to understand the clinical picture as a whole, not by just putting the pieces of

information together but by integrating the clinical picture an imagining what the patient would look like. In recognizing that the clinical picture is more than the sum of the parts, Callie has greater understanding of what she needed to anticipate in providing patient care.

Diane spoke about an experience of understanding the clinical picture by describing how she processed through the clinical experience. The patient was in the Intensive Care Unit for severe respiratory distress and had been placed on a ventilator. The patient was unable to speak to Diane but through gestures had indicated something was wrong.

> His facial expressions were changing, kind of agitated where he was calm before that. I had him last night for four hours and he wasn't complaining at all last night. It helped that I had seen him before; I could notice the change in him. . .Like this morning he pointed to his abdomen. He had an endotracheal tube in, so he could not talk. He was rubbing his abdomen. I asked him "Does it hurt, is it tender?" I realized his abdomen hurt. I felt his abdomen and it was really firm. . .I thought the first thing was to look at him again and try to figure out what he was doing, what is he really experiencing. . .there is something else wrong, what is it? I have got to figure out what it is. How am I going to do that? He can't talk, so I am trying to think of the questions. What could I ask him to help me to know what he was feeling?. . .Actually the nurse figured out the problem was a clogged foley catheter. . .I was thinking more along the GI function. . .I had not seen the output from the night shift and the nurse had; she knew that it was low. . .We had talked a little earlier about the fact that he had not had a bowel movement in a couple of days, so that is why I was thinking that. . .I guess if I was given the opportunity to figure out the questions, I might not get them all, but I start to think before someone just gives me the answer. Obviously you try to figure it out yourself. Each time you solve a problem you will remember it more.

While Diane's conclusion was incorrect, her ability to describe the process she went through exemplifies the interactive, interconnected processes that is part of understanding the clinical picture.

The concept "knowing the patient" has been described as "the nurse's understanding of the specific patient and the subsequent selection of interventions" (Radwin, 1998, p. 591). In a study by Tanner, Benner, Chesla, and Gordon (1993), "knowing the patient" was a major theme

in the development of expertise in critical care nurses. The critical care nurse learned the two ways of knowing the patient, the "typical pattern of responses by the patient and learned about the patient as a person" (Tanner, Benner, Chesla, Gordon, 1993, p. 273). In doing so, the nurse made effective decisions regarding the care of the patient. Further research has identified experience as a major component in this process. Radwin found that with experience, the nurse "developed a patient centered focus, learned to be confident, and identified antecedents and consequences of specific patient situation" (1998, p. 591). The decisions made by the nurse were enhanced by understanding this clinical picture.

While the students in this study have not had the experience of registered nurses, they have had experiences. The students were able to build upon these experiences to begin to understand the clinical picture by recognizing the pattern of responses of each patient and by learning about the patient as a person. In understanding the clinical picture, the students also began to understand the appropriateness of the decisions made in the clinical environment.

Summary

In this chapter, I presented a description of the participants and the context in which this study was conducted. Five themes were identified from the students' stories of their clinical experience. The themes were gaining confidence in skills, building a relationship with staff, connecting with the patient, gaining comfort with self as nurse, and coming to understand the clinical picture.

The first theme " gaining confidence in skills" described how important gaining self confidence with technical skills and communication is to the students. As their self-confidence developed, the students were able to direct their attention to the needs of the patient. When students concentrated on the patient in the clinical environment, the nursing staff and patients

also began to gain confidence with the student. This exchange between the student, the nurse,

and the patient supported the student and enhanced the student learning in the clinical environment.

The nursing staff was an important component in the students' development as presented by the theme " building a relationship with the staff." In creating this nurse-student partnership, the nurse was willing to invest the time to share perceptions and experiences and to identify additional learning opportunities for the student. In turn, the student learned from the nurse and gained more self confidence. The students perceived this commitment by the nurse to mean they were valued and could meet the challenges of the clinical environment. The nurses who enhanced student learning by encouraging and supporting the student felt the students were worth the extra time and effort.

The third theme of "connecting with the patient" identified the student caring for the patient. The students who connected with the patient were beginning to realize the importance of knowing the patient as a person and integrating this knowledge with the physical care. In listening to or learning about the needs and preferences of the patient, the students demonstrated to the patients that they cared about them as an individual. In turn, the patients were more inclined to trust and to have confidence in the student. This trust and confidence by the patient led to the student learning the how of nursing. If this relationship between the patient and the student could develop, the quality of care provided by the student and the learning from these experiences was enhanced.

Theme four was titled "gaining comfort in self as a nurse." The students began to recognize the importance of integrating their knowledge, perceptions and skills to broaden their

perspective of the clinical environment. As this integration of the pieces occurred, the students became comfortable seeing themselves in the role of the nurse. When the student became comfortable in the nursing role, they could concentrate on the patient and begin to understand the clinical picture.

The final theme "coming to understand the clinical picture" described how the students began to know the patient. The students began to recognize patterns of symptoms and responses by the patient and to realize there were similarities and differences between these patterns and the clinical situations. The students also began to understand the processing of patient information that led to the implementations of nursing interventions in a given situation.

The students in this study made decisions about the identification and implementation of nursing interventions. Returning to my conceptual definition of clinical decision making, the students in this study demonstrated a thinking process that resulted in independent and interdependent nursing interventions. The five themes identified in this chapter illustrate the dynamic and complex process of clinical decision making.

CHAPTER V

IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to identify how nursing students learn clinical decision making. Seventeen senior nursing students in their last semester of baccalaureate nursing courses participated in this study. The transcribed interviews were analyzed by a method described by Diekelmann and Allen (1989) and modified by Minick (1995) and Harvey (1997). Five themes were identified: gaining confidence in skills, building a relationship with staff, connecting with the patient, gaining comfort with self as nurse, and coming to understand the clinical picture.

The research questions guiding this investigation were (a) what clinical decision making situations are identified by senior nursing students? and (b) what essential components are associated with learning clinical decision making among senior nursing students? These research questions were identified in this initial study of my research program after I found minimal research on clinical decision making among nursing students in the nursing literature. Asking senior nursing students to relate their stories about making decisions in the clinical setting seemed the most appropriate place to begin this investigation. The findings of this study provided responses to these questions, raised additional questions, and provided insight into the complex process of clinical decision making.

In this chapter, I present a succinct summary of the findings for each question. I also present a graphic depiction of the relationship of the five themes with learning clinical decision

making. I conclude this chapter with a discussion of the implications and recommendations for practice, education, and research.

Question 1. What clinical decision making situations are identified by senior nursing students?

When asked to identify a situation in which a clinical decision was made, the students had difficulty responding to this request. While presenting my study to the students to recruit participants, one student voiced concern that she did not have a situation where she had made a clinical decision. During the pilot study the two students also expressed discomfort with identifying a situation in which they made a clinical decision. As I continued to interview students, I realized while they did not always identify their activities as making decisions, they were, in fact, relating stories of clinical decision making. When I asked the students to describe a clinical situation and I began to ask them how they came to some of their conclusions, they could relate detailed information about their decisions made in the clinical environment.

A majority of the decisions described by the students in this study focused on the current clinical situation of the patient and on their direct care of that patient. Andrea discussed how she decided which medications to administer to the patient while Elsa described how she chose to deal with the immediate needs of the patient so other concerns could be addressed. Sandy spoke of using her knowledge about alternative diet options to assist a patient to incorporate dietary restrictions into his lifestyle. Susan spoke of directing her attention to the family of a dying patient. In each situation the student identified decisions about nursing actions that focused on the immediate patient needs.

Foundational to the decisions made by these students were practices that indicated caring for the patient and family. Caring practices indicate that the patient is viewed as a person who matters (Benner, 1994a). Because the students viewed the patient as a person, they began to learn

about the patient and began to recognize the patient's preferences and the unique patterns of response of that patient. The students implemented nursing actions that were perceived as the means to meet the patient or family needs.

Other nursing students had more difficulty identifying a clinical decision, especially those students who did not have a connection with the patient. In these instances the language used by the students implied that the nursing action was the outcome. Beth described how she managed her care through the use of a chart for the medications and treatment that needed to be completed. For Beth, the outcome was to mark off the activities on the chart. Beth perceived that she was effectively caring for the patient when all of the tasks were marked off the chart. Other students made decisions about nursing actions so that they did not make any mistakes in the clinical setting. Mindy discussed a situation where all of her actions were verified by the nurse so she would not make any mistakes. These students did not connect the nursing actions with the needs of the patient. The students seemed to focus more on the tasks that needed to be accomplished, the rules that governed implementation of the tasks, and their personal need to complete the interventions without making a mistake.

Benner described the novice nurse as one who must follow the rules (Benner 1984; Benner, Tanner, & Chesla, 1996). The novice nurse has learned the tasks without application within the situational context. The rules themselves become the determining factors in making a decision about what nursing actions to implement. The novice is unable to modify the rules in response to the needs of the individual patient or change in clinical environment. The students who viewed the nursing actions as the outcome demonstrated this need for rules and for the inability to modify these rules based upon the patient needs.

A vast majority of the decisions made by the students were in conjunction with the staff nurse or physician. When the students and staff created a partnership, the students relied on the staff to support them through the clinical decision making process. The students learned from or with the experienced clinician. The minimal involvement of the clinical instructor in the students' stories was an interesting and important aspect of this whole process. When specifically asked about the influence of the instructor in the clinical environment, the students responded that the instructor was available if they needed her.

One interpretation of this limited instructor involvement may be due to the structure of the clinical rotation. Each clinical instructor has ten students placed in various units throughout the hospital. This geographic distancing of the students may limit the instructor involvement in the clinical situation. Another interpretation of this phenomenon is that the instructors are present and supporting the students but not taking a lead role in the clinical situation. As a result, the instructor became invisible to the students because the instructor did not direct the patient care. The instructors encouraged the students to assume the responsibility of collecting the information and of proceeding with the making the decisions. Because the instructor was not obviously involved in the situation, the students may not have perceived the actual role the instructor had in the student experience. A final interpretation is that the clinical rotation was created to encourage the development of the nurse-student partnership. Recognizing that the students will soon be placed in a position in which they must learn the unit culture, the instructor is present on the unit only when needed. The staff nurse and students are then encouraged to begin the process of learning about each other and of developing a working relationship. By not being present, the instructor supported the development of the student-nurse partnership and ultimately the development of the students' skills in the clinical environment.

In answering the first question, a majority of the decision making situations described by the students in this study focused on patient care needs such as selecting the medication to administer, trach care, managing pain, and diet teaching. The decisions made by students were in consultation with the staff nurses assigned to the same patients. The nursing students took an active role in caring for the patients and in making the decisions about nursing actions appropriate to meeting the patient unique needs.

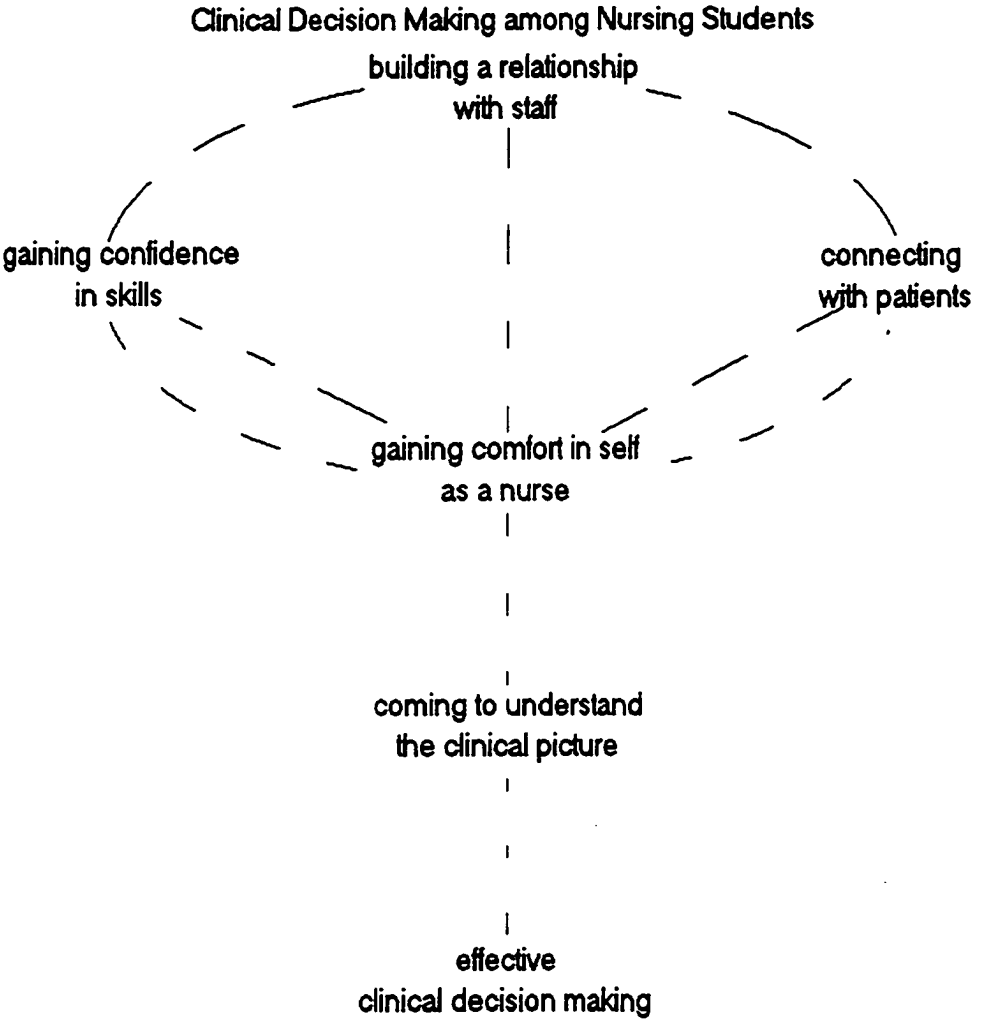
Question 2. What essential components are associated with learning clinical decision making among senior nursing students?

The five themes (gaining confidence in skills, building a relationship with staff, connecting with the patient, gaining comfort with self as nurse, and coming to understand the clinical picture) have been identified as the essential components associated with clinical decision making among nursing students. Using these five themes, a graphic depiction of learning clinical decision making is proposed.

Tentative Relationship of the Emergent Themes

After completing this interpretive analysis of the students' interviews, I began to envision a beginning relationship among these five themes to demonstrate the circular, interconnectedness of learning the clinical decision making process described by the participants in this study. The relationship of the five themes is graphically depicted on the next page as a beginning attempt to visualize how the themes from this study are interwoven and integral to learning clinical decision making among nursing students.

TENTATIVE RELATIONSHIP OF EMERGENT THEMES



The students in this study identified the need to gain confidence with skills in the clinical environment, the need to build a relationship with the nursing staff, and the need to connect with the patient. If these needs were met, the student became comfortable with the nursing role in the clinical environment. However, it is not that simple. While gaining confidence with skills in the clinical environment, building relationships with the nursing staff, and connecting with the patient are critical in the student gaining comfort in the role of the nurse. This comfort in the nursing role then supported even further development of gaining confidence with skills in the clinical environment, building relationships with the nursing staff, and connecting with the patient. This circular, interconnected process resulted in the student's coming to understand the clinical picture. With this understanding of the clinical picture, the students made or recognized effective clinical decisions.

Underlying each of these themes is the knowledge level of the students. To safely implement nursing skills, the student must understand the need to complete the skills, must recognize and implement the steps to complete the skill, and must have the ability to complete the psychomotor component of the skill with relative ease. The student must also be able to demonstrate this understanding when building relationships with the staff and connecting with the patient. When the students demonstrate an understanding of the disease process, the prescribed treatments, and the interventions for that disease, the students are able to effectively participate in the clinical decision making process.

The graphic depiction attempts to represents the dynamic interconnectedness of this process. The results of this study would indicate that the process begins when the student initially gains comfort with skills, builds a relationship with the staff, and connects with the patient. These three components of the clinical environment are important if students are to gain comfort

within themselves in the role of the nurse and ultimately begin to understand the clinical picture. When the students had insight into the clinical picture, the clinical decision made by the students positively influenced the patient outcomes.

The three initial concepts are closely intertwined. While these three aspects of clinical experience do not need to develop at the same rate, they do need to develop. As was seen in the findings of this study, if the student was unable to gain confidence, or to build a relationship, or to connect with the patient, the students did not gain comfort with self in the clinical setting, nor were they able to fully understand the clinical picture. As a result the students were unable to influence the patient outcomes.

By gaining comfort in themselves as nurses, the students move from focusing on their own personal needs in the clinical setting to understanding the clinical picture and focusing on "knowing the patient." Effective, patient-centered clinical decisions are made when the nursing students directed their thinking to learning about and knowing the patient. A study conducted by Brooks and Thomas (1997) found similar results. With minimal experience to use as a source of reference, the students were concerned about themselves and what might happen to them in the situation. When the students were able to shift their focus from themselves to the patients, the students were able to begin to recognize the patient needs (Brooks & Thomas, 1997).

In answering the second question, five components were identified as essential to clinical decision making among nursing students. The relationship of these five components to learning clinical decision making among nursing students is proposed. A graphic depiction of the relationship of these five themes is presented to generate further discussion of this complex process and to encourage nurse educators to continue to dialogue about teaching strategies that support the development of effective decision making in the clinical environment. Additional

nursing research is needed to add to the body of knowledge and to gain understanding of clinical decision making among nursing students.

Implications and Recommendations for Practice

The importance of the staff nurse to student clinical decision making has been identified in this study. The nursing students relied on the staff nurse to support them and to participate in their learning process in the clinical environment. This support and participation from the staff is critical in the development of the students' self confidence. In a recent study, the perceptions of student nurses and staff nurses assuming a preceptor role in the clinical environment were investigated (Byrd, Hood, & Youtsey, 1997). The results of this study found that the students sought out the staff nurses who were willing to build a relationship and to share their expertise with the students. Time is needed to build these relationships and to share experiences. Both the nurse and the student must be able to commit that time to this process.

While the staff nurses may have a great desire to work with a student, the clinical expectations placed upon them may significantly influence the amount of time the nurse actually has available for the student. This learning environment may be lost to the students in today's health care environment particularly with the changing staff mix in the hospitals. As staff nurses are required to care for an increased number of patients with complex problems, the time they have to share and to participate with the student learning may become increasingly limited.

A challenge facing nursing practice is finding methods to encourage and support the staff nurse who desires to work with a student in the clinical setting. Patient assignments, scheduled work time and unit responsibilities may need to be re-evaluated for the nurses willing to share their expertise and time with nursing students. Acknowledging the efforts of these nurses by building this responsibility into clinical career ladders or some other type of recognition for

nurses is imperative. Hospital and nursing administrations need to recognize this process as an investment in the development of future nurses for the institution.

The benefits from this arrangement were presented in this study. The sharing of experiences about clinical decision making by staff was an effective learning process for the students. By sharing their thought processes and conclusions about a particular patient incident, the staff nurses created a clinical picture within the context of the patient experience for the nursing student. This sharing of the patient situation by the nurse created a powerful learning environment for the nursing students. The students reported that the narratives about a patient by the nurse aided the student in understanding the patient situation as a result of the personal involvement in the situation. In addition, aspects of the situation which the student did not identify were uncovered in the sharing of the nurses' stories. By their sharing, the nurses revealed the meanings and hidden knowledge in nursing practice (Benner, 1991).

Benner identified narrative accounts as a way to "uncover meaning and feelings in ways that shed light on the contextual, relational, and configurational knowledge lived out in the practice" (1991, p. 3). Staff nurses sharing their clinical stories enhance student learning beyond the rules. The importance of the staff nurses involvement in the educational process of nursing students was critical. Significant clinical manifestations within the patient situation were made visible when the experienced nurses shared their perceptions and understanding with the nursing students (Benner, Tanner, & Chesla, 1997).

The students in this study recognized the importance of the staff nurses and of building the nurse-student relationship. The challenge in the practice setting is developing an environment that supports and recognizes the value of this process.

Implications and Recommendations for Education

The findings of this study raise some interesting questions for nursing education. One observation during the data collection phase was the students discomfort with the idea of making a clinical decision. I had anticipated that the students would recognize that they were making decisions about patient care. However the students in this study had difficulty acknowledging their actions as clinical decisions. If students do not understand that they are making clinical decisions, learning how to make these decisions becomes even more difficult. Perhaps nurse educators should consider presenting the nursing care provided by the students in terms of what decisions were made during the clinical experience that directed the students to implement the nursing actions. By explicitly acknowledging that students are making decisions, the students may begin to recognize how they are learning to make a decision in the clinical setting.

Another consideration is the student placement in different clinical environments throughout their educational program. The mission of undergraduate nursing education is to prepare a nurse generalist, a graduate who is introduced to a variety of different patients and clinical environments. Nurse educators have traditionally thought that providing the students with different clinical rotations broadens the depth and understanding of the complex process of nursing.

The findings in this study indicate that this method of clinical rotation may prevent the student from coming to understand the clinical picture and therefore make effective clinical decisions. The students spend considerable time learning the culture of the environment. When the student is concentrating on learning the unit, there is less time and energy directed toward learning about and coming to know the patient. The results of this study indicate that knowing

the patient and understanding the clinical picture is essential for the student to make effective clinical decisions.

Balancing the students' need to gain comfort with the clinical environment while broadening the exposure of the student to the different patient experiences is difficult. The students in this study identified the importance of gaining confidence in their skills and being comfortable within the clinical environment. If the students were successful in achieving this confidence and level of comfort, they began to experience comfort in the nursing role and to gain personal knowledge of themselves.

Personal knowing in nursing was first described by Carper (1978). Carper presented personal knowing as the "inner experience of becoming a whole, aware self" (Chinn & Kramer, 1991, p. 3). Personal knowing is essential to knowing the patient. By gaining personal knowledge, the students were then able to "know another human being as a person" (Chinn & Kramer, 1991, p. 9). Without this personal knowledge, the ability to participate in a meaningful shared human experience is impossible (Carper, 1978).

In becoming aware of themselves and their role in the clinical environment, the nursing students were able to make clinical decisions and to implement effective nursing care. The students who had not gained this understanding of themselves were unable to capture the clinical picture and implement effective patient care.

In addition, a study conducted by Nehls, Rather, and Guyette (1997) found that an important component in teaching nursing was the instructor knowing the student. The teacher needed "linear time" with the student to create a learning environment (1997, p. 225). This would seem to provide additional support to the identification of consistent clinical rotation for nursing students. Once the nurse educator has time to learn about the student and about the needs of the

student, the educator may be able to enhance learning though student specific assignments on the clinical unit.

The discussions of moving nursing students through various clinical rotations needs to be reopened. While broadening the exposure of the student to various clinical experiences would seem appropriate, this approach may have a significant influence on the students' ability or inability to function effectively in the clinical setting. Consistent clinical assignments seem to encourage and to support the students, thus creating an environment where they begin to understand the clinical picture and make effective clinical decisions that influence positive patient outcomes.

Having just addressed the challenge of consistent clinical rotation and the need for educators to learn about the students in nursing education, the findings of this study indicate that the clinical instructor had minimal involvement or influence during this clinical experience. The senior nursing students in this study relied almost totally on the staff nurse when relating clinical experiences. Several interpretations of this finding were presented earlier in this chapter.

The limited instructor involvement at the senior level has several implications for nurse educators. If nurse educators become less influential as the student progresses through the nursing courses, the staff nurse as a preceptor becomes critically important. The selection process for preceptors takes on renewed importance. Staff nurses who are committed to sharing and working with the students should serve as preceptors. Educators will need to direct attention to the development of the role of the preceptor and be active in communicating the expectations to the preceptors in the clinical environment. The sharing of curricular strengths and areas of concern about the clinical experiences should be shared between preceptors and educators. The preceptor brings a knowledge of the day-to day world of nursing while the educator bring

expertise in learning strategies to the student's clinical experience. In creating a teaching partnership, students' learning will be enhanced in the clinical rotations.

Another implication from this finding is a revisiting of the role of the clinical instructor. Loving (1993) conducted a study that indicated student learning may be influenced by the educational context developed by the clinical instructor. The 22 students in Loving's study responded very differently when they perceived that the instructors created a teaching environment instead of an evaluation environment. Student learning was enhanced when the instructor created a teaching environment for the students.

In this study, this limited instructor involvement may be a method to create that teaching environment. A majority of the students related their learning had been enhanced by the clinical rotations described for this semester. Another possibility is the creation of a third educational environment, one of facilitation. While there is no definitive answer, continued dialogue among nurse educators on the role(s) of the clinical instructor at each level or year of the educational process may be helpful in creating a clinical environment that supports the development and learning of the students.

An additional consideration for nursing education is the development of a teaching-learning community by revisiting the traditional teaching practices. This study supported the belief that clinical decision making is a dynamic, nonlinear process. Yet nursing education continues to present content to students using a linear, step-by-step approach creating tension between what is taught and what is actually seen by the nursing students.

Nursing education, in moving from hospital to university settings, incorporated behavioral pedagogy as an efficient means to present content (Diekelmann, 1993). Nursing situations are presented objectively and context free. Nurse educators spend considerable time

presenting pathophysiology, signs and symptoms, pharmacology, and nursing interventions of each disease. This presentation of content is important for the students to understand all the factors involved in the disease process. The piece that is missing, which is integral for the student to comprehend the complexity of the process, is putting these pieces of information together to create a clinical picture (Brook & Thomas, 1997).

The challenge for nursing education is to present content in a manner that "explores beyond the sum of the whole" (Brooks & Thomas, 1997). Revisions to traditional teaching need to be explored. Teaching methodologies that introduce the students to information about selected disease process and create a clinical picture of the patient are needed. The clinical picture displays the richness of the patients' physiological and psychological response to the disease.

One approach is the use of narratives about patients as proposed by Diekelmann and colleagues (Diekelmann, 1993; Nehls, 1995). The students learn about the specific information of a disease process within the context of the experience and begin to recognize that patients respond differently to certain diseases due to varying environmental or internal factors. Students begin to realize that there is more to understanding the clinical picture than putting the pieces together. When students have a beginning level of understanding of the complexity of the whole clinical situation, the decisions made in caring for the patient also change. Instead of following the context free rules in every clinical experience, the findings of this study suggested that the students were able to identify and implement specific nursing actions to meet the needs of that patient. When the students gain insight into this dynamic process, effective clinical decision making is demonstrated.

Implications and Recommendations for Research

Additional research on clinical decision making among nursing students is needed to gain further understanding of this complex process. Further study of the relationship of the five emergent themes in this study is needed and may provide further understanding into the learning of clinical decision making among nursing students.

A limitation of this study was the homogeneity of the senior nursing students in this sample. Additional nursing research involving diverse groups of participants will continue to increase the knowledge and understanding of clinical decision making among nursing students. Additional populations that might be considered as participants for future studies include senior nursing students who participate in a nursing practicum prior to graduation and nursing students at different levels of nursing education. Conducting a study with graduate nurses having only six to nine months full time employment in the clinical setting may also provide insight into the complex process. Studying the perceptions of nursing faculty could also provide insight into the learning of clinical decision making among nursing students.

Nursing research that continues to explore the role of the clinical instructor and the way students learn in different type of clinical environments created by the instructor is needed. The results of these studies would add to the body of knowledge on teaching and learning in the clinical environment. The results could also further explicate the clinical environment that supports the development of clinical decision making among nursing student.

Both quantitative and qualitative research studies are needed. Clinical decision making has been identified as a dynamic, multifaceted, and nonlinear process in this study; continued understanding of the process through nursing research is needed. The complexity of the clinical decision making process must be considered when identifying the methodology to use in future

studies. Investigating specific steps in the decision making process may not adequately reflect the complexity of the process. However, investigating variables that may influence this process such as student locus of control may provide additional knowledge about the clinical decision making process.

Care must also be taken when coming to conclusions in research studies. In previous studies nurse researchers have concluded that nursing students are not able to make effective clinical decision due to a lack of knowledge. This is a powerful statement that may significantly influence the relationship between nursing education and nursing service and stereotype the nursing student as incapable of making decisions.

Nursing students do make decisions in the clinical environment. The clinical decisions made by the participants in this study demonstrated a thinking process that resulted in independent and interdependent nursing interventions. If students are to implement effective care for the patient, they must have further understanding of this thinking process. As students and ultimately as registered nurses, they must recognize that they are making decisions which will have a significant influence on patient outcomes. Collaboration between nursing education and nursing service is required to support the nursing student and recent graduate in the clinical environment. Collaborative research conducted by members of education and service will add to the body of nursing knowledge on clinical decision making and potentially create learning environments that support the development of these skills in future nurses.

Summary

This study was conducted to identify the essential components of learning clinical decision making among nursing students. The results of this study indicated that until the students are able to understand the clinical picture, their clinical decision making capabilities are

limited. A major component of understanding the clinical picture is the students gaining comfort in themselves as nurses. The findings in this study indicated that development of self confidence as a nurse is a multifaceted process. Interesting challenges and recommendations for nursing practice and nursing education have been raised. Additional nursing research is required to understand this complex process of learning clinical decision making among nursing students and to develop teaching strategies that support and enhance clinical decision making skills.

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Appendix A

Institutional Review Board Approval

Georgia State University

August, 1997

IRB# _____

Institutional Review Board (IRB) for the Protection of Human Subjects
Georgia State University

Application Form

Researcher and project information:

Principal Investigator (print or type): Ann H. White		___ Faculty ___ Staff x Student
Department: Nursing	Telephone: [redacted]	E-mail: [redacted]edu
Proposal title: Clinical Decision Making among Nursing Students: An Interpretive Study		
Co-Principal Investigator(s):	Funding Agency:	
Grant title, if different from proposal title:		
Starting date: 3/98 Estimated ending date: 3/99	Is this a renewal application? ___ yes _x_ no	If renewal, old IRB#:

Review category:

_x_ 1. Exempt from review per category # 2 . (Research may begin after Department chair signs below.)
_____ 2. Expedited review per category # _____ (Research may begin after IRB chair signs below.)
_____ 3. Other, requiring full review. (Research may begin after IRB chair signs below.)

Items submitted:

For new applications, check to show you are submitting the following four items:
_x_ 1. This application cover sheet.
_x_ 2. A one-page lay summary of your proposal, explaining what you will be doing with human subjects.
_x_ 3. Any methods section from your proposal that apply to human subjects, and any interview or survey instruments you will use.
_x_ 4. Any consent form you are using.

For renewal applications, check to show you are submitting the following four items:
_____ 1. This application cover sheet.
_____ 2. A one-page lay summary of your proposal, explaining what you will be doing with human subjects.
_____ 3. Any consent form you are using.
_____ 4. A one-page summary of subjects studied, problems with subjects, changes in procedure, and new information on risks.

For new or renewal applications, staple the items into a packet in the order shown. Submit two copies of the packet, one with original signatures.

Researcher assurance:

Check the following to indicate you will protect research subjects, in compliance with federal regulations and GSU policies.
_x_ I will obtain informed consent from all subjects.
_x_ I will report to the IRB any harmful effects to the subjects.
_x_ I will renew my application if the research extends beyond one year.
_x_ I will gain IRB approval before altering the research protocol or consent forms.

DEPARTMENT APPROVALS

	Name typed or printed	Signature:	Phone	Date
Principal Investigator	Ann H. White	[redacted]		3/9/9
Faculty Advisor/ Sponsor	Dr. Ptlene Minick	[redacted]		3/13/
Department Chair				

THIS SECTION IS TO BE COMPLETED BY THE INSTITUTIONAL REVIEW BOARD (IRB) ONLY

	Name typed or printed	Signature:	Date
IRB Chairperson:	James M. Dabbs, Ph.D.		

IRB comments: _____

IRB audit if proposal is declared exempt: Signature of IRB member Date

Appendix B

Institutional Review Board Approval

University of Evansville

UNIVERSITY OF EVANSVILLE

School of Education

1800 Lincoln Avenue
Evansville, Indiana 47722
812-479-2367
Fax: 812-471-6995
http://www.evansville.edu

April 8, 1998

Ms. Ann H. White
c/o Dr. Rita Behnke, Chair
Department of Nursing
University of Evansville.
Evansville, Indiana 47722

RE: Research Proposal: Clinical Decision Making Among Nursing Students: An Interpretive Study

Dear Ms. White:

Your research project entitled "Clinical Decision Making Among Nursing Students: An Interpretive Study " has been fully approved by the Subcommittee for the Protection of Research Subjects.

This project is approved for one year only. If for any reason the project is carried forward into a second year, you must resubmit the project to the committee for review.

Sincerely,

[redacted]

Davies E. Bellamy, Ph.D.
School of Education

Appendix C

Consent Form

Consent Form

I have been asked to participate in a study of clinical decision making among nursing students. If I chose to participate, I will be interviewed by Ann White on a clinical experience as a nursing student. I understand it is possible I may be contacted again by phone or in person to clarify any information obtained during the interview. I also understand I may be asked to verify an interpretation of my experience.

There are no reasonably foreseeable physical risks associated with this study. It is possible that I could experience some anxiety or recall some painful memories through relating my story. It is also possible that I could experience a sense of satisfaction as a results of telling my story but otherwise there is no direct personal benefit.

If participating in this study causes me anxiety or I am upset from recalling painful memories, the researcher will refer me to a member of the nursing program faculty or university student counseling.

The audiotaped interviews will be transcribed by a person outside of the organization. Any identifying information from the interview will be removed or altered on the written transcribed interview. Audiotapes and transcribed interviews will be shared with only members of the research team which consist of two nurse researchers who are experts in qualitative research, two doctoral students and myself as the principle investigator. No individual identity will be detectable from any reports or publications resulting from this study.

I may ask any questions about this project of the researcher, Ann White ([redacted]), or her advisor Dr. Ptlene Minick of the School of Nursing at Georgia State University, (404) [redacted]. The GSU Research Office (Room G-76 Alumni Hall, 404 [redacted]) can provide me with general information about the rights of human subjects in research.

I understand that I may refuse to participate in this study, and if I do choose to participate I may stop at any time. If I refuse to participate or decide to stop, I will not be penalized and will not lose any benefits to which I am entitled.

I have read and understand the above, and I agree to participate in this study.

_____
Printed Name

_____
Signature

_____
Date

Appendix D

Interview Guide

Guided Interview

Demographic Data
Age, Work (previously or now) in healthcare and in what capacity,

Interview
Please tell me about a time in which you felt you made a difference or you learned something new in your clinical experience as a student nurse. Tell me about an experience that you will never forget because of the importance of the situation to you or the patient outcome of the experience. Include as much detail as possible and stay in the telling of the story.

Please describe why this story is important to you and what it means to you. It can be a story of a situation in which nothing went right or one of making a difference with a patient or fellow health care professional. If you agree, I may contact you at a later date to clarifying information. I will recontact you to read an interpretation of your story to clarify the meaning of your experience.

Additional questions to aid in eliciting detail in the students' telling of the story would include

What did you expect in this clinical situation?

What were you thinking about in this clinical situation?

While you were involved in this experience, did you come to see the situation in a different way?

Did you priorities change during this situation. If so, how?

Can you identify any rules, guidelines, or principles that guided your behavior during this situation?

Did you seek guidance from anyone (instructor, staff nurse, doctor)?

Did you reason out what to do in this situation?

Has you thinking about clinical experiences changed since being involved in this situation?