

**FACTORS INFLUENCING DECISION MAKING
DURING PATIENT CARE:
NURSING STUDENTS' PERCEPTIONS**

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ABSTRACT

During their clinical practicum, nursing students are involved in making decisions about the care for their patient or group of patients. The purpose of this study was to ascertain nursing students' perceptions of the variety and magnitude of factors that influence them as they are making decisions about patient care.

For the study a nonexperimental approach utilizing a cross-sectional descriptive design was used. Thirty-three second year and thirty-one third year nursing students from a diploma nursing school responded to a questionnaire designed to reflect perceived domains of influence in their clinical decision making. A subset of 18 subjects were interviewed.

Some of the major findings include:

- 1) More second year than third year students perceived stress as a factor affecting their clinical decision making. Third year students most often mentioned the instructor-student relationship as a source of stress. Second year students most often referred to their workload and fatigue as contributing to their stress.
- 2) More third year than second year students perceived decision making theory and the nursing process to be an influencing factor in decision making.
- 3) Previous life and health-related work experience was indicated to be an influencing factor in clinical decision making more often by second year students than by third year students.
- 4) When asked to choose and rank five from a list of sixteen influencing factors in clinical decision making, the combined group chose the following in order: knowledge of

patients and their condition, level of self confidence, knowledge of nursing process, relationship with instructor, previous nursing experience, and previous life experience.

5) In the interviews the two most frequently mentioned guiding forces in decision making were: (a) what they (the student) or someone close to them would want and (b) patient preference.

The study encourages nursing instructors to be cognizant of the variety of forces impacting student decision making in the clinical setting. It also suggests that students who are encouraged to incorporate their personal reality in an atmosphere that provides some latitude in decision making will be more likely to assume decision-making responsibility.

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CHAPTER ONE

INTRODUCTION

The decisions that nurses make have a direct bearing on their clinical practice. Nurses decide what data to collect about their patients, which observations are significant, what problems to address from a nursing perspective, which interventions are appropriate, and when interventions should be reviewed. Quality decisions are reflected in quality patient care (Thomas, Wearing, & Bennet, 1991).

Many clinical problems requiring decisions are not clearly defined. Changes in the health care delivery system as a result of burgeoning theoretical knowledge, expanded technological capabilities, rising health care costs, and increased consumer expectations require that nurses be prepared to meet the challenge of making effective practical and ethical decisions in an increasingly complex milieu. A heightened emphasis on clinical decision making is reflected in the National Commission on Nursing (1981) statement that "nurses need to become more autonomous in their practice and more involved in the decision-making process related to both organizational policies and delivery of patient care" (cited in Prescott, Dennis, & Jacox, 1987, p.56).

It is essential that contemporary nursing education respond to the need for practitioners capable in this regard. A recent survey of nurse educators in the United States revealed that the teaching of clinical decision making and problem solving skills was identified as one of the top ten research priorities in nursing education (Tanner & Lindeman, 1987, cited in Lindeman, 1989). Del Bueno (1983), Field (1987), Holbert and Abraham (1988), and Tanner (1986) argue that one of the major goals in nursing education today is to assist nursing students in developing clinical decision-making

abilities. It is this aspect of nursing education within the setting of one nursing diploma program in Western Canada that is the focus of this study.

During their clinical practicum, nursing students become increasingly cognizant of the fact that professional nursing involves assuming the responsibility for making decisions within a "legally defined and occupationally regulated domain" (Prescott et al., 1987). During the fifteen hundred hours the nursing students in this study spend in the clinical setting at the Regional Hospital, they are involved in providing direct bedside care to assigned patients. Here the students not only have the opportunity to integrate the theory and practical skills they learned to that point, but they have the responsibility of participating in making decisions about their patients' care. It is expected that nursing students, as future nurses, will practice and develop decision-making abilities in the clinical setting as they are exposed to varying patient-care situations. This is increasingly an emphasis in the diploma nursing program at the institution these nursing students are enrolled in.

In preparation for each clinical day, the students in this study spend several hours researching charts and other relevant resources to gain insight into their patients' conditions and therapeutic regimens. Additionally, these students review policies, procedures, and care modalities in order to decide how they will proceed with the care of their patients the next day. During the research time and during the time of patient care the instructor is available for consultation and assistance. The instructor-student ratio is 1:6.

Throughout their clinical experience nursing students are faced with situations that require them to make decisions in the areas of assessment (what information needs to

be collected regarding the patient, what observations need to be made), diagnosis (what problems need to be addressed), patient care planning (what interventions are required, in what sequence, and when they need to be reviewed), and referral (when is the patient referred to other members of the health care team). For example, a student assigned to care for both a comatose patient and a surgical patient will need to make organizational decisions such that the comatose patient receives complete physical care responsive to ongoing assessment while the surgical patient is prepared for surgery by a designated time. In another scenario, a student making decisions about treatment methods may be faced with a situation where an assessment of the patient's condition reveals a change in health status resulting in a need for some alternate form of procedure. Sometimes students have plenty of time to make their decisions; at other times decisions are made under pressure.

Jenkins (1985a) claimed that "decision making practised [by the student] during clinical experiences can establish habit patterns that will carry over into professional use" (p. 243). Del Bueno (1983) maintained that "there is no such thing as too much practice in the development of effective decision making" (p. 8). However, del Bueno (1990) cautioned that "employers and educators often assume that because nurse graduates have participated in formal and clinical learning activities, they are ... able to make acceptable or appropriate clinical decisions and judgments" (p. 290). In other words, participation in formal and clinical learning activities, including practice in decision making, does not necessarily guarantee acceptable decision-making performance. A variety of factors may influence the decisions nurses and nursing students make. This study examines nursing

students' views of the many factors influencing their decision making in the clinical setting.

Significance of the study

One of the most compelling arguments for the study of clinical decision making is the potential benefit for the patient. Patients are the recipients of the care provided by nurse decision makers. Improved understanding of decision making may result in improved decisions in the areas of assessment, planning, and intervention. Because particular clinical circumstances or factors may result in serious decision errors (Thomas et al., 1991), an investigation of influencing factors represents an important area of study. We need to be aware of factors affecting decision making, study their effects, and utilize this information to enhance decision making with respect to patient care.

Student decision making during patient care has some very real implications for the instructor, the educational institution, and the health-care institution. Decisions have consequences. The recent emphasis on patients' rights and nurses' legal responsibilities have brought this issue to the fore. Educators concern themselves with the priority of patients' physical and psychological safety as they assign and encourage student practice. There is always the question of whether patients are receiving the care to which they are entitled and whether students are able to make decisions that lead to 'safe' practice. At the same time, educators need to support students' endeavors to assimilate the ideal of professional autonomy in the area of decision making with regards to patient care.

Concerns regarding quality decision making and patient care are reflected in the pattern of continuous evaluation of students' clinical activities. Educators feel these appraisals are necessary to ensure a standard of practice that will protect patient safety.

Evaluations of students in the clinical setting take many forms: direct observation, marking of care plans and research guides, consultations with patients, and discussions with the students themselves. These assessments, however, might not truly reflect all aspects of the clinical decisions made or the patient care provided. The whole may be more than the sum of the parts and the parts may not necessarily reflect the totality of the whole.

The examination and evaluation of student decision making should not be left, as so often happens, at the component parts; that is, the processes used (the type of reasoning that occurs), the behaviors observed, and the outcomes. As nursing instructors, we need to be sensitized to the whole of what students are experiencing while they are making decisions in the clinical area. Thus we should also consider the complexity of factors that influence the decisions they make and their perspectives in these instances.

Inherent in student evaluations must be the consciousness that instructors have developed certain expectations of patient care which they employ while appraising student performance. Hepworth (1989) stated that "the assessor of a student's clinical nursing skills can only assess the student in the light of her own perception of the nursing situation and her own nursing expertise" (cited in Hepworth, 1991, p.46). In other words, there needs to be an accounting for the instructor's life text, for, "when one is 'caught' in one's views, one is less likely to accurately read the qualities of the situation ..." (Pinar, 1988, p.145).

At the same time, the student's lived reality in the moment of decision making must be considered. For example, the individuality of the student and the uniqueness of the student/patient relationship may have an impact on the moment of decision making.

Moreover, the interaction of the attitudes, expectations, and values of the patient with those of the student nurse may affect the decisions that are made. What is within the student or present in the situation will likely influence the decisions the student makes.

Decision making needs to be viewed as a "lived" experience, not just another skill to be practised and perfected and performed. With increased awareness and understanding, educators may be able to assist students as they attempt to take part in more meaningful decision making while caring for their patients.

This study of factors affecting decision making will contribute another dimension to the overall study of clinical decision making. To date there are only a handful of studies examining factors that influence nursing students in their clinical decision making. Two involved administering standardized tests to student nurses in order to measure the relationship between decision making and such discrete variables as "general critical thinking abilities" (Brooks & Shepherd, 1990) and "locus of control" (Neaves, 1989). Several recent studies (Benner, 1984; Tanner, 1989) compared student, novice, and expert nurse accounts of strategies undertaken in patient care. Tschikota's study (1990) focused on student nurses' descriptions of care planning in a given case study. These investigations reviewed particularly the processes involved though Tschikota (1990) did include student perspectives of factors (facilitative and inhibitive) influencing their decision making.

Several studies have examined graduate nurse decision making and correlated this with the factors of task complexity and nursing expertise (Corcoran, 1986a), experience and education (del Bueno, 1990), and sex-role stereotype, self-concept, education and

experience (Joseph, 1985). The literature did not reveal any consistently identifiable factors influencing student decision making concerning patient care.

Clinical Anecdote

The following, factually based, clinical anecdote illustrates the need for a more comprehensive examination of factors that affect students as they make decisions in the clinical setting.

A student was assigned to a medication experience that involved delivering the required medications to every patient on the unit. It was the student's first day in this assignment. The instructor noted that the student did not always implement a required safety check, that of reading the patient's identification band prior to administration of medications. The student was prompted and did utilize the check on a few occasions but then omitted it again. Once again the student was prompted. Each time the student needed to be prompted, the instructor became more concerned about the student's performance and scrutinized her even more closely. By the time the first round of medications had been delivered, the student had made additional errors and in fact could not even seem to perform one of the most basic of skills, that of accurately assessing the blood pressure on a patient who was receiving a medication for hypertension. It appeared to the instructor that the student was not only incompetent, but had no regard for patient safety. The instructor chose to speak with the student immediately about the situation.

During the course of the conversation, the student verbalized an awareness of every infraction that had occurred. She also explained that she had spent the previous day with the medication nurse and was modelling what she had observed. Furthermore, she revealed that the more closely the instructor followed her and the more she was

prompted, the more her confidence waned. The fear of failure loomed so large that the student felt incapable of even deciding how to position the bedridden patient's arm to obtain an accurate blood pressure.

The instructor inquired as to what she could do to assist the student if this ever occurred again. The student suggested that the increasingly close physical presence of the instructor as the situation deteriorated was completely distracting, resulting in increased errors. In other words, the student recommended that the instructor withdraw somewhat and demonstrate more trust. There was further conversation on this point but, suffice to say, there were factors affecting this student in her decisions regarding procedures of which the instructor was not aware. Might the factors have been addressed earlier and might the experience have been more validating for both the student and the instructor?

As noted previously, student clinical performance (decision making) takes place in the shadow of evaluation. The assessment of this student's ability was based on the ideal of safe practice. The question arose as to whether the nursing behavior exhibited by the student necessarily indicated her knowledge and skill, or whether it reflected a myriad of other factors. Instructors may not be accurate in assessing students' understanding and abilities if there is no consideration of the possible factors influencing their decision making in patient care.

Purpose of the Study

The purpose of this study is to listen to the nursing students as they consider the factors that affect their decision making in the clinical area.

By attending to students' perspectives, instructors may become more sensitized to the factors within the practice situation that facilitate or inhibit a student's ability to plan

patient care and implement principles of safe and prudent nursing practice. Decision making in nursing curriculum may come to be seen as a lived experience, not just another skill to be practised and refined. Nursing instructors may find themselves better relating to the students in a common quest for more meaningful, quality decision making with respect to patient care.

Student revelations, both written and verbal, regarding factors that influence their decision making during patient care will contribute another dimension to the study of clinical decision making. Throughout these considerations there must be a realization that the intention is "not to explain (flatten out) for control purposes, but to reinterpret in order to provide greater ground for understanding" (Macdonald, 1988, p.105).

CHAPTER TWO

LITERATURE REVIEW

The purpose of this chapter is fourfold: (a) to define the key terms and concepts used in this study; (b) to review concepts associated with decision making; (c) to discuss the theory regarding decision making as taught in one diploma nursing program; and (d) to review the literature on the factors influencing decision making in the clinical setting.

Definitions

Nursing Students

Nursing students referred to in the literature include both diploma and baccalaureate students registered in accredited nursing schools throughout North America. The nursing students participating in this study involve those individuals who are enrolled in the two and a half year diploma nursing program at a Western Canadian College.

Clinical Instructors

Clinical instructors are registered nurses who have completed at least a baccalaureate degree in nursing, are affiliated with a school of nursing, and instruct student nurses in the clinical setting. Most nursing instructors involved with the students in this study partake in both academic and clinical instruction.

Clinical Setting

The clinical setting is the physical area, usually a hospital or a community health agency, where the nursing student is involved in providing direct care to patients as part of a planned learning activity. Students in the School of Diploma Nursing in this study spend the bulk of their clinical time on medical, surgical, obstetrical, pediatric, and

psychiatric wards at the Regional Hospital. It is in these settings that they put theory, learned in class or self study, and skills, learned in the nursing arts laboratory, to practical use.

Clinical Learning Experience

The clinical learning experience is an opportunity to acquire, apply, and refine intellectual and psychomotor skills and is seen by many as the "heart" of the professional education (McCabe, 1985). According to Infante (1975) essential elements of the clinical experience include:

1. Opportunity for patient contact
2. Objectives for activities
3. Competent guidance
4. Individualization of activities
5. Practice skill learning, both motor and intellectual
6. Encouragement of critical thinking
7. Opportunity for problem solving
8. Opportunity for observation
9. Opportunity for experimentation
10. Development of professional judgement or decision making
11. Encouragement of creative abilities
12. Provision of transfer of knowledge
13. Participation in integrative activities
14. Utilization of the team concept (p.22).

Decision Making

This section will examine aspects of decision making as found in the nursing literature.

Decision making is considered to be a vital component of professional nursing practice. Gover (1972) stated that a distinguishing characteristic of professional behavior is "personal responsibility for the decision-making process" (p.12). "Nurses are expected to make decisions regarding health care, to respond quickly to emergencies and to attend

consistently to all patient situations intelligently" (Joseph, 1985, p.22). This reflects the necessity to exhibit both thought and action, for, as Stevens (1985) puts it, "a decision is the critical point where thought leads to action" (cited in Maltby & Andrusyszyn, 1990, p.415). Decision making as utilized in this study indicates the cognitive processes leading to action in the situation of patient care within the clinical setting. It implies thinking and doing. Problem solving, clinical judgement, and diagnostic reasoning, three other terms used in the literature, are taken to be elements in decision making.

Decision making may indicate both rational-analytic processes and non-analytic processes. In the literature, the term "clinical decision-making" frequently denotes the rational-analytic approach to problems in the clinical area (del Bueno, 1983; Jenkins, 1985; Tanner, 1989; White, Beardslee, Peters & Supples, 1990). In this sense, decision making involves the collection and analysis of information, formulation of a diagnosis or hypothesis, generation of alternative approaches, and the making of choices to achieve goals in patient care (Prescott et al., 1987; Tanner, 1989). This method, commonly referred to as the nursing process is a systematic, rational, problem solving mode involving the phases of assessment, diagnosis, goal-setting, planning, implementation, and evaluation. Since 1973, when the steps of the nursing process were legitimized by the American Nurses' Association Congress for Nursing Practice, the nursing process has continued to be upheld by educators as the guideline for nursing practice and a framework for decision making and problem solving in the area of patient care (Tayler, Lillis, & LeMone, 1989; White et al., 1990).

Recent nursing literature has questioned the primacy and restrictiveness of rationality in decision making. For example, Allen (1990) suggested that a decision could

not be considered truly rational without complete information and full consideration of all perspectives. He stated that "the 'rationality' of a decision depends vitally on both the quality of the information considered and the perspectives brought to bear on that information" (p.315). In fact, according to Jenkins (1985b), it may be difficult to attain a purely rational approach in most clinical decision making because of "insufficient information, the unattainability of perfect calculations, and the uncertainty of outcomes" (p. 227). Macdonald (1988), from the education literature, presented a slightly differing view and suggested that what is commonly referred to as rational thought "leaves out the thinker, his or her unique horizon or place in the universe, with its associated urges, feelings, and impulses" (p.103). He further maintained that the purpose of rational thought was to explain (flatten out) things for the purpose of predicting and controlling, and that this type of thinking did not really result in an understanding of the situation.

One non-analytic component of decision making frequently referred to is intuition, a word used to describe clinical judgement not backed by rationale. "When using intuition, nurses arrive at a decision without being able to describe either the elements of the situation that led to the decision or the process they used to get there" (Tanner, 1989, p.21). Brunner, cited by Blomquist (1985), stated the following:

Intuition implies the act of grasping the meaning, significance, or structure of a problem without specific reliance on the analytic apparatus of one's craft. The rightness or wrongness of an intuition is finally decided not by intuition itself but by the usual methods of proof. It is the intuitive mode, however, that yields hypothesis quickly, that hits on the combination of ideas before their worth is known (p.9).

Benner (1984) included the significance of experience and knowledge in her description of intuition as the "direct apprehension of a situation based upon a background of similar and dissimilar situations and in embodied intelligence or skill"

(p.295). Tanner described two aspects of intuition; those of pattern recognition and a sense of salience. Both Henderson (1982) and Benner believed that intuitive judgement derived from a combination of clinical knowledge and personal life experience is often ignored in favor of the more "logical" nursing process (cited by Field, 1987).

Educational Theory Regarding Decision Making

Throughout the nursing diploma program referred to in this study, students are instructed to use the nursing process as a model for problem solving and decision making during patient care. In the second semester of the program several weeks are devoted to the classroom teaching of the components of the nursing process: data collection, diagnosis, planning, treatment, and evaluation. During this time, and throughout the rest of the program, students practice utilising this process by developing nursing care plans which require them to go through each of these steps as they consider the care of their patient. Expectations related to depth of thinking increase as students advance in the program. By the time the students reach the second year, they are expected to complete two to three care plans per semester during the clinical practicum. According to Justus (1986) most diploma and baccalaureate nursing programs in Canada and the United States follow this pattern of teaching the nursing process in the classroom and evaluating its use in written care plans (cited by Tschikota, 1990).

The evaluation forms used to assess student clinical performance in the second year of this Diploma Nursing Program reinforce the expectation that students will use this mode when making decisions in planning patient care. It should also be noted that the nursing textbooks used in the program are all organized around the nursing process.

Thus this mode of thinking with regard to patient care is reinforced every time the students read their texts.

In addition to receiving the theory related to the nursing process, the students attend a critical thinking workshop in which thinking processes associated with problem solving are examined. For example, in the latest workshop, the instructors talked about attending to cues (for the formulation of a data base), diagnostic reasoning (the process involved in arriving at a nursing diagnosis), and diagnostic strategies (hypothesis generation, hypothesis investigation and diagnosis formulation). Creative problem solving was addressed through the use of case studies.

Factors Influencing Decision Making

It is reasonable to expect that student nurses involved in decision making during their time in the clinical area are influenced by a host of factors; some evident and some not so evident. The literature showed the following factors to be the most significant: formal education, the situation or environment, the student-instructor relationship, stress, locus of control, self concept and value system, experience, cognitive ability, and perception of decision-making ability. The purpose of this section is to review the findings in the literature with respect to these influences so that they can be used as a backdrop when examining the responses of students in this study.

Effect of Education

One component of the literature discusses the effects of formal education on decision making. This is an important consideration for theoretical knowledge is "relevant only to the extent to which it is used in patient care activities" (del Bueno,

1983, p.7). Jenkins (1985) echoed this viewpoint in her statement that "a theoretical base is worthless without application in a clinical context" (p.243).

Felton and Parsons (1984) found that "education had a significant impact on overall ethical/moral reasoning levels" (cited by Bevis, 1989, p.118). Tanner (1989) stated that "theoretical knowledge guides the acquisition of practical knowledge" but also acknowledged research suggesting that humans acquire many skills without theoretical knowledge (p.27). Benner (1984) strongly suggested that clinical "know how" (as in holistic decision-making, clinical judgement, and practice) was derived from a variety of experiences both formalized (as in classroom theory) and practical (as in patient care assignments). She also discussed the impact of incidental learning (as might be gained through observation) and intuitive thinking on quality practice.

Field (1987), stated that "to be successful, nurses need knowledge of and skills in the cognitive processes of problem solving, commonly referred to as the nursing process, an understanding of the care situation and the theoretical knowledge base needed in order to solve the problem" (p.563). Holbert and Abraham (1988) advocated the explicit teaching of generic (generalizable) thinking and problem-solving skills as necessary to effective nursing practice in view of the increasing diversity and complexity of health care. Both Holbert and Abraham (1988) and Jenkins (1985a) questioned whether there has been a lack of effective education with regard problem solving in nursing and whether this had affected the application of the nursing process to patient care.

Jenkins (1985a) stated that the skill of decision making in the practice setting could be learned and strengthened through education and practice. However, Tanner (1986) and Corcoran (1986b), in their studies of decision making activities during patient

care planning, concluded that neither students nor practising nurses used the nursing process as outlined when they were attempting to problem solve. Even with theoretical teaching and practice, there continued to be disparities between expected and observed student behaviors in this regard.

A study by Joseph (1985), correlating willingness to make decisions regarding patient care and educational preparation showed that nurses from diploma programs were more willing to take responsibility for decision making than those who had obtained a degree. The amount and types of clinical experiences and the emphasis of the curriculum were seen to have been a factor here. It was suggested that diploma nurses were more socialized into the hospital "world of work" (p.31).

Effect of the Situation

Jenkins (1985a) suggested that clinical decisions were affected by the environment in which they were made. For example, autonomy in decision making may be suppressed in an environment that fosters the view of nurses (and even more so student nurses) as occupying subordinate roles and following doctor's orders and hospital rules (Neaves, 1989). The size of the hospital, whether it is a teaching hospital (which may afford the nurse more autonomy) or a community hospital (which may have very strong physician control) may also affect the decision making capacity of the student (Prescott et al., 1987).

Neaves noted studies by Christman (1971), McClure (1978), and Schlotfeldt (1973) which revealed that "particularly in large health-care institutions it can be observed that nurses, often willingly, function in a dependent, subservient manner, seldom implementing nursing care based on their own knowledge and skills" (p.13).

These types of institutions are seen to perpetuate the norm for much of women's service work which has been characterized by "the fatal combination of responsibility and powerlessness" (Frye 1983, p.9). Clinical units structured around the concept of primary nursing were seen, however, to afford more autonomy (Prescott et al., 1987).

Personnel in the environment may also affect decision-making. Benner (1984) stated that novice nurses need support in their decision-making in the setting of priorities; they need to be backed by competent nurses. Because students are dealing with actual patients (some of whom are suffering, in crisis, in pain, or near death) the clinical area is often seen to be stress producing. Additional inhibitors to nurse decision making included heavy workloads, dealing with large numbers of individuals, and non-nursing problems that "took time away from patient care problems" (Prescott et al., 1987, p.61).

Brown (1981) noted that the clinical milieu was not controlled specifically for the education of nursing students. Student nurses in the clinical setting potentially observe and model decision making, whether it be acceptable or unacceptable. In their practice of decision making there is not often room for trial and error.

Effect of Relationship with Instructor

There is some indication in the literature that the student-instructor relationship is an important determinant of the climate in which the student is learning to make decisions. Jenkins (1985a) suggested that effective decision-making was more likely to be enhanced when the instructor demonstrated a supportive attitude by allowing learners "to experience fully the process of making decisions and being held accountable for them" (p.243). Berman (1968) advocated an atmosphere of openness and advocacy for risk taking (cited by Jenkins, 1985a).

Instructors might also consider that their own decision-making practices provide models for students (Jenkins, 1985a). Clayton and Murray (1989) discussed the implications of faculty expertise on the student learning experience. They cited a study by Kramer, Plifron and Organek (1986) involving a group of 134 baccalaureate students and 14 instructors which noted increased "autonomy, self-concept, self-esteem, locus of control, and professional role behavior" in students working with faculty who were also engaged in clinical practice (p.49). The study used Bandura's social learning theory (1977) in which the conditions for learning include:

1. The learner either directly or vicariously observes a model and the consequences of the model's behavior.
2. The learner has the opportunity to practice the behaviors he or she has observed.
3. The learner imitates models who are perceived to be expert, competent, or socially powerful.
4. Reinforcement is paramount in the acquisition process and most instrumental when the model, rather than the modeller, perceives reward (cited in Clayton and Murray, 1989, p.49).

Several studies have looked at instructor behaviors in the clinical setting relative to their positive or negative effects on learning. Since decision making is part of clinical learning, these are relevant for this discussion. An example of a study undertaken to determine characteristics of best and worst clinical instructors was that of Mogan and Knox (1987) who distributed a clinical effectiveness inventory to 173 students and 28 instructors from seven schools of nursing in Canada and the United States. The best clinical teacher characteristics listed by both faculty and students included: good role modelling, enjoyment of nursing, approachability, fostering of mutual respect, high clinical skill and judgement levels, enjoyment of teaching, preparedness for teaching, self-confidence, and willingness to take responsibility for own actions. Students also

mentioned behaviors of enthusiasm, promotion of student independence, and correcting without belittling. Positive instructor behaviors identified by other writers included: providing support for students in crisis situation (Griffith & Bakanauskas, 1983; McCabe, 1985), providing successful learning experiences (Griffith & Bakanauskas), and conveying confidence in students (Brown, 1981).

Effect of Stress

"Stress experienced by nursing students is a significant deterrent to their success in nursing school" (Policinski & Davidhizar, 1985, P.34). Feelings of insecurity brought on by having to deal with patients experiencing illness, pain, and maybe even life threatening conditions; feelings of being threatened by authority figures, be it the instructor, staff, or physicians; feelings of being overwhelmed by the demands of procedure, time, or the patient assignment; and feelings of fear related to the unknown; all contribute to students' perceptions of inadequacy (Policinski & Davidhizar). These can serve to undermine the students decision-making abilities.

Cleland (1967) studied the effects of stress on thinking and noted a decreased performance, particularly in highly complex tasks, under high stress conditions (cited in Thomas et al., 1991). Other research conducted on decision makers under the pressure of time found that this stress influenced adversely the quality of decisions (Wright, 1974, cited in Thomas et al., 1991).

Gillese (1986) recognized the stress brought about by feelings of being overwhelmed by academic expectations. He stated that the knowledge explosion in the medical and social sciences has influenced nursing education such that over the past fifteen years the information diploma students are expected to integrate has almost

doubled. Added to this is the emergence of "patient rights" with increased public expectations of care received in the institutional setting. Moreover, while students are expected to meet the needs of patients in therapeutic ways, they have to deal with their own need to succeed in the course (Davis & Fricke, 1977). Jarvis and Gibson (1980) discussed stresses experienced by returning adult learners concerned about the reorganization of their self-image which was threatened by their new role and their new environment.

Stresses experienced by nursing students in situations requiring decision making might negatively influence the outcome. Jenkins (1985a) stated that threats to self-efficacy needed to be diminished by promoting a greater sense of control in learning situations and independence in clinical decision making.

Effect of Locus of Control

Locus of control, a psychological construct identified by Rotter (1966), refers to individually-held belief systems about what affects outcomes in life events (cited in Neaves, 1989). A person with an internal locus of control has a perception of personal power and control in situations. Persons with an external locus of control believe that life events are not only out of their control, but governed by external sources such as luck, other people, or the environment.

Neaves (1989) studied decision making among nursing students relative to locus of control. The author used Rotter's (1966) Internal-External Locus of Control Scale to determine students' locus of control. A "Medication Administration Questionnaire", which forced respondents to select independent or dependent options to a situation was used to measure decision-making. The findings based on the responses of 91 students

"supported the hypothesis... that subjects with an internal locus of control tended to select independent responses on the decision-making scale ... and individuals with an external locus of control tended to select the dependent responses" (Neaves, 1989, p.15). By the researcher's own admission, there was no guarantee that responses selected on paper were consistent with actual behavior.

Neaves (1989) stated that personality characteristics of "submissiveness, deference, and a low regard for intellectual and leadership skills" found to be dominant among nurses and nursing students could be manifestations of external locus of control (p16). Moreover, she suggested that "external locus of control may interfere with the full incorporation and implementation of principles and rules of accountable professional practice" and emphasized the need for further research into the factors which "might compromise the vulnerable student's ability to implement the principles of safe, prudent nursing practice" (p.15). Neaves also conceded that decision making is a very complex process in which locus of control was only one variable.

Effect of Self Concepts and Value systems

The students' perception of self may affect their decision-making activities. Joseph (1985) suggested that women and nurses have been the victim of society's general belief that they are inferior. This label of inferiority reinforces a submissive attitude, which, in turn, compromises decision-making activity. In a study done by Joseph (1985), a sample of eighty-five female nurses with varying levels of experience and education were asked to complete the "Joseph Decision-making Tool" which required them to make decisions in twenty patient-problem scenarios. The purpose of the study was to ascertain the relationship between self-concept, sex-role stereotype, educational preparation, and

years of experience; and nurses' attitudes towards decision making. The "Bern Sex Role Inventory" (BSRI) scale was used to determine whether a person was characterized as masculine, feminine or androgynous. It was found that 'male' scorers were more willing to make decisions.

Self-concept was also assessed by Joseph (1985), and there was no apparent relationship between it and the ability to make decisions. This finding was contrary to that in a study done by Fitts (1972) which showed a direct correlation between high self-concepts and decision making (cited in Joseph, 1985). While Joseph's study found nurses to have high self concepts, she acknowledged studies by Cohen (1981) and Kramer (1979) which found student nurses to have low self concepts. Joseph did suggest, however, that the number of variables used in her study may have been too large for the sample size and thus the findings were not explicit.

Jenkins (1985b) in citing Coppersmith (1967) and Tippet and Silber (1966) indicated that confidence in decision-making ability correlated with high levels of self esteem. People with low self esteem, on the other hand, performed according to the context within which they found themselves.

Decision-making must also be assessed in the light of individual value systems (Jenkins, 1985). "Judgements are never completely free from centrally held values anchored in experience, socialization and cognitive function" (Hepworth, 1989, cited in Hepworth, 1991). According to Lindberg, Hunter and Kruszewski (1990), nurses (and nursing students) operate in clinical situations within values systems established as a result of cultural and ethnic backgrounds, family traditions, peer group ideas, political environment and educational and religious philosophies. Nurses also bring with them

professional values. Potter and Perry (1989) suggested that students may have some difficulty differentiating between personal and professional values. It may be that students encounter patients in the clinical setting whose values conflict with their own and these value conflicts may present ethical dilemmas in decision making. Questions about abortion and quality versus quantity of life are examples of these.

Effect of Experience

Prior experience is seen to be a factor in decision-making. Del Bueno (1983) stated that the "development of decision-making skill can be impeded by limited practical experience and lack of opportunity to actually make decisions" (p.7).

Benner (1984) described a study in which groups of nursing students and nurses with varying levels of experience were interviewed with respect to their practice of patient care. The researcher looked at differences in novice and expert descriptions of the same clinical situation. She noted that novices often had little or no background in the circumstances in which they were expected to perform. They had been taught about situations in lab and class theory and had been given context free rules to direct actions but there was a lack of connectedness when faced with real life situations. Advanced beginners, on the other hand, could demonstrate "marginally acceptable performance" in given situations based on coping with previous real situations and relating aspects of the two (p.23). According to Benner "novices ... can take in little of the situation: it is too new, too strange, and besides, they have to concentrate on remembering the rules they have been taught", thus making it difficult for them to make satisfactory decisions (p.24).

Campbell, Cordis, McBeath, and Young (1987), in describing teacher professional development, presented a model that could be utilised when attempting to

understand and describe the professional development of nurses (including student nurses). Novices were described as feeling very insecure, highly anxious, and concerned about perceptions of their own performance. They were continually questioning whether they were capable of handling the task at hand. The model also described the novice's ability to transform knowledge into practice, as being somewhat "robotic" with a possible lack of understanding of the theory content and how it actually related to practice. Additionally, many of the decisions made by inexperienced practitioners were described as impulsive (not necessarily backed by rationale), and without indication of an understanding of the possible ramifications. Much of the practice at this level was seen as a reflection of the need to be accepted by "peers, supervisors and the profession" (p. 16).

At the same time, there are nursing students who enter the nursing diploma program with a background of nurse-related work experience in such capacities as nursing assistant or ward aide. Educators need to recognize the issues that students with varying clinical experiences face as they enter the clinical practicum of the diploma program. For example, Diekelmann (1989) discussed the sense of confinement these students may undergo when they attempt to define their holistic perception of a situation (gained from years of observation) in terms of the new theory and principles they have been taught. Just as textbook rules are transformed in practice for the novice student, previous practice may be transformed through theory for the more experienced student. These transformations are not often recognized when students are evaluated according to written offerings. Diekelmann (1989) suggested that we need to struggle to understand what these students are dealing with to assist them in creating meaning as they attempt to unite previous experience with education.

It is also possible that previous experience may have a deleterious effect on decision making in that it "may override any rules or guides for decision-making the individual may have learned" (Arkes & Hammond, 1986, cited in Neaves, 1989, p.16). Additionally, Joseph (1985) suggested that an institutional background might result in a reluctance to question authority and make independent decisions.

Effect of Cognitive Processes

Cognitive abilities are seen to have an effect on decision making (Brooks & Shepherd, 1990; Hepworth, 1991). Cognitive processes as used in this study refer to ways of knowing. Gover (1972) stated that the "accuracy of decision is determined by the level of nursing knowledge that the respondent possesses, and by her ability to use this knowledge to solve ... problems" (p.54-55). In recent nursing literature, the "use of knowledge" appears to be subsumed by the notion of "critical thinking". Bandman and Bandman (1988) defined critical thinking in nursing as "the rational examination of ideas, inferences, assumptions, principles, arguments, conclusions, statements, beliefs, and actions" (p.5). According to these authors, the four types of reasoning that comprise critical thinking include: deductive, inductive, informal or everyday, and practical reasoning.

White et al. (1990) viewed critical thinking as "the process of reasoning by which we analyze information and form conclusions" (p.17). Malek (1986) contended that "professional nurses must be good decision makers" and that it is the responsibility of clinical instructors to assist the students in developing the skills in critical thinking necessary for good decision-making (p. 20). Brooks and Shepherd (1990) concurred by

saying that "critical thinking skills and the ability to make guided decisions based on sound, rational bases need to be consciously taught" (p. 393).

Sternberg (1985) noted the escalating enthusiasm among educators for teaching critical thinking. This trend is easily recognized in the nursing field as an increasing number of "how to" articles have appeared in nursing journals. Sternberg (1985) cautioned, however, that the strategies presented in the teaching programs do not necessarily prepare students for problem solving in the real world. His concerns include: a) The difficulty in problem solving is often in the recognition of the existence of a problem, and what exactly the problem is, b) problems are not often well structured and it is not always clear what information is necessary to solve the problem, c) problems are affected by the context and often do not submit to one right solution, d) informal knowledge (acquired through life experiences) plays a significant role in problem solving, e) unlike case studies, solutions to problems have real consequences, f) problems are often resolved as a consequence of group efforts, g) and finally, problems sometimes "can be complicated, messy, and stubbornly persistent" (p.198).

Perception of decision-making ability

Jenkins (1985b) discovered that her study of senior nursing students supported the existing literature in that nursing students not only did not perceive themselves as decision makers, but they did not feel that they had any power or responsibility to make decisions. In order to effectively undertake decision making in the clinical area, there must be a perception of capability in this regard (Jenkins, 1985b). Jenkins (1985a) suggested that factors such as student status, presence of skilled personnel, and lack of familiarity with procedures can result in decreased sense of efficacy.

Joseph (1985) indicated that nurses may have "trouble identifying their own role in decision making" (p.30). She further indicated that the fact that many hospitals have policies about the types of decisions that need to be made by physicians might result in an uneasiness about making independent decisions about patient care.

Summary

This chapter included definitions of the terms nursing student, clinical instructor, clinical setting, and clinical experience; a discussion of concepts related to decision making; a profile of educational theory related to decision making as presented in the diploma program in this study; and a review of literature regarding factors influencing decision making in the clinical setting.

The discussion of educational theory regarding decision making as presented to the nursing students revealed concerted attempts to standardize decision making regarding patient care into a logical, theoretically sound process. The literature review disclosed the many factors affecting clinical decision making and gave rise to speculation as to the extent of their effect on the decisions students make. The writer further questioned whether there were additional factors that came into play. This study of nursing students at one college provided an opportunity to reveal the variety and magnitude of factors affecting their decision making.

CHAPTER THREE

METHODOLOGY

The purpose of the chapter is to: (a) articulate the rationale underlying the methodology, (b) discuss the research design including the questionnaire and the interview, (c) outline ethical considerations, (d) describe the sample and the setting, and (e) delineate the assumptions.

Rationale

During their clinical practicum, nursing students are involved in making decisions about the care for their patient or group of patients. Prior to their time with the patients, students are expected to utilize the nursing process to prepare a nursing care plan in anticipation of the care they will provide. During their time with the patient, students are expected to employ the nursing process as situations requiring clinical judgement arise. Several nurse researchers have questioned whether the nursing care plan is really a predictor or indicator of patient care and whether the nursing process is really the determinant in decisions regarding patient care (Corcoran, 1986b; Field, 1987; Tanner, 1986; Tschikota, 1990). Even though educational efforts have focused on standardizing clinical decision making into a logical, theoretically sound process, recent articles in nursing journals and informal discussions with colleagues and students suggest that decision making is not always clear-cut and may, in fact, be influenced by a myriad of factors.

Simulated performance tests have become popular as a mode of assessing decision making in clinical situations. For example, video simulations were used by del Bueno (1990) in a study using 563 nurses of varying educational backgrounds to

"determine what, if any, relationship exists between or among experience, educational preparation for nursing, and ability to make acceptable clinical judgements" (p. 291). Del Bueno did admit, however, that "real patients do not present nurses with a case study or multiple choice options that include the 'right' decision. Obviously the most reliable test of nurses' decision-making abilities are their performances in actual situations" (p.290).

Tanner (1989) and Tschikota (1990) used case studies and asked students to talk their way through the planning of care of a simulated patient. The purpose of these studies was to assess the processes used in decision making. Tschikota (1990) also obtained a self-report from students regarding factors influencing decision making, but students were asked to report these in terms of which factors facilitated their decision making and which factors inhibited their decision making.

The purpose of this study was not to consider the processes used in decision making nor the acceptability of the decisions made, but rather, look at the factors, as reported by the students, that influenced them as they made decisions about patient care. To this end students were asked to complete a questionnaire (Appendix B) and participate in an interview.

Research Design

This study employed a nonexperimental approach utilizing a cross-sectional, univariate descriptive design. According to Polit and Hungler (1983) such a design allows the researcher to look at multiple variables at a given point for the purpose of description rather than for the purpose of correlation. As noted in the literature review, a few studies identified discrete variables affecting decision making but no consistency was found in the relationships. This researcher found only one study (Tschikota, 1990)

containing a student self-report regarding factors influencing their decision making. The students were asked to report these in terms of facilitative and inhibitive influences. In Tschikota's study, however, the factors were correlated with locus of control and the processes used in decision making.

Because research identifying factors affecting student nurses as they make clinical decisions was scarce, this researcher opted for a descriptive design. The goal was to describe the incidence and degree of the varying factors as reported by the students. The study took a two-pronged approach to data collection: (a) administration of a questionnaire to all volunteering participants and (b) interviews with a subset of the volunteers.

The Questionnaire

The questionnaire (Appendix B) was administered to all second and third year nursing students from the studied diploma program who volunteered to take part in this project. Sixty-four out of a potential 74 students participated. The objective of the questionnaire, which took 20 to 40 minutes to complete, was to assess the incidence and degree of factors influencing decision making.

There were 40 items in the questionnaire. The questionnaire was designed by drawing on the literature and consulting with nursing professionals to ascertain possible influences on student clinical decision making. Items were designed to reflect perceived domains of influence in clinical decision making. These domains were called dimensions. For example, the dimension of stress was represented by items 15 and 31. The dimension of relationship with instructor was reflected in items 6, 14, 22, 27, and 35. Other dimensions represented in the questionnaire included: education regarding decision

making (nursing process), cognitive processes, clinical experience, situation, locus of control, and perception of decision-making ability (Appendix C). Generally four to five items were created to reflect each dimension. The instrument included positively and negatively worded statements to reduce the possibility of a response bias (Polit and Hungler, 1983). The items were recoded for the computer analysis such that a high score was either associated with a more positive attitude or indicated a greater influence.

The items were written to represent a self report. For example, item 11 read "I think about what my instructor would say when I consider the choices I could make about patient care." Each item contained five response options: strongly agree, agree, undecided, disagree, and strongly disagree. The reliability of the scale (standardized alpha) was .795.

Content validity was a concern in the formulation of the questionnaire. To this end, items representing each dimension were initially grouped (though later dispersed throughout the questionnaire) and assessed for representation of the desired domain. Five nursing instructors from the college where the study took place were asked to review the questions in terms of appropriateness, applicability, construction, and readability. In addition, three recent graduates (December, 1990) were asked to complete the inventory and comment about the timing, adequacy of response categories, face validity, length of instrument, and anything else associated with the instrument.

In order to address concerns regarding possible sources of measurement error (Polit and Hungler, 1983), the researcher arranged for all second and all third year students to hear the explanation and to have the opportunity to complete the questionnaire in their respective classes. The second year group filled out the

questionnaire during a post conference time following a 7 hour shift in the hospital setting. They were halfway through a three week clinical practicum. The third year students completed their questionnaires after a lecture and prior to the clinical component of their semester.

The researcher was not present while the questionnaire was being completed or when the consent forms and questionnaires were collected. Consents were separated from the questionnaire and placed in a different packet so that respondents to the questionnaire could not be identified. The researcher (who is also an instructor in the program) was on sabbatical leave, thus possibly allaying any concerns about reprisal.

The questionnaire was developed out of a concern that interviews alone might not generate the desired information. Students coming into an interview may not have given a lot of thought to factors affecting their decision making and may have difficulty formulating their perspectives in a short interview time. The self-report items generated from the literature allowed the student to consider possible factors. In addition the researcher was able to tabulate the incidence and degree of response to each factor.

The Interview

Interviews were conducted with 8 students from the second year class and 10 students from the third year class. Two of these interviews were conducted with groups containing 3 students each. The rest (n=12) were individual interviews. The interviewees were randomly selected from the participants (n=64) in the study. Interviews were conducted in the hospital (either in an isolated area of the cafeteria or in a separate room) and in the researchers office.

The interviews began by giving the students an opportunity to recount a clinical situation in which they were involved in decision making regarding patient care. The students had been asked to think about this prior to the interview. The purpose of this story telling was to give the interviewees a reference point for the discussion on clinical decision making. The conversation that followed revolved around themes emerging from an analysis of the responses to the questionnaire. Dimensions discussed included relationship with instructor, perception of self (personal values), clinical situation, clinical experience, nursing process, and intuition. Participants were also given an opportunity to discuss any additional factors that affected their decision making. The interviews lasted from 30 minutes to just over an hour.

The researcher was aware that the data obtained through these methods would be of a subjective character but as Hepworth (1991) stated that "it could be argued that the profession needs to accept the subjective nature of assessment and also accept that subjectivity need not be inversely related to validity and reliability. The social science disciplines are rapidly moving towards the acceptance that the scientific method may not be an appropriate way to study people ..." (p. 51).

Ethical Considerations

The study proposal was approved by the Human Subjects Research Committee at the University of Lethbridge. Permission to conduct the study within the School of Diploma Nursing was obtained from the appropriate office of the selected college.

The researcher met with the second and third year students in their respective classes to explain the project and provide opportunity for completion of the questionnaire. Students who agreed to participate in the study were asked to sign a

consent form (Appendix A) which briefly explained the study, and assured them that their responses would remain confidential and their identities hidden. Additionally, students were informed that their participation was completely voluntary and that they had the option to withdraw from the project at any time without consequence. During the interviews the students were assured that the interviewer was on a sabbatical leave and was acting in the capacity of researcher. Furthermore, their responses would be used only in the context of the study and their identities would remain hidden.

Sample and Setting

This study obtained volunteers from the second and third year nursing students currently enrolled in the selected School of Diploma Nursing.

Forty second year students entered the program in September, 1991. Thirty-five were female and 5 were male. These students had completed a minimum of three semesters in clinical practice (approximately 281 hours). All had nursing experience on a medical unit and about half had nursing experience on a surgical unit. It was expected that by this point in the program they would have cared for at least two patients during an 8 hour shift. One of these patients would usually have required more acute care while the other might have needed minimal assistance. At the time of this study students were expected to focus on integrating the theory they had learned, develop proficiency in psychomotor skills, and learn organizational skills. The theory to this point included two courses in Foundations of Nursing, one in Interpersonal Communications, one in Nursing of Adults, two Biology courses, one Microbiology course, two Psychology courses, and one Sociology course.

Thirty-four third year students entered the program in September, 1991. Thirty-one were female and 3 were male. Students entering the third year would have completed a minimum of 1045 hours in a clinical practicum. By this time, the students had worked on various medical, surgical, obstetrical, and pediatric units. In addition to their first year courses they had completed three more nursing courses, another sociology course, and a philosophy course. They had also written comprehensive examinations and were entering a preceptorship practicum during which they worked with a registered nurse.

It was the writer's belief that factors affecting diploma nursing students during clinical decision making in the selected School of Diploma Nursing would be similar to factors affecting the Western Canadian population of diploma nursing students.

Assumptions

The following assumptions were present in this study:

1. Students would feel free to disclose their experiences of decision making regarding patient care.
2. What they said would be representative of their usual experiences in decision making in the clinical area.
3. Students would be able to define and describe the factors they perceived to be influential in their decision making.
4. Though students have common curricular experiences, they may have perceived these experiences in different ways.

Summary

This chapter included a discussion of the rationale underlying the methodology for the study and outlined the research design. The questionnaire and the interview were explained and ethical considerations were reviewed. The sample and setting for the study were discussed and the assumptions underlying the study were stated.

CHAPTER FOUR

RESULTS OF DATA ANALYSIS

The purpose of this study was to discover the incidence and magnitude of factors influencing student decision making in patient care. Results of the data analysis from the questionnaire and the interviews include the following: (a) description of the sample and (b) discussion of influencing dimensions.

Description of Sample

Sixty-four out of a possible 74 students completed the questionnaire. Of the 33 second year students who responded to the questionnaire, 17 (52%) were twenty-four years old or younger, 10 (30%) were between the ages of twenty-five and thirty-four, and 6 (18%) were between the ages of thirty-five and forty-nine. Of the 31 third year students who completed the questionnaire, 23 (74%) were twenty-four years old or younger (see figure 1).

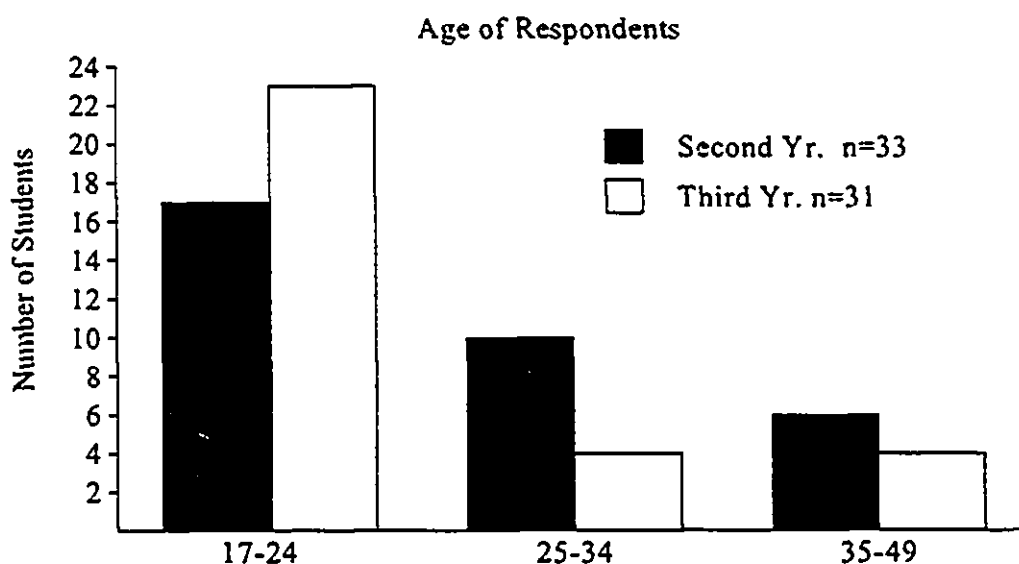


Figure 1 - Age of Students

The students were asked to state their highest level of academic preparation prior to entering the nursing program. Twenty-seven (42%) of the total number of respondents (n=64) came in with a high school diploma while 25 (39%) entered with one to three years of college or university. Six students (9%) had a college diploma or university degree (see figure 2).

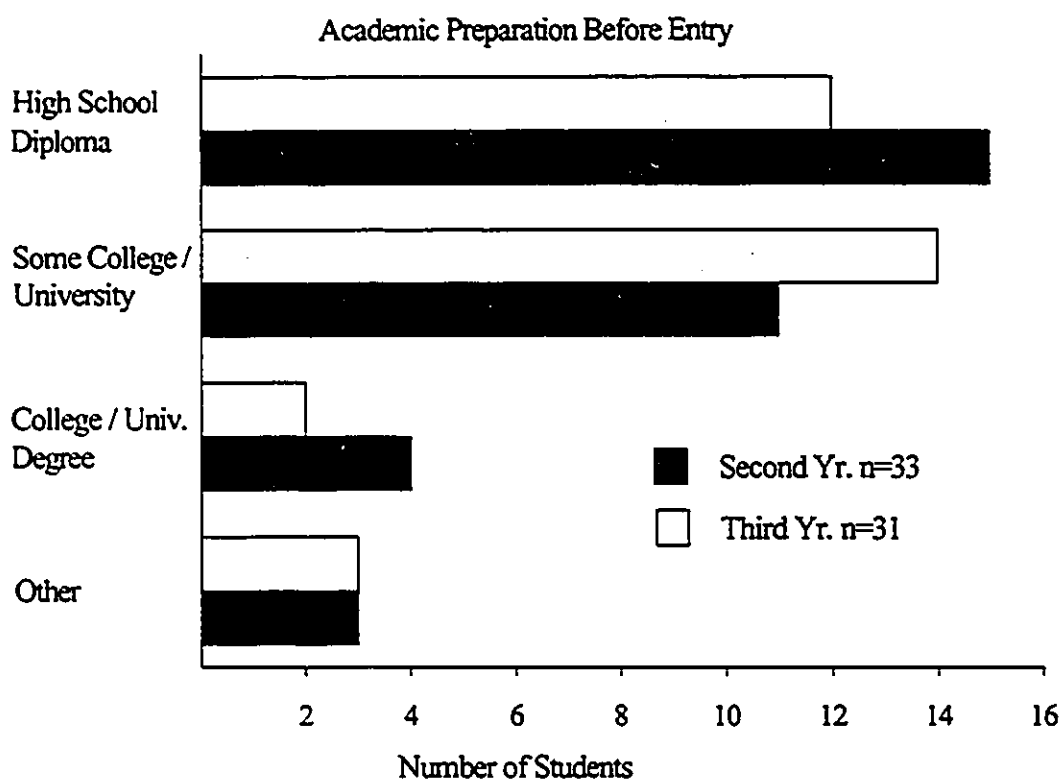


Figure 2

Of the total sample (n = 64), 24 (38%) had engaged in health-care related work experience prior to entering the nursing program. Twelve of the second year students (36%) and 8 of the third year students (26%) stated that they had health relate work experience (see figure 3). The majority of these students had worked as nursing home attendants and nursing assistants in extended care units. Two worked as emergency medical technologists, two with the mentally retarded, and one as a pharmacy technician.

While many students had never had health related work experience, several had participated in volunteer work in health related fields.

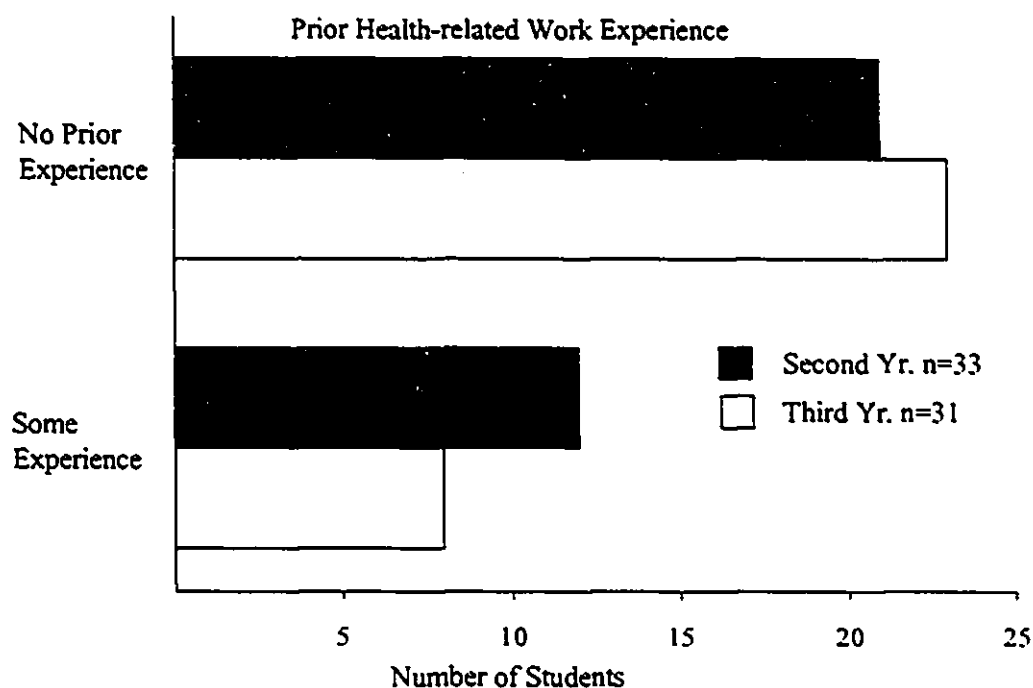


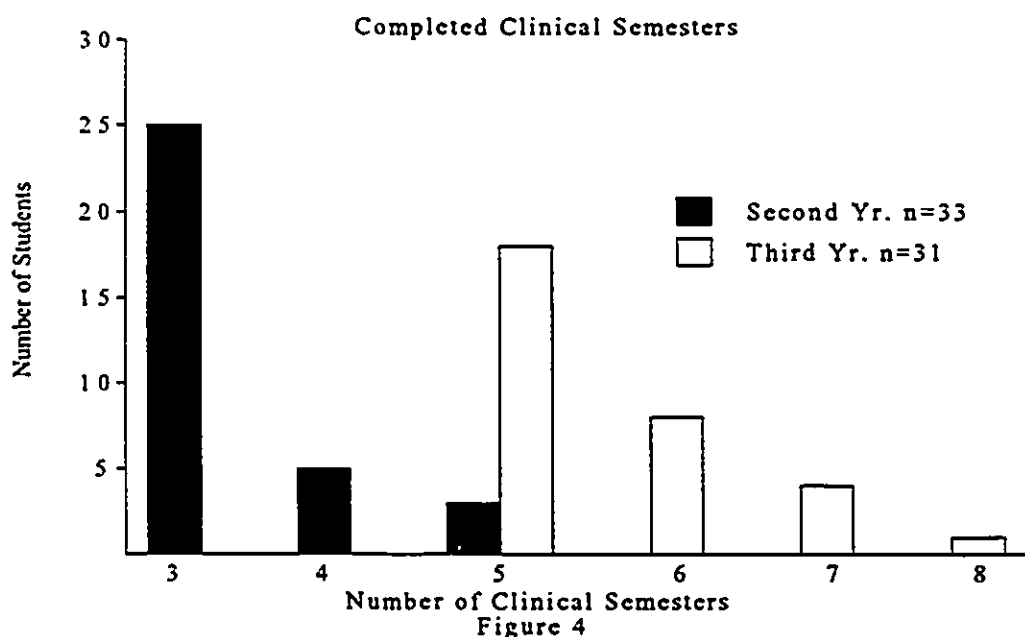
Figure 3

Of the respondents who claimed non health-care related work experiences, the majority described involvement in the service industry in such capacities as waitress, cashier, clerk, chambermaid, housekeeping, and gas jockey. Several had managed small companies and a few had acted as instructors in recreational activities. Others worked as general laborers in such fields as agriculture and construction. Thirteen respondents had worked as secretaries and six as child care workers.

The students were asked to list courses or activities that might have contributed to their ability to make decisions. Courses that were considered to be helpful included time management, physics, psychology, English, law, ethics, nursing, management, business, babysitting, and special aide. Several students stated that their involvement in public

speaking, clubs, committees, and sports activities were factors in their development of decision making abilities. Other activities mentioned were socialization in family and school, home-making and parenthood, general life experiences, books, and prayer. Two respondents stated that their experience with peer counselling and the crisis line contributed to their decision making ability.

The students in the study were asked to indicate how many clinical semesters they had completed in the nursing program. Of the second year group, 25 (76%) had completed three semesters of clinical experience. The rest had completed four or five semesters, an indication that they had repeated two to three clinical experiences. Of the third year group, 18 (58%) had completed five semesters of clinical experience. The rest had completed six semesters or more, which meant that they had repeated two or three clinical semesters in the nursing program (see figure 4).



Reliability

The reliability of the scale (standardized alpha) was .795.

Discussion of Dimensions

The dimensions (domains students perceived to be influential in decision making) found to be most pronounced in the study analysis included those of stress, education regarding decision making, relationship with instructor, previous experience, and perception of decision-making ability (including self confidence). Other dimensions of interest included intuition, locus of control, situation, modelling, and personal values and beliefs. The findings are presented in the following section.

Stress as a Dimension

The dimension of stress was examined using one-way analysis of variance (ANOVA). A significance level of .05 was set for this study. The two questions within the scale reflecting this dimension are:

15. The stress I feel in the clinical setting, affects my ability to make sound decisions about patient care.

31. I find that my clinical experience is stressful (Appendix B).

Results (see Table 1) indicate a significant difference between groups in the variable of year of program ($p=.003$) and number of clinical semesters ($p=.021$). When examining stress and the variable of prior education, the results approached significance ($p=.066$).

Table 1.

ANOVA: STRESS x RESPONDENT VARIABLES

Variable	df	F ratio	p
Year of Program	1	9.64	.003
No. of Clin. Semesters	5	2.91	.021
Age	6	1.32	.264
Prior Education	6	2.11	.066

Of the total sample (n=64), 35 students (55%) agreed that they found the clinical experience to be stressful (Appendix B, question 31). Eight (13%) indicated that they were undecided in this matter. More second year (n=21, 64%) than third year students (n=14, 45%) stated that they found their clinical experience to be stressful. In fact, 6 second year students (18%) strongly agreed that they found the clinical experience to be stressful while none of the third year group indicated thus (see figure 5).

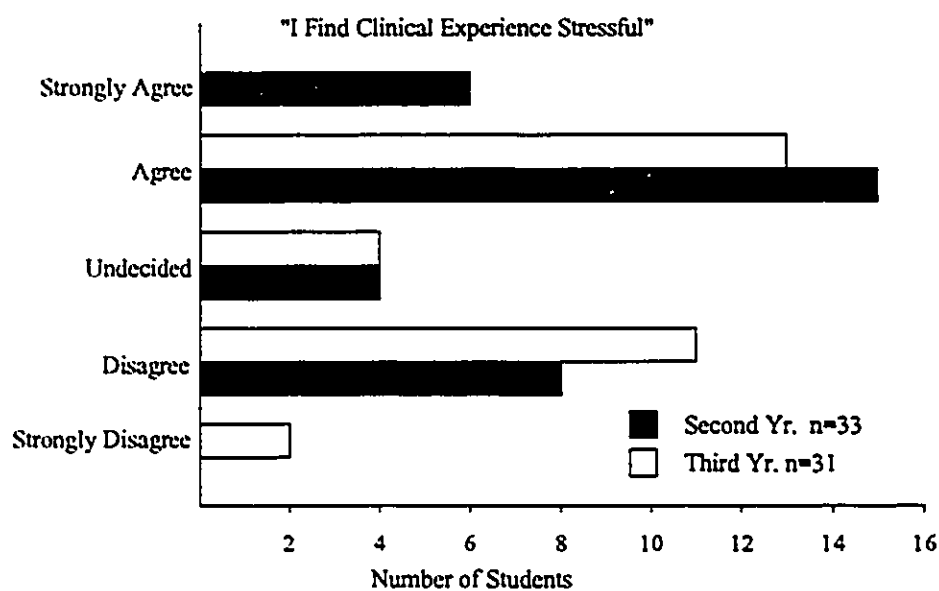


Figure 5

Second year students (n=22, 67%) were also more likely than third year students (n=11, 35%) to claim that the stress that they felt in the clinical setting affected their ability to make sound decisions about patient care (Appendix B, question 15).

In the questionnaire, students were asked to list the factors that caused them to feel stressed during their clinical experience. Eighteen third year (58%) and 8 second year students (24%) mentioned the nursing instructor as a factor. Of the third year students, 9 stated that nonsupportive, unfriendly, impatient, critical instructors contributed to their stress. In all, 7 students commented on stress resulting from

instructors "hanging over" their shoulder and "watching every move". Other comments indicated stress as a result of "feeling of being judged by instructors", "instructors having the power to pass or fail" and "instructors having differing expectations for each student". Some students suggested that stress resulted from criticism without credit for things well done.

Of the students who described how the instructor factor as a stressor affected their ability to make decisions about patient care, several said that they were afraid to make any move, especially a wrong move. Some stated that they lost confidence in their ability to make decisions; they felt inadequate. Others acknowledged their inability to "think clearly" and "reason through" problems because of the instructor component. One student admitted that "a student wants to succeed so they are afraid of making a wrong decision"; another indicated the inability to grow in independence with the instructor watching every move. Interestingly, 4 students contended that stress as a result of the instructor factor had no bearing on their clinical decision making.

Twelve third year (39%) and 5 second year students (15%) indicated that nonsupportive and uncooperative staff members contributed to their stress in the clinical setting. According to the responses, this affected decision making in that students were afraid to make decisions for fear of making mistakes, or for fear of their decisions being rejected by the staff. Additionally, students were reluctant to ask unsupportive staff members for assistance in decision making. One student indicated that when the staff was uncooperative, the focus in the clinical setting might be shifted from the patient to the staff.

Heavy workloads resulting from patient research and other clinical assignments was indicated as a factor contributing to stress in the clinical setting. Nineteen of the second year respondents (58%) suggested that this was a major factor while 11 third year students (35%) indicated the same. According to some of these students the resulting fatigue and information overload affected the quality of their decisions. One student indicated that while the workload was heavy, the completion of research guides did aid in making competent decisions.

Further to the workload, 8 second year (24%) and 5 third year students (16%) cited fatigue as stressor. In their view, fatigue affected their decision making in that their motivation was decreased, they couldn't think clearly, the process of decision making was slowed, and they tended to overlook information. This is notable in view of the fact that 21% of the second year students picked fatigue as one of the top five factors that influenced them the most as they were making decisions about patient care (Appendix B, question 37).

Patient-related factors were listed by 9 second year students (27%) as contributing to clinical stress. Examples of these included dealing with patient pain, caring for the critically ill, dealing with the family of a hostile or dying patient, and attempting to build rapport with the patient and the family. According to the students, these factors affected decision making in that emotional involvement would cloud issues and that it was hard at times to determine the boundaries for intervention. Lack of familiarity with procedures and policies was a stress inducing factor for 9 second year students (27%) and 6 third year students (19%).

Education as a Dimension

The dimension of education regarding decision making was examined using

ANOVA. The four questions within the scale reflecting this dimension are:

- 4. The theory related to problem solving and decision making that I learned in the nursing program influences me as I make decisions about patient care.
- 7. The experience of developing and writing out nursing care plans does not influence my ability to make decisions about patient care.
- 24. I use the nursing process (assessment, planning, intervention, and evaluation) when making decisions regarding patient care.
- 33. My knowledge of the nursing process (assessment, intervention, and evaluation) does not really influence my decision making regarding patient care (Appendix B).

Results indicate a significant difference between groups in the variable of year of program ($p=.012$) (see Table 2).

Table 2

ANOVA: EDUCATION x RESPONDENT VARIABLES

Variable	df	F ratio	p
Year of Program	1	6.67	.012
No. of Clin. Semesters	5	1.75	.138
Age	6	.46	.835
Prior Education	6	2.11	.066

According to the responses on the questionnaire the vast majority of the subjects felt that the theory related to problem solving and decision making influenced them as they made decisions about patient care (Appendix B, question 4). Fifty-eight of the 64 respondents (91%) either strongly agreed or agreed on this matter. It was interesting to note that while all third year students agreed with this item, 6 second year students were either undecided or did not agree.

Throughout the nursing program at this particular college, students are instructed in the use of the nursing process, a model of problem solving and decision making. Overall 51 subjects in the study (80%) stated that they used the nursing process when making decisions regarding patient care (Appendix B, question 24). Of the third year students, only 1 individual disagreed on this matter while 9 second year students (27%) were undecided and 3 (9%) disagreed. Additionally, several second year students (n=9, 27%) either did not agree or were undecided as to whether or not their knowledge of the nursing process influenced them in clinical decision making (Appendix B, question 33).

During their clinical practicum, students are required to write out nursing care plans utilizing the nursing process. Fifty-two subjects (81%) signified their agreement that the experience of developing and writing out nursing care plans influenced their ability to make decisions about patient care (Appendix B, question 7). It appeared that more second year (n=8, 24%) than third year students (n=4, 14%) were undecided or disagreed that these assignments had any impact on their ability to make decisions about patient care.

When students were asked to indicate from a list of sixteen items which five factors influenced them most in clinical decision making, the knowledge of the nursing process was the third most frequently cited factor (Appendix B, question 37). Forty-two percent of the second year and 58% of the third year students concurred with this.

The findings from the interviews corroborated the findings from the questionnaire. With the exception of one, all the remarks indicated a belief in the nursing process as being a vital part of clinical decision making. Comments such as "We need it, it's a framework to work within", "I can't live without it, it's so ingrained", and "nursing

process is an integral part of decision making" seemed to bear this out. The third year interviewees appeared to believe the process to be more integrated into their mode of operation rather than the step by step process more often described by second year students. This was reflected in the statement of one third year respondent:

I use the nursing process, not in order. I see it as the nursing process later. It is more automatic now. I seldom stop and think about it. I did think about it at the start of the program.

Intuition as a Dimension

The literature review indicated the possible impact of intuition on clinical decision making. This study attempted to find out if "intuition" was perceived by the students to be a factor in their decision making. While intuition was not defined for the students, it was used along with the phrase "gut feeling" in the questionnaire and in the interviews. Thirty per cent of the subjects in the study indicated that their gut feelings in a decision making situation rated in the top five influencing factors. This factor came in ninth in a field of sixteen possible factors in decision making (Appendix B, question 17).

Seventeen (52%) second year and 11 (35%) third year students indicated that they often used intuition when making decisions about patient care (Appendix B, question 19). Twenty-four (73%) second year and 15 (48%) third year admitted that their use of intuition or gut feeling resulted in their best decisions about patient care (Appendix B, question 2). At the same time 94% of all the respondents to the questionnaire indicated that their most successful approach to decision making was to carefully examine the data and analyze the options before determining a course of action (Appendix B, question 17).

Interview comments relative to the influence of intuition were mixed. There seemed to be some ambivalence about using intuition at this stage in the students' career.

Comments such as "You need more experience to have intuition or gut feelings in nursing" or "At this point in our education there is a constraint to think things through" were indicative of this. One third year student stated:

Sometimes I use intuition or gut feeling. If I'm stuck, then if gut feeling directs me, I'll go with it. I don't like it as much. It's like taking a gamble.

On a stronger note, another third year student asserted:

I like to feel that my nursing practice is knowledge based and theory based. I don't call it intuition. In retrospect I might have acted quickly but still find I go through the steps of the nursing process.

On the other hand, 4 of the 18 students interviewed outright declared the importance of intuition in their clinical decision making. For example, 1 second year student declared:

Intuition is important. I get a gut feeling that something is not right and I check it out. It is a mental nudging but the problem is trying to get your consciousness to that level to know what it is.

Overall the interviews appeared to lean towards a reluctance in admitting intuition as a factor. Comments from at least 12 of the 18 students indicated this.

Relationship With Instructor as a Dimension

Of the total sample (n=64), 45 percent indicated that their relationship with the instructor ranked in the top five of sixteen possible factors that influenced them in clinical decision making (Appendix B, question 37). More second year students (n=17, 58%) than third year students (n=10, 34%) picked this factor as being one of the five most influencing. In fact, relationship with instructor, level of self confidence, and knowledge of patients and their condition were equal in rating and chosen most frequently by the second year students.

Within the questionnaire, students were asked to consider their latest clinical experience and decide whether their relationship with their clinical instructor was a factor

in their decision making. Of the total group, 50 (78%) agreed that the instructor/student relationship was a factor (Appendix B, question 14). Interestingly, more second year students (n=28, 85%) than third year students (n=22, 71%) felt this to be the case. Relationship with the instructor and its impact on student clinical decision making was discussed during the interviews. The responses were mixed. Several suggested that the instructor constituted a supportive force in their decision making. One interviewee from the second year described the instructor as a guiding influence in decision making. Others stated that the instructor was encouraging, helped to validate decisions, and was available for consultation. Several students from both second and third year indicated the need for instructors to positively reinforce student abilities in decision making.

Of the group who completed the questionnaire (n=64), 9 students (14%) indicated that in their most recent clinical experience, the relationship with the clinical instructor negatively affected their attempts at decision making about patient care (Appendix B, question 27). Interestingly, 7 of the 18 students interviewed expressed concerns about the instructor influence on their decision making. The following comments from third year interviewees bear this out: "The presence of instructors decreases individualized decision making"; "Some instructors don't allow you to make decisions" and "Some instructors make decisions for the student." One second year student asserted, "You can get so that you're afraid to make a decision in your mind, let alone carry it out!" Several claimed that decision making hinged on instructor expectations. In the words of one interviewee, "Instructors have objectives, we meet criteria."

Nevertheless, 54 students (84%) from the total group agreed that their most recent clinical instructor encouraged them to independently arrive at patient-care decisions

(Appendix B, question 6). Fifty-five students (86%) indicated that their most recent clinical instructor was a positive role-model in decision making. In the words of one third year student, "I often think about how the instructor would do something" when I have to make a decision.

Perception of Decision-making Ability as a Dimension

The dimension of perception of decision-making ability was examined using ANOVA. The four statements within the scale that reflect this dimension are:

- 9. When I am caring for a patient, I feel I am responsible for making the decisions about their care.
- 28. I have the necessary skills to make sound decisions about patient care.
- 34. I feel confident about making decisions regarding patient care.
- 36. I make decisions about patient care that count (Appendix B).

Results indicate a significant difference between groups in the variable of age at last birthday ($df=6$, $F=2.35$, $p=.04$).

The majority of students ($n=52$, 79%) acknowledged that they had the necessary skills to make sound decisions about patient care (Appendix B, question 28).

Interestingly more third year students ($n=28$, 90%) than second year students ($n=23$, 70%) agreed to this statement.

When asked if they felt confident about making decisions regarding patient care (Appendix B, question 34), the third years students appeared slightly more confident ($n=27$, 87%) than the second year group ($n=25$, 76%). "Level of self confidence" received the second highest overall rating when students were asked to choose the factors that influenced them most when making decisions about patient care (Appendix B, question 37). Fifty-eight percent of the second year students and 38% of the third year students chose this dimension as one of the most influential in their decision making.

During the interviews, several students admitted that their feelings about themselves had an impact on their decision making. One indicated that when she had difficulty in the clinical setting her self-esteem diminished. Consequently she did not act as independently, she always "checked about everything". Another said, "It [perception of self] can override everything; if you feel bad about a recent experience, it might inhibit decision making".

The students also indicated that they made decisions about patient care that counted (Appendix B, question 36). Twenty-six second year students (79%) and 28 third year students (90%) agreed on this matter. In view of this it was interesting to note the responses to item 9 (Appendix B). Only 22 second year students (65%) and 16 third year students (52%) agreed that they were responsible for making the decisions about the care of their assigned patient. At this point, several qualifiers were inserted into the questionnaire by the third year students. Two stated that decision making was a team effort and 2 indicated the importance of patient input.

The factor that came out the strongest when students were asked in the questionnaire to choose the five most influential factors in their decision making (Appendix B, question 37) was that of "my knowledge of patients and their condition". Overall 73% of the students ranked this in the top five. Interestingly, 90% of the third year subjects responded in this way while 58% of the second year indicated the same.

Locus of Control as a Dimension

This study attempted to examine the students locus of control and discover its effect on student decision making.

The items indicating this dimension are:

11. I consider what my instructor would say when I think about possible choices I could make in patient care.

18. The fact that I am evaluated in the clinical setting influences the decisions I make about patient care.

25. Doctors orders and hospital rules prevent me from making important decisions about patient care.

29. I am often prevented from carrying out my decisions about patient care because nursing staff on the unit tell me to do something different.

32. The team leader is responsible for making decisions about the care of a patient who is assigned to me (Appendix B)

The majority of the students who responded to the questionnaire (n=52, 81%) considered the instructors responses when thinking about possible choices in patient care (Appendix B, question 11). Twenty-three second year (70%) and 24 third year students (77%) did not feel that doctors' orders and hospital rules inhibited them in their decision making (Appendix B, question 25). However, nursing staff input was seen to prevent 8 second year students (24%) and 5 third year students (16%) from carrying out their decisions about patient care (Appendix B, question 29). In addition, 11 second year (33%) and 5 third year students (16%) agreed that the team leader was responsible for making decisions about the care of a patient assigned to the student. Seventeen second year students (52%) and only 4 third year students (13%) acknowledged that the fact that they were evaluated in the clinical setting influenced the clinical decisions they made. However, according to the responses to item 38 on the questionnaire, the knowledge of being evaluated was considered to be the least influential factor, out of a field of sixteen choices, in clinical decision making. There was no attempt to correlate locus of control and perception of decision making ability.

Situation as a Dimension

Four items in the questionnaire looked at the clinical situation in terms of the staff, routines and the setting and attempted to relate them to decision making. They were:

- 5. The nursing staff in my latest clinical rotation discouraged me from making my own decisions about patient care.
- 12. In my latest clinical rotation, the nursing staff on the unit encouraged students to make decisions regarding patient care.
- 13. In this setting (see question #12) I was able to use my unique ideas as I participated in patient care.
- 23. The routines in the clinical setting discourage students from making independent decisions about patient care (Appendix B).

According to the overall responses to question 12, the students in recalling their most recent clinical rotation tended to agree that the nursing staff encouraged students to make patient-care decisions (n=43, 67%). Only 5 (8%) acknowledged that the nursing staff discouraged them from decision making in patient care (Appendix B, question 5). When asked to select which five factors influenced them most when making decisions about patient care, 45% of the second year and 16% of the third year students chose "attitude of the staff" (Appendix B, question 37).

Furthermore, 73% (n=24) of the second year students and 68% (n=21) of the third year students felt that they were able to use their unique ideas as they participated in patient care in their latest clinical rotation. Interestingly, 14 second year students (42%) and only 7 third year students (23%) agreed that the routines in the clinical setting discouraged them from making independent decisions about patient care.

During the interview, participants tended to agree that positive relationships with the staff in the clinical setting enhanced decision making. In the words of one third year student, "If staff relationships are good, it is easier to make decisions. I feel more

confident in myself." Interviewees alluded to the expertise of the staff and indicated that this expertise was more accessible when the student was comfortable with the staff member. According to the responses to the first item in the questionnaire, most students in the sample (n=52, 81%) felt they were well accepted and valued members of the clinical team (Appendix B, question 1).

Previous Experience as a Dimension

The dimension of previous experience was examined using ANOVA. The five items within the scale reflecting this dimension are:

- 3. Students with previous health related work experience make better decisions about patient care than those who don't have this experience.
- 10. My clinical nursing experiences thus far have not assisted me in developing decision-making skills.
- 16. The best predictor of "sound" decision making is clinical nursing experience.
- 20. My previous life experiences have strengthened my ability to make sound decisions about patient care.
- 26. I was provided with sufficient opportunities to make independent decisions about patient care in order to develop decision-making skills (Appendix B).

Results indicate a significant difference between groups in the variable of year of program ($df=1$, $F=5.28$, $p=.025$). Twenty-seven second year students (82%) and 22 third year students (71%) agreed that the best predictor of 'sound' decision making was clinical nursing experience. Also, more second year students (n=13, 39%) than third year students (n=6, 19%) agreed that students with previous health related work experiences made better decisions about patient care than those who didn't have this experience. Furthermore, more second year students (n=9, 27%) than third year students (n=7, 23%) were undecided in this matter. More second year (n=29, 88%) than third year students (n=24, 77%) believed that their previous life experiences had strengthened their ability to

make sound decisions about patient care. Clinical nursing experiences within the program were, however, seen by all third year and most second year students (n=27, 82%) to be assistive in developing decision-making skills (Appendix B, question 10). The differences between how second and third year students viewed experience was evident in how the students responded to question 37 which asked them to choose the five most influential factors in their decision making (Appendix B, question 37). Thirty-two percent of the third year and 51% of the second year students picked their previous life experience as being one of the most influential factors. Thirty-eight percent of the third year and 51% of the second year students included previous nursing experience in the top five choices.

The interviews did not appear to show a differentiation between the two groups in their views regarding the role of experience in clinical decision making. Three third year students articulated the idea that with experience, decisions come more quickly, are of a better quality, are more thorough in that they incorporate data better, and are more organized. Several students from both groups talked about the transferability of experience. One third year student cautioned, however, that "You can become saged by experience and therefore stereotype." She emphasized that decision making may be based on a stereotypical data base. "When I started nursing I thought experience was the key but it can be a dangerous weapon" was her comment.

It should be further noted that several students believed that their advanced age and developmental stage was a factor in their decision making. For example one stated, "My age, my maturity, and experience give me a different perspective in decision making. I feel more comfortable in making decisions." According to the questionnaire,

the majority of second year (n=23, 70%) and third year subjects (n=24, 77%) agreed that they had been provided with sufficient opportunities to make independent decisions about patient care in order to develop decision-making skills (Appendix B, question 26).

Modelling as a Dimension

The two items reflecting the dimension of modelling and its effect on decision making are:

- 8. My observations of nursing staff in the practice of patient care influences me greatly as I make decisions about patient care.
- 21. I find myself deciding to perform skills the way staff nurses do, even though they are different than the way I learned them in the nursing program (Appendix B).

According to the questionnaire analysis, an equal number of students from each year for a total of 44 (69%) believed that their observations of nursing staff in the practice of patient care influenced them greatly as they made decisions about patient care (Appendix B, question 8). Ten second year students (30%) and 4 third year students (13%) found themselves deciding to perform skills the way staff nurses did them even though they were different than the way they learned them in the nursing program (Appendix B, question 21). Fifty-five percent of the second year (n=18) and 77% of the third year students (n=24) disagreed with the statement. "Observations of other staff members" came in fourth when students were asked to indicate which of the sixteen factors listed influenced them the least in their clinical decision making about patient care (Appendix B, question 38). Thirty-seven percent of all the respondents claimed this to be one of the three least influential factors.

Values and Beliefs as a Dimension

The 18 students participating in the interview were asked to respond to the following question:

You filled out the questionnaire but when all is said and done, what factors really influenced you as you were making your decisions? What generally influences or affects you in this regard? What drives you?

They were also asked to comment on how their values and beliefs impacted on their clinical decision making. At least 6 students maintained that in their decision making, they tried to imagine what they or someone close to them would want in a given situation. For example, "When I make a decision, I consider them [patient] as a human being; I value them as a person. I think about what I would want for myself."

About half of the respondents suggested that their guiding force was "patient preference" or "what is right for the patient". These two aspects are represented in statements such as, "The patient helps decide" and "Is it good for the patient?". Along this line, others talked about the "wellbeing of the patient", wanting to help, and "what they tell me they are feeling" as motivating their decision making. Incorporated in this discussion were comments on patient rights and human dignity.

When discussing their personal values and beliefs relative to decision making, several students acknowledged their very real influence. In the words of one student, "Your values about alcoholism lead to certain assessments and judgements. Life experiences become integrated and affect relationships with patients." These sentiments corroborate Field's (1987) assertion that, "nurses are not value free" (p.564).

At least 4 students directly indicated their reluctance to imposed their values in a decision making situation. For example, one third year student stated:

I come with a definite set of ideals and standards. I realize that I may need to be flexible, I can't be regimented... I may need to explain my values such as my stand on euthanasia. If I need to deal with a patient who has differing values, I won't get into a conflict over it. Maybe I can act as a role model. I try not to impose feelings and values... The patient ultimately needs to make their decisions.

The students not represented in the above statements offered the following as guiding their decision making: knowledge and principles (4), capabilities (1), instructor approval and modelling (2), legalities (2), and common sense (1).

Summary

This chapter reviewed the results of the data analysis. It included a description of the sample and a discussion of the dimensions in terms of how they were perceived by the students to affect their clinical decision making. In the discussion of influencing dimensions both quantitative and qualitative data were included. When using ANOVA to examine the dimensions of relationship with instructor, locus of control, cognitive processes, and modelling; there was found to be no significant difference between groups in the variables of program year, number of clinical semesters, age, and prior education. When using ANOVA to examine dimensions of clinical nursing experience, education regarding decision making, and stress, there was found to be a significant difference between groups in the variable of year of program. In other words the second year and third year students varied significantly in their perception of the what impact clinical nursing experience, education regarding decision making, and stress had on their decision making. The remarks given in the interviews assisted in gaining further insight in this regard.

CHAPTER FIVE

DISCUSSION

This chapter presents (a) the limitations of the study, (b) a discussion of the findings, (c) implications for teaching, (d) possibilities for further study, and (e) some conclusions.

Limitations of the Study

Limitations in this study are related to the sample, study design, instrument, and timing and setting.

Sample

This study utilized diploma nursing students from an accessible population of diploma nursing students as its subjects. The sample was not randomly selected, the students who took part volunteered. Ninety-one percent of the third year and 85% of the second year group of students participated. Even though it is expected that throughout Western Canada there are commonalities in diploma nursing students' perceptions regarding their clinical decision making, the researcher recognizes that the small sample for the questionnaires (n=64) and interviews (n=18) from a single institution might pose some threat to the generalizability of the results. However this group does provide an opportunity to explore the phenomenon of influencing forces in student clinical decision making.

Design

The study collected both qualitative and quantitative data. The small sample size casts some question on the statistical significance of the findings. However, while quantitative measures provided some idea of the incidence and degree of influential

forces in student decision making, qualitative input allowed for a wider range of understanding. The argument for qualitative input is reinforced by Munhall's (1982) words, "Qualitative research methods ... may be more consistent with nursing's stated philosophical beliefs in which subjectivity, shared experience, shared language, interrelatedness, human interpretation, and reality as experienced rather than contrived are considered" (cited in Moody, 1990, p.31).

Instrument

The questionnaire, designed in response to information found in the literature, consisted of items reflecting dimensions of influence on clinical decision making. The items reflecting the dimension of relationship with instructor (questions 6, 14, 22, 27, & 37) referred only to the latest clinical rotation. The replies, therefore, might not have reflected a more general perception which would have been in keeping with the rest of the instrument.

Item 37 listed sixteen possible influences on student decision making and asked students to choose the five most influential and rank them. This item might have been more useful to the researcher if it had been more comprehensive. As it turns out, some of the dimensions which were found by the study to be rather dominant were not represented. For example, the dimensions of stress and value systems were not clearly identified. However, informal comments from the students revealed that they found item 37 particularly thought provoking.

There may have been some variation in the interpretation of some of the terms used throughout the instrument. Words such as stress, intuition and decision making were not defined for the student. The researcher also queries whether more explicit

information might have been gleaned with a more specific focus on a particular category or instance of decision making. Students may have responded differently to a skill related decision than to an ethically oriented decision. Additionally, it is recognized that further testing of the questionnaire with a larger sample is required to determine its re-test reliability.

Timing and Setting

The questionnaire was presented to the two groups of students at different points in the semester. The third year students were given the opportunity to answer the questionnaire at the beginning of the semester after a day of lectures at the college. The second year volunteers responded to the questionnaire at the end of a seven hour shift in the hospital during the second week of their first clinical rotation. While all the interviews were conducted during the same two weeks, the third year students were not inundated with assignments and an impending exam as were the second year students. These factors may have, in part, accounted for some variation in responses.

Because the questionnaire items represented attitudes, the responses might have been more vulnerable to the individuals' inclination at the particular time of response. Also responses may or may not have reflected actual decision-making behaviors.

The setting in which the questionnaires were completed might have influenced the variety of responses. For example the college classroom and the hospital setting might have conjured up different feelings. Interviews were generally conducted in the hospital cafeteria (in an isolated corner) and in the researcher's office. Of those conducted in the hospital, several occurred before the clinical shift and several after. Additionally, the fact that the interviewer was an instructor, though clearly on sabbatical leave, might

have affected the interactions in the interviews to some degree. There might have been a disposition to respond in ways that were seen as "good" and "right".

Discussion of the Findings

The intent of this study was to listen to the students as they identified and described contributing factors affecting their decision making during patient care. The researcher acknowledges that students function as unique individuals in particular circumstances and that influences on decision making would vary from person to person and from situation to situation. This study did not, however, provide for an in-depth analysis of individual situations but examined rather the collective perspectives of second and third year students. Also, the study did not isolate influences in terms of greater or lesser impact, but it did provide some insight into the magnitude of influencing factors in decision making present in these two groups.

The results of the analysis suggest some notable differences in what second and third year students perceived to be influential in their decision making. Differences were found to be statistically significant for the dimensions of stress, use of the nursing process, and previous experiences. For example, second year students were more likely than third year students to indicate that stress affected their decision making. They were also more likely to credit previous health-related work experiences and life experiences with having a positive effect during clinical decision making. Finally, the second year students were less likely to agree that decision making and problem solving theory affected their decision making and also less likely to acknowledge that they used the nursing process. These findings are discussed in the following paragraphs. In the

discussion, there is an implicit assumption that the collective findings in this study are not predictive of individual perspectives.

Stress

Stress was found to be an important dimension in student decision making. As stated above, the analysis of the questionnaire showed that the perceptions of stress expressed by second year students differed significantly from that experienced by the third year students. Second year students, who had experienced just over 280 hours in the clinical setting (as compared to third year's 1045 or more hours), indicated more frequently that they experienced stress in the clinical setting and that this stress was more likely to affect their decision making. According to these students, the sources of stress (in order of stated frequency) were: workload (related to their many assignments), fatigue, patient related factors (such as pain and death), unfamiliarity with procedures and policies, nonsupportive instructors, and nonsupportive staff.

This finding supports the discussion by Policinski and Davidhizar (1985) who thematically portrayed the stresses of novice nursing students. The themes these authors addressed were insecurity (related to life and death issues on the unit and continually changing clinical environments), threat of authority (related to perceptions of staff and instructors), overstimulation (relative to time, workload, and changing expectations) and fear of the unknown.

Of the third year students who responded to the questionnaire, the factors most readily indicated as a source of stress were nonsupportive or overprotective instructors. The researcher suggests that this finding might indicate the third year students' consciousness of their need for affirmation and independence in their clinical practice at

this stage in the program. On the other hand, it may simply be a reflection of the greater variety of instructors that these students had worked with. The second year students mentioned instructors as a source of stress less often but were more likely to acknowledge that their relationship with their instructor was a heavy influence in their decision making. Again this might indicate a greater student reliance on instructor input in the early stages of clinical practice. A third year student in a post study discussion regarding this finding suggested that the dissimilarity in workload between the two groups might have resulted in differences as to what was more likely to be perceived as a stressor.

Students who discussed the instructor as a facilitative force in their clinical decision making, reiterated their appreciation of and continual need for positive reinforcement during their clinical activities. This included providing and supporting opportunities to make decisions. These ideas concur with the opinion of Jenkins (1985a) who asserted that:

Teaching effective decision making is not so much a set of objectives or a classroom exercise as it is an attitude on the part of the teacher to allow the learner to experience fully the process of making decisions and being held accountable for them (p.243).

It was heartening to notice that by far the majority of respondents (84%) felt that their most recent clinical instructor encouraged them to independently arrive at patient-care decisions. Positive student-instructor relationships can enhance decision making.

The effects of stress on decision making were portrayed by student contentions that stress contributed to their inability to "think clearly" and "reason through" problems, "fear of making mistakes", and "overlooking information". These remarks exemplified the concerns of Thomas et al. (1991) who stated that "it is quite likely that high levels of

stress can result in substantial deterioration in clinical decision performance" (p.57).

These authors did however acknowledge that while stress is generally thought to undermine decision making ability, few studies had actually investigated the effect of stress on performance in the clinical setting.

Decision Making Theory and the Nursing Process

The study results revealed a surprisingly overwhelming positive attitude among the students toward the nursing process and its effect on their decision making. This finding did not appear to support the implications in studies by Tanner (1986) and Corcoran (1986b) who concluded that neither nursing students nor practicing nurses used the nursing process (as defined) when they were attempting to problem solve. It is recognized, however, that these studies investigated the processes in decision making rather than perceptions about decision making.

This researcher had anticipated that the views of the students would reflect somewhat the debates in the literature about the comprehensiveness versus restrictiveness of the nursing process as decision making mode. It was expected that the responses of the students would be more varied and more tentative especially since the writer, as an educator, had on occasion heard students express their reluctance about incorporating the nursing process into their mode of thinking about patient care. The findings might be explained by the views of Bowman, Thompson, and Sutton (1986) who suggested that when teaching is correlated with practice, the "experience has an element of 'truth' for the student" (p.586). This may provide both an encouragement and a caution in nursing instruction. If the nursing process as a decision-making model is taught and practiced

consistently, it may promote a longer lasting behavior but it may also preclude the development of other ways of thinking about clinical situations.

It is interesting that third year students were not only more likely to agree that the theory related to problem solving and decision making influenced them as they made decisions about patient care, but they also more often indicated that they used the nursing process in their decision making. Furthermore, the nursing process was chosen the second most frequently by the third year students as being one of the most influential factors in decision making (Appendix B, question 37). The researcher questions whether this occurrence reflects a belief in its usefulness or whether the findings are a product of the continual exposure to and reinforcement of the nursing process through teaching, reading, and assignments. Additionally, one needs to question whether responses in an attitudinal survey reflect real behavior.

Surprisingly more second year (52%) than third year students (35%) admitted that they often used intuition when making decisions about patient care. Moreover, 73% of the second year students and 48% of the third year students believed that the use of intuition resulted in their best decisions about patient care.

One explanation for this finding might be the difference in the ages of the subjects in the two groups. The analysis reveals that there are more second year students in the older age brackets. Do older students bring more of their life experiences to bear on a situation? If so, this might support Benner's (1984) view on intuition as an integration of experiences and "embodied intelligence or skill" (p.295). On the other hand, one might question whether the educative experiences of third year students might have suppressed or discouraged intuitiveness. This explanation would support the

concerns of Benner (1984) and Henderson (1982) who believed that intuitive judgement is often ignored in favor of the more logical nursing process (cited in Field, 1987). If intuition in decision making is regarded as an inclusion of one's integrated being, then it would appear that students, as they advance through the program, perceive this integration as less impactful on their decision making. Is this a result of socialization in the clinical setting or a lack of instructor validation of the role of intuition in decision making?

On the other hand, the greater propensity for second year students to accept intuition as a factor in decision making might be explained to some degree in the description of novice practitioners by Campbell et al. (1987). These authors claimed that many decisions made by inexperienced practitioners could be described as impulsive – without indication of understanding of rationale or understanding of the ramifications.

The statistics regarding the use of intuition were puzzling in view of the fact that 94 percent of all the respondents to the questionnaire indicated that their most successful approach to decision making was careful examination of the data and analysis of the options (the nursing process approach) prior to determining a course of action (Appendix B, question 17). This finding might be explained by an understanding that decision making incorporates elements of both approaches. It may, in fact, exemplify the knowledge of nursing as a science and an art, both of which have an equal input (Field, 1987). Intuitive input into clinical decision making is derived in part from the individual's synthesis of life experiences and clinical knowledge (Benner, 1984). The hesitant comments during the interviews about the role of intuition in decision making might be a reflection of the students' immaturity with regard to clinical experience.

Experience

The fact that more second year than third year students in this study believed that previous life experience and health-related work experiences were important factors in decision making may be a consequence of the disparity in the number of clinical hours experienced by these two groups (second year = approximately 280 hours, third year = approximately 1045 hours). The second year students more likely saw the greater need to draw from outside resources while third year students saw themselves as drawing on their educative experiences in making patient care decisions. The interviews with second and third year students did reveal that they viewed experiences to be potentially transferable. This appears to support Benner's (1984) conviction that with more experience, beginner nurses are able to make connections that enable them to make better decisions.

It was interesting that fewer third year students (71%) than second year students (82%) felt that the best predictor of sound decision making was clinical nursing experience. The writer submits that while the use of "best" might have created some hesitation, this finding might be indicative of a perception that the more senior nursing students might be developing about experienced nurses with regard to decision making. Joseph (1985) in her study of attitudes towards decision making in 85 nurses found that the more experienced nurses indicated less willingness to make decision. She suggested that nurses had been socialized in their environments to accept the authority of the physician and the institution and thus were less inclined to assume the role of decision maker. It would seem that further investigation in this regard would be necessary to clarify the findings in this study.

While third year students were less likely to acknowledge experience as a major factor in their decision making, they were more likely to perceive that they had decision-making skills and more likely to indicate their confidence regarding decision making. Furthermore, self confidence was highly ranked by the students as an influential force in decision making (Appendix B, question 37). This finding countered that of Jenkins' (1985b). In her study it was found that the subjects (students in three levels of a baccalaureate program) did not perceive themselves as decision makers. According to Jenkins (1985a), "a student must perceive that she or he is actually capable of making clinical decisions in order to do so effectively" (p. 243).

One must be cautious when interpreting the results of this study. These findings did not reflect the students' understanding of what type of decision was referred to. It would be well, therefore, to question whether the complexity of decision required would have mitigated these responses. Furthermore, there is no indication in this study of the subjects' decision making ability in an actual situation.

The responses to the item "When I am caring for a patient, I feel I am responsible for making the decisions about their care" were not as positive as the items reflecting confidence and ability in decision making. Only 59% of the total group agreed that they were responsible. This finding may have reflected some ambiguity about the intention of the item as several students mentioned the need to incorporate patient input and teamwork in decision making. Thus the responses to the item might have reflected the students' belief that patient care responds to mutual understanding and is not an autocratic activity. Furthermore, the setting these students found themselves in was structured around the concept of team nursing rather than the concept of primary nursing. The

perception of the students regarding their autonomy in decision making might have reflected this. Prescott et al. (1987) did assert that the primary care mode of patient care promoted and afforded greater autonomy.

This study also attempted to gain some understanding of how one's locus of control might affect decision making activities. As noted in the analysis, the majority of the subjects indicated that Doctor's orders, hospital rules, and nursing staff were not seen to be a barrier to their clinical decision making. The study did not formally attempt to ascertain individual's locus of control and there was no attempt to correlate locus of control with perception of decision making ability. Thus this study did not provide the opportunity to verify the findings of Neaves (1989), who posited that locus of control was a very important factor in predicting students' willingness to partake in decision-making activities.

Further Discussion

As mentioned in the analysis, when students were asked to choose from a list of sixteen factors which five influenced them the most in decision making, the most frequent response was "knowledge of the patient and their condition". While this was not a comprehensive list, it did give some indication as to the students' perceptions of what was a dominating force in their decision making. However, when the students were encouraged during the interviews to discuss the actual driving motivators or factors in their decision making during patient care, their responses tended to indicate that decisions would depend on: (a) what they would want for themselves or someone close to them, or (b) what was right or good for the patient. During the interviews students

generally agreed that their values and beliefs had some impact on their decision making but several were quick to point out that they would not impose these.

The writer questions why "knowledge of the patient and their condition" ranked so highly in the question 37 (Appendix B) when the interviews revealed such a different and diverse tendency. Does the response in the ranking indicate a more acceptable belief while the interview indicates the reality for these students?

Implications for Teaching

Clinical teaching/learning is a complex transaction. Much of clinical activity revolves around decision making. As nursing educators it is easy to get caught up in focusing on the outcomes of clinical decisions. For example, this particular School of Diploma Nursing has established behavioral objectives for every semester of student clinical practice. Efforts have also been directed at gaining consensus regarding our expectations of nurse graduate competencies. Our clinical teaching so often reflects the belief that decision making is closely linked to knowledge and technique. Our evaluation of student decision making is usually based on the outcome of a decision. According to Allen (1990), this comes out of an anxiety and need to create a "fail-safe" education that produces practitioners. He believes that we tend to see students "as a potential threat: if they make serious mistakes in clinical or after graduation, their failure reflects on us" (p. 313).

Through all of this it easy to loose sight of the possible variety of impacting forces on decision making. Students are unique individuals. They do not make decisions in a vacuous think tank with clean data at their disposal. They are living in their experiences of decision making. They bring who they are and interact with those around

them in situations that are ever changing and not always clearly defined. The decisions that are made do not have the same import for all those involved, be it the patient, the student, or the instructor. It is important, therefore, for clinical nurse educators to maintain a keen awareness, particularly in the situation of evaluation, of the variety of forces affecting student decision making. With increased awareness, efforts can be focused on exploring how situations might be mitigated to provide for and promote student success in clinical decision making.

This writer agrees with Hedon's (1989) view that we would do well to recognize the social constraints within which the students learn, and within that knowledge work towards creating a "learning environment that empowers individuals to participate in their reality ... as autonomous responsible agents" (p.83). It can't be expected that all students will be of one mind. We can empower students by enabling them to develop personal meaning in their decision making experiences through assistance in incorporating the realization of their reality with the needs of their patients and the clinical environment. In addition to directing them to formulae and encouraging a knowledge base, nursing educators need to encourage students as they acknowledge their own perspectives and ways of being. After all, "knowledge is not synonymous with content or subject matter. Knowledge is personal and contextual: created by each individual, shaped by his or her unique biography" (Nelms, 1991, p. 7). If we can't create that awareness of the individuality of knowledge and perspective during educative experiences, how can we expect the acknowledgement of each others reality, that of patient and co-worker, in the future work setting.

Stress is seen by students to have a major impact on their decision making. Its impact on actual clinical performance has not been widely researched but it is clear that stress has been perceived to have a negative influence. According to Policinski and Davidhizar (1985), "helping the student develop independent problem-solving abilities can be achieved more effectively when the stress level is lower" (p. 35).

The stress of decision making in patient care might be tempered in an atmosphere where students feel they have permission to learn. Latitude in decision making within the framework of students' knowledge and experience could very well promote a desire to take responsibility in this regard. This corresponds with Jenkins (1985a) beliefs that "teaching effective decision making is not so much a set of objectives or a classroom exercise as it is an attitude on the part of the teacher to allow the learner to experience fully the process of making decisions and being held accountable for them (p.243). This, according to Jenkins, requires a commitment on the part of both instructors and administrators.

Possibilities for Further Study

This study suggests several directions for further research.

1. Further investigation is needed to assess the effect of stress relative to time, workload, fatigue, interpersonal relationships, and knowledge on decision making.
2. Further investigation about the role and effects of personal life experience, personal values and beliefs, health-related work experience, and clinical nursing experience in student decision making is indicated.
3. Consideration should be given to the development of a means of student assessment that reflects a more holistic view of the student's learning experience by incorporating a

realization of the student's position in the learning situation. This assessment should also reflect the variation of needs that are evident at the different levels of the nursing program.

Conclusions

Nursing students participating in this study perceived that a variety of factors influenced their decision making. The results of this study showed that the students felt the following to be especially impactful: knowledge of the patient and condition, level of self confidence, knowledge of the nursing process, stress related to instructor-student associations, stress related to workload, and previous experiences.

It must be emphasized that this is a study of student perceptions. Nurse educators must seriously listen to the students as they describe what affects them in their decision making. A greater awareness of the student's position might result in better understanding as student and instructor work together in the common quest for more meaningful decision making with the goal of enhancing patient care and encouraging the professional development of the student. This study of student perceptions about decision making also contributes another dimension to the overall study of clinical decision making.

The results of the study must be interpreted with the recognition that there was no attempt to determine the processes utilized in decision making nor was there an effort to uncover the actual effect various influences had on the outcomes of decisions. This study simply reflected the perceptions of two groups of nursing students in one particular School of Diploma Nursing. It is suggested, however, that the findings may be indicative of what diploma students in other nursing schools in Western Canada are experiencing

Summary

This chapter presented the limitations of the study, a discussion of the findings, implications for teaching, possibilities for further study, and some conclusions.

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APPENDIX A

CONSENT FORM

CONSENT FORM

Dear Student,

You are invited to take part in this research study about students' perceptions of factors that influence decision making in patient care. In this study I will ask questions about what factors influence you as you are making decisions about the care you will give your patients. The information you provide may give nurse educators insight into the experiences of nursing students as they are making decisions in the clinical setting.

Please read the following carefully and sign below if you are willing to participate in this study.

I understand that I am participating in a study about students' perceptions of factors that influence decision making in patient care. I understand that I may refuse to participate in this study simply by not completing the supplied questionnaire and/or participating in the interview. By completing the questionnaire and/or participating in the interview, I grant permission to the researcher to use the data so provided for the study. It has been explained that my information will remain strictly confidential and any reports of the results of the study will be completely anonymous. I have also been assured that I may withdraw at any point in the study without penalty.

Any questions regarding the study should be directed to me or to the following people from the Faculty of Education, University of Lethbridge, 4401 University Drive, Lethbridge, Alberta, T1K 3M4

Dr. Kas Mazurek (Thesis Supervisor) Phone: 329-2462
Dr. Maggie Winzer (Committee Member) Phone: 329-2461
Dr. David Smith (Committee Member) Phone: 329-2186
Dr. Linda Pimentel (Chairperson, Human Subjects Research Committee) Phone: 328-2341

Sincerely,
Vi Wiens (M.Ed. Candidate)

I _____ consent to participate as a subject in this study.

Signature _____

Date _____

APPENDIX B

QUESTIONNAIRE

Dear Student,

In this research study, I am trying to find out what factors influence your decision making as you are providing care for your patient in the clinical setting. If you are willing to participate in this study, please complete the following questionnaire. Your responses simply indicate **your** perceptions and thus there are no right or wrong answers. The questionnaire should take between thirty and forty minutes to complete.

Your replies will remain anonymous and confidential. In reporting the data, only grouped information will be used and no individual subject will be identified. Please do not identify yourself on the inventory.

You may withdraw from the study at any time without penalty.

Thank-you for your time.

Sincerely,

Vi Wiens (M.Ed. Candidate)

P.S. If you wish to make any additional comments on the questionnaire, please feel free to do so.

BACKGROUND INFORMATION

Please circle your response to the following questions.

In what year of the nursing program are you presently enrolled?

- 1. year 2
- 2. year 3

Not counting this one, how many semesters of clinical experience have you had in the ~~1933~~ School of Diploma Nursing? Include any semesters you have repeated.

- 1. 3 semesters
- 2. 4 semesters
- 3. 5 semesters
- 4. 6 semesters
- 5. 7 semesters
- 6. 8 semesters
- 7. 9 semesters

In how many semesters of clinical experience have you participated in another nursing program? _____

What is your age?

- 1. 17-19
- 2. 20-24
- 3. 25-29
- 4. 30-34
- 5. 35-39
- 6. 40-44
- 7. 45-49
- 8. 50-54

What was your educational preparation prior to entering the ~~1933~~ School of Diploma Nursing? Circle the highest level completed.

- 1. High school diploma
- 2. One year of college/university
- 3. Two years of college/university
- 4. Three years of college/university
- 5. A college/university diploma _____
- 6. A college/university degree _____
- 7. Other _____

Please list and briefly describe any health-care related work experiences you had prior to starting the nursing program. How long did each last?

Please list and briefly describe non health-care related work experience.

Please list any courses or activities in which you have been involved (other than those listed above) that you think may have contributed to your ability to make decisions.

PLEASE PROCEED WITH THE QUESTIONNAIRE

QUESTIONNAIRE

For the following items, please show the extent of your agreement or disagreement by checking the following:

- SA = Strongly Agree
- A = Agree
- U = Undecided
- D = Disagree
- SD = Strongly Disagree

1. When I work in the clinical setting, I feel I am well accepted and a valued member of the team.

2. My use of intuition or 'gut feeling' results in my best decisions about patient care.

3. Students with previous health related work experience make better decisions about patient care than those who don't have this experience.

4. The theory related to problem solving and decision making that I learned in the nursing program influences me as I make decisions about patient care.

5. The nursing staff in my latest clinical rotation discouraged me from making my own decisions about patient care.

6. The clinical instructor in my most recent clinical experience encouraged me to independently arrive at decisions regarding patient care.

7. The experience of developing and writing out nursing care plans does not influence my ability to make decisions about patient care.

8. My observations of nursing staff in the practice of patient care influences me greatly as I make decisions about patient care.

SA A U D SD

	SA	A	U	D	SD
1. When I work in the clinical setting, I feel I am well accepted and a valued member of the team.					
2. My use of intuition or 'gut feeling' results in my best decisions about patient care.					
3. Students with previous health related work experience make better decisions about patient care than those who don't have this experience.					
4. The theory related to problem solving and decision making that I learned in the nursing program influences me as I make decisions about patient care.					
5. The nursing staff in my latest clinical rotation discouraged me from making my own decisions about patient care.					
6. The clinical instructor in my most recent clinical experience encouraged me to independently arrive at decisions regarding patient care.					
7. The experience of developing and writing out nursing care plans does not influence my ability to make decisions about patient care.					
8. My observations of nursing staff in the practice of patient care influences me greatly as I make decisions about patient care.					

SA A U D SD

9. When I am caring for a patient, I feel I am responsible for making the decisions about their care.

--	--	--	--	--

10. My clinical nursing experiences thus far have not assisted me in developing decision-making skills.

--	--	--	--	--

11. I consider what my instructor would say when I think about possible choices I could make in patient care.

--	--	--	--	--

12. In my latest clinical rotation, the nursing staff on the unit encouraged students to make decisions regarding patient care.

--	--	--	--	--

13. In this setting (see question #12) I was able to use my unique ideas as I participated in patient care.

--	--	--	--	--

14. In this setting (see question # 12) my relationship with my clinical instructor was a factor in my decision making regarding patient care.

--	--	--	--	--

15. The stress I feel in the clinical setting, affects my ability to make sound decisions about patient care.

--	--	--	--	--

16. The best predictor of "sound" decision making is clinical nursing experience.

--	--	--	--	--

17. My most successful approach to decision making is to carefully examine the data and analyze the options before determining a course of action.

--	--	--	--	--

18. The fact that I am evaluated in the clinical setting influences the decisions I make about patient care.

--	--	--	--	--

19. I often use intuition when making decisions about patient care.

--	--	--	--	--

20. My previous life experiences have strengthened my ability to make sound decisions about patient care.

--	--	--	--	--

SA A U D SD

21. I find myself deciding to perform skills the way staff nurses do, even though they are different than the way I learned them in the nursing program.

--	--	--	--	--

22. The clinical instructor in my most recent clinical experience was a positive role-model in decision-making regarding patient care.

--	--	--	--	--

23. The routines in the clinical setting discourage students from making independent decisions about patient care.

--	--	--	--	--

24. I use the nursing process (assessment, planning, intervention, and evaluation) when making decisions regarding patient care.

--	--	--	--	--

25. Doctors orders and hospital rules prevent me from making important decisions about patient care.

--	--	--	--	--

26. I was provided with sufficient opportunities to make independent decisions about patient care in order to develop decision-making skills.

--	--	--	--	--

27. My relationship with the clinical instructor in my most recent clinical experience negatively affected my attempts at decision making about patient care.

--	--	--	--	--

28. I have the necessary skills to make sound decisions about patient care.

--	--	--	--	--

29. I am often prevented from carrying out my decisions about patient care because nursing staff on the unit tell me to do something different.

--	--	--	--	--

30. I best solve problems or make decisions by analyzing all the information available to me before forming conclusions.

--	--	--	--	--

31. I find that my clinical experience is stressful.

--	--	--	--	--

SA A U D SD

32. The team leader is responsible for making decisions about the care of a patient who is assigned to me.

33. My knowledge of the nursing process (assessment, intervention, and evaluation) does not really influence my decision making regarding patient care.

34. I feel confident about making decisions regarding patient care.

35. The clinical instructor in my most recent clinical experience undermined (did not support) the decisions I made regarding patient care.

36. I make decisions about patient care that count.

	SA	A	U	D	SD
32. The team leader is responsible for making decisions about the care of a patient who is assigned to me.					
33. My knowledge of the nursing process (assessment, intervention, and evaluation) does not really influence my decision making regarding patient care.					
34. I feel confident about making decisions regarding patient care.					
35. The clinical instructor in my most recent clinical experience undermined (did not support) the decisions I made regarding patient care.					
36. I make decisions about patient care that count.					

37. The nursing literature reveals factors that might influence student nurses as they make decisions about patient care. Following is a list of some of the factors.

Choose 5 that influenced you the MOST and rank them.

1 = most influential 5 = least influential

- () my previous life experience
- () my previous nursing experience
- () the environment on the unit
- () hospital policies
- () the attitude of the staff
- () my knowledge of the nursing process
- () my relationship with the instructor
- () my status as a student
- () the consequences of my decision
- () my knowledge of patients and their condition
- () my 'gut' feelings about the situation (instincts)
- () my level of self confidence
- () my observations of other staff members
- () the knowledge that I was being evaluated
- () the time constraints I had to work within
- () fatigue

38. Following is a list of factors that might influence student nurses while making decisions about patient care. Choose 3 that influence you the LEAST and rank them. 1 = the least influential, 2 = the next to least influential, and 3 = the third least influential.

- my previous life experience
 - my previous nursing experience
 - the environment on the unit
 - hospital policies
 - the attitude of the staff
 - my knowledge of the nursing process
 - my relationship with the instructor
 - my status as a student
 - the consequences of my decision
 - my knowledge of patients and their condition
 - my 'gut' feelings about the situation (instincts)
 - my level of self confidence
 - my observations of other staff members
 - the knowledge that I was being evaluated
 - the time constraints I had to work within
 - fatigue
-

39. List the factors that cause you to feel stressed during your clinical experience.

40. How do these factors affect your ability to make decisions about patient care?

THANK YOU FOR TAKING THE TIME AND THOUGHT TO COMPLETE THIS QUESTIONNAIRE. IT IS GREATLY APPRECIATED.

APPENDIX C

DIMENSIONS

DIMENSIONS

Relationship with Instructor as a Dimension

6. The clinical instructor in my most recent clinical experience encouraged me to independently arrive at decisions regarding patient care.
14. In this setting (see question # 12) my relationship with my clinical instructor was a factor in my decision making regarding patient care.
22. The clinical instructor in my most recent clinical experience was a positive role-model in decision-making regarding patient care.
27. My relationship with the clinical instructor in my most recent clinical experience negatively affected my attempts at decision making about patient care.
35. The clinical instructor in my most recent clinical experience undermined (did not support) the decisions I made regarding patient care.

Perception of Decision Making as a Dimension

9. When I am caring for a patient, I feel I am responsible for making the decisions about their care.
28. I have the necessary skills to make sound decisions about patient care.
34. I feel confident about making decisions regarding patient care.
36. I make decisions about patient care that count.

Locus of Control as a Dimension

11. I consider what my instructor would say when I think about possible choices I could make in patient care.
18. The fact that I am evaluated in the clinical setting influences the decisions I make about patient care.
25. Doctors orders and hospital rules prevent me from making important decisions about patient care.
29. I am often prevented from carrying out my decisions about patient care because nursing staff on the unit tell me to do something different.

32. The team leader is responsible for making decisions about the care of a patient who is assigned to me.

Clinical Nursing Experience as a Dimension

3. Students with previous health related work experience make better decisions about patient care than those who don't have this experience.

10. My clinical nursing experiences thus far have not assisted me in developing decision-making skills.

16. The best predictor of "sound" decision making is clinical nursing experience.

20. My previous life experiences have strengthened my ability to make sound decisions about patient care.

26. I was provided with sufficient opportunities to make independent decisions about patient care in order to develop decision-making skills.

Situation as a Dimension

5. The nursing staff in my latest clinical rotation discouraged me from making my own decisions about patient care.

12. In my latest clinical rotation, the nursing staff on the unit encouraged students to make decisions regarding patient care.

13. In this setting (see question #12) I was able to use my unique ideas as I participated in patient care.

23. The routines in the clinical setting discourage students from making independent decisions about patient care.

Education Regarding Decision Making as a Dimension

4. The theory related to problem solving and decision making that I learned in the nursing program influences me as I make decisions about patient care.

7. The experience of developing and writing out nursing care plans does not influence my ability to make decisions about patient care.

24. I use the nursing process (assessment, planning, intervention, and evaluation) when making decisions regarding patient care.

33. My knowledge of the nursing process (assessment, intervention, and evaluation) does not really influence my decision making regarding patient care.

Cognitive Processes as a Dimension

- 2. My use of intuition or 'gut feeling' results in my best decisions about patient care.
- 17. My most successful approach to decision making is to carefully examine the data and analyze the options before determining a course of action.
- 19. I often use intuition when making decisions about patient care.
- 30. I best solve problems or make decisions by analyzing all the information available to me before forming conclusions.

Stress as a Dimension

- 15. The stress I feel in the clinical setting, affects my ability to make sound decisions about patient care.
- 31. I find that my clinical experience is stressful.

Modelling as a Dimension

- 8. My observations of nursing staff in the practice of patient care influences me greatly as I make decisions about patient care.
- 21. I find myself deciding to perform skills the way staff nurses do, even though they are different than the way I learned them in the nursing program.