ABSTRACT

Many researchers who have explored nurse decision making have concluded that decision making is a learned skill that must be taught by nurse educators. Yet little research has been conducted to explore nursing students’ decision making. If nurse educators are to teach this skill, it is necessary to have a better understanding of the kinds of decisions students are making in the clinical setting and the factors that influence this process. Once we have a greater knowledge in this area, curricular materials can be developed to ensure this skill is taught throughout an undergraduate education, resulting in graduates who possess strong, independent, and interdependent decision making skills. This article will describe one component (the kinds of decisions) of a larger qualitative case study that explored the kinds of decisions and the factors that influenced nursing students’ decision making throughout a baccalaureate degree program.

BACKGROUND

Clinical decision making is a skill learned most often in the clinical setting. It is frequently an implicit element in the core nursing curricula, and it is assumed this requisite skill develops over time, without direct teaching on the topic. Given that this is a cornerstone skill for nurses, it appears that more intentional research related to the topic of the development of nurse decision making is warranted. It is imperative that we, as educators, begin to understand the kinds of decisions baccalaureate nursing (BSN) students are making and the factors that influence their decision making. After this is known, we can begin to develop explicit curricula to facilitate the improvement of decision making skills, thereby enhancing students’ cognitive abilities and ability to provide quality patient care.

Decision Making by Baccalaureate Nursing Students in the Clinical Setting

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The study by Baxter and Rideout (2006) revealed that students made decisions related to encounters with three key groups of individuals: patients, nursing staff, and clinical tutors (i.e., faculty who teach in the clinical setting). Students described decisions about patient care and nursing tasks. However, when students recognized the need for such decisions, the most important of these were whether to seek help and from whom to seek it.

Much of the current literature on decision making focuses on the decision making skills of either practicing nurses or students in one particular year of a nursing program. However, nurse educators assume that decision making skills emerge and develop over the course of a 4-year BSN program.

As a nurse educator teaching in both clinical and classroom settings at a university in Southern Ontario, Canada, I believe that understanding how decision making develops over time provides a foundation for teaching, supporting, and evaluating this cornerstone skill of the nursing profession. Additional knowledge also facilitates the development of strategies to promote independent decision making.

**RESEARCH QUESTIONS**

The research questions used in the study were:

- How do the kinds of patient care decisions made by students change during the 4 years of the BSN education in both the problem-based learning and clinical settings?
- What factors influence nursing student decision making in the two settings over the 4 years of the BSN education?
- How does nursing student decision making develop over the 4 years of the BSN education program in both the problem-based learning and clinical settings?

This article reports findings related to the first research question above and discusses these findings in relation to the clinical setting.

**CASE ANALYSIS**

A qualitative single-case study approach was used to address the research questions. This approach allowed for a unique complex contemporary issue such as decision making to be explored within the context of the BSN program (Yin, 2003). The case was defined as the clinical decisions made by nursing students throughout a 4-year BSN program.

**Case Boundaries**

Following the recommendations of Miles and Huberman (1994), the case was bound by the definition of decision making, the setting, the time, and student characteristics. For the purposes of this study, nurse decision making was defined as a cognitive process requiring patient assessment and problem identification, the identification and consideration of alternatives, the consideration of preferences and values (of all parties involved), the selection of interventions, and the determination of how best to achieve these interventions (Boblin, 2003).

The case was bound by the clinical setting in all 4 years of the program. Clinical courses occurred in the clinical laboratory, the community, or acute care settings. Students were engaged in clinical activities from 2.5 hours per week in Level 1 (i.e., first year of the program) up to 24 hours per week in Level 4 (i.e., fourth year of the program). All clinical courses were taught by faculty in the clinical setting, also referred to as clinical tutors. Decision making was focused on decisions related to patient care.

**METHOD**

**Data Sources**

This study involved key informants and key documents, which, according to Yin (2003), are two primary sources of data for case studies. Key informants for this research were the nursing students from all 4 years of the program because they were best able to describe their decision making in detail (Stake, 1995; Yin, 1994, 2003). Key documents included the program and level goals and the course objectives for the clinical courses in all four levels. The documents helped to better explain the phenomenon of student decision making and provided the context.

Ethical approval was received from the Research Ethics Board, and permission to access students was given by the Undergraduate Nursing Education Committee.

**Participants**

In keeping with qualitative research, purposeful sampling was used to collect data from 19 full-time nursing students from all four levels of the nursing program during the second half of the fall and first half of the winter semesters. Students' ages ranged from 18 to 24. Most of the students entered the program directly from high school, and this would be their first university degree and participation in clinical courses.

**Data Collection**

Students were recruited through the use of posters placed in the school of nursing, and through advertisements placed in the school's internal e-mail system. A research assistant also introduced students to the study after the nursing theory classes. Students were encouraged to drop off the signed consent form into a marked box located in the school of nursing. Students were assured that their anonymity would be maintained and that their decision not to participate, to participate, or to later drop out of the study would not affect their standing at the university.

Three data collection strategies were used: individual interviews, journals, and a document review. Students were asked to complete two journal entries prior to attending an interview with a research assistant. These journals enabled the students to think about their decision making prior to the interview and also served as a jumping off point for the interview. Each journal was approximately...
1 page unless the student independently expanded his or her thoughts. Journals simply enabled the student to reflect on a clinical situation encountered in the clinical setting that day. This strategy was used because the literature suggests that nurses have great difficulty describing the decisions they make during their clinical day. Guidelines for the journal were distributed to the students when the study began.

Individual interviews were open ended, lasted 30 to 60 minutes, and enabled key informants to state facts and express their opinions about decision making. An interview guide was developed and pilot tested prior to data collection. Each interview was conducted either at the university in the school of nursing or over the telephone. All interviews were audiotaped and transcribed verbatim. The key documents were reviewed to determine how they may have contributed to the kinds of decisions made by the students throughout the program.

Data Analysis
Data collection, analysis, and interpretation occurred simultaneously. Analysis of individual interviews followed the recommendations of Miller and Crabtree (1999). An editing organizing style was used to search for meaningful words and phrases (Crabtree & Miller, 1999). Each transcript was read twice. The first reading enabled the researcher to record the intent, whereas the second reading identified words related to the research questions and highlighted key quotations in the text. Segments of the text that stood out were sorted and organized into codes, which were then reduced into categories and themes. Participants were asked to verify that the codes and themes that emerged from the analysis accurately reflected their perspectives. This was accomplished by providing students from all four levels with an overview of their comments and the emerging themes and then asking each participant to comment on whether his or her perspective had been accurately represented.

For the document review, a template organizing style was used when reviewing the program goals, level goals, and course goals and objectives (Miller & Crabtree, 1999). The template was derived from preexisting knowledge and a summary reading of the documents. This template was applied to the documents with the intent of identifying meaningful data. Chunks of similar and meaningful data were identified in the text of each document. Then, the chunks were sorted and connections between similar chunks were made within the document. These chunks were then legitimized by comparing them with similar text in other documents.

RESULTS

Kinds of Decisions
Students at all levels of the program described five key kinds of decisions:

- Assessment.
- Intervention.
- Resource.
- Communication.
- Action.

Assessment. Assessment decisions are defined as decisions about what patient data to gather and how to gather those data. Students in Level 1 described their assessment decisions as primarily focusing on how to complete a patient assessment. Students made decisions about the kinds of questions to ask the patient, the manner in which to ask the questions, and their approach to the patient. One Level-1 clinical student said:

You have to be aware of everything you’re doing. How you’re sitting, your tone of voice, eye contact, all that stuff. And asking questions that we’ve never thought of before or maybe we feel funny asking them stuff that maybe they might not understand and we’re trying to get information from them that we can’t it’s hard to organize it. It’s just weird. It’s a situation we’ve never been in before.

By Level 2, students were making decisions about what information was necessary to gather and what was of key importance. By Level 3, a shift in focus was evident as students described their interventions but did not describe any decisions related to the data they had gathered and how they determined which data were important and which were extraneous. In contrast, Level-4 students described their assessment decisions, which included decisions about what questions to pose, how to pose the questions, and what to do with the collected data. These students were often in unfamiliar and highly acute clinical areas, and this shift in the level of complexity may have had a negative influence on students’ level of confidence, causing them to be more conscious of their assessment decisions. One Level-4 clinical student said:

I decided that I would approach the family in a warm manner and take the time to teach with clarity, listen to questions, and support the parents. These are not decisions that most nurses would consciously make, it is an approach that comes naturally to an experienced nurse.

This intuition of the experienced nurses is something I look forward to developing.

Intervention. Intervention decisions are described by students as those decisions that determine what must be done to maintain or improve a patient’s health. In Level 1, students seldom mentioned these kinds of decisions, possibly because Level 1 clinical is experienced in a laboratory setting using simulated patients (i.e., paid actors) or through a community project. However, when students were asked to describe this project, they alluded to making decisions about how to collect information. Students in Level 1 described their frustration about the limited opportunities they were given to make decisions based on the collected and interpreted patient data. Students in Level 2 described simple intervention decisions that often related to providing resources and information to the patient. In Level 3, students described how they decided to challenge the information given to them by peers and the nursing staff. They began to make independent intervention decisions when they encountered simple situations. By Levels
3 and 4, students used their communication skills as an intervention by providing comfort for their patients and their families. By the end of the program (Level 4), students were beginning to engage in intervention decisions in more complex clinical settings, but much of their decision making was in collaboration with the nursing staff or preceptor, not independent. When students did make independent decisions, they described simple situations in which, had a wrong decision been made, it would have resulted in no perceived negative outcome for the patient (e.g., scheduled medicines, dressing changes, providing comfort).

Resource. Resource decisions are described as decisions related to who or what the student requires to support them in the decision making process and how to effectively use the resources. Overall, students decided to use their peers, the literature, professionals, and the policies to inform or support their decision making. Students in Level 1 focused on the use of textbooks and the tutor to support their decision making. Students also used tools that were provided for them by the clinical tutor to determine what information to gather during the patient assessment. A Level-1 student said:

I usually just follow the order of the checklist because it’s the easiest.

Another Level-1 student said:

The book says do this and this, so I’ve got to do this, this, and this.

In Levels 1, 2, and 3, students relied mainly on paper resources and peers to aid in their decision making. As students progressed in the program, they began to use more and higher quality resources. It was evident that students were beginning to critique their resources and were conscious of their practice being evidence based. Level-4 students described their decision to include additional human resources, including allied health care professionals and physicians; they also used policies and best practices guidelines to help them plan care. Students in this level were more critical of both text and professional resources and demonstrated discernment when deciding which resource would be the most valuable when making clinical decisions.

Communication. Communication decisions were described by students in all four levels. These decisions included deciding who to approach, what communication strategies to use with the patient and nursing staff or preceptor, and how to communicate with others in an attempt to engage them in the decision making process. Students in Level 1 described their decisions to engage the tutor and their peers in their decision making and saw them as a source of information and feedback. In Level 2, communication decisions changed and now incorporated nursing staff in the clinical setting. A Level-2 student said:

When the client complained of pain then I just informed the RN who was in charge of him and let her know that he was in pain and she would...give the medication whenever appropriate.

Students in this level described their decisions about who to approach for information and when to do so. They were cognizant of how their decision making and subsequent patient care would be affected if they approached a nonsupportive nurse. Level-3 students also made decisions about what to report to the nurse or clinical tutor and when to do so. They demonstrated an increased level of confidence in their ability to communicate with the nursing staff and to draw them into their decision making. A Level-3 student said:

This patient had an intravenous [IV] and she really didn’t need it, she was drinking well, she was eating well. The IV was a huge problem for her, so I went to my nurse and said she’s been drinking this much, she’s eating well, she’s tolerating foods. And so [the nurse] asked me all these questions about her condition and then she asked me what I thought we should do. I told her we should discontinue the IV. So she helped me make the decision and then [she] called the doctor and explained why we had discontinued it.

Students in their final year described a significant change in their communication decisions. These students confidently involved other health care professionals (e.g., physicians, physiotherapists, occupational therapists) in their discussions about patient care.

Action. The fifth classification is unique to this research. This kind of decision determines whether a student will proceed in the decision making process, whether an intervention will be implemented, and whether information will be communicated to another health care professional. One Level-4 student said:

I couldn’t just make the decision, even though I thought I had the knowledge on my own to make a decision. There’s always little circumstances and exceptions to the rule that without a lot of experience I wouldn’t know about. So though in black and white I could say this should be the outcome for this situation, this is the decision that should be made, I would always consult with one of the other nurses who had a lot of experience to see if my decision would match theirs and if it didn’t, why not, so that I could learn if I had made the wrong decision and why.

Students, in contrast to graduate nurses, described making a decision to act or not to act and based this decision on their appraisal of risk to themselves and to the patient. The risks they considered were related to their success as a student, to their patient, and to themselves personally.

IMPLICATIONS FOR NURSING EDUCATION

Knowing the kinds of decisions students are making—and sometimes not making—in the clinical setting should prompt nurse educators to reevaluate whether curricula provides the necessary tools to facilitate the development of decision making and whether students are sufficiently encouraged to engage in making all kinds of decisions (McCaughan, 2002).

Recognizing that students make decisions related to assessment in the beginning levels but focus less on these
decisions in later years reinforces the need for nurse educators to continue to emphasize the importance role assessment plays in decision making and providing effective and safe patient care. In addition, nurse educators should encourage students to act on the assessment data on the basis of their knowledge and, as time goes by, their experience. Decision making will only improve if decision makers are taught to systematically assess, gather information, plan, implement, and evaluate nursing care (Dawes, 2000).

Findings from this study also suggest that students made many decisions related to communicating with patients. The importance of therapeutic communication to patient care must continue to be emphasized; however, as students progress through the program, they need to continue to develop this skill and learn to act on the information gained from patient interactions. Other communication decisions were related to which resources students would use to facilitate and support their decision making. These decisions reflected both a curriculum that promoted collaboration and evidence-based practice and the development of a self-directed student who sought a variety of appropriate resources to address patient situations. These decisions required a comfortable and supportive environment. Nurse educators teaching in clinical settings must continue to provide the kind of environment in which decision making can occur and develop without fear of reprimand.

Another unexpected finding was the level of collaboration students required to make decisions. The encounters that students experienced with nurses, patients, and faculty often provided them with the opportunity to receive support and feedback when making decisions. Students described the need to seek out others during the decision making process. Recognizing that students may be mimicking what they see evidenced in the clinical setting, nurse educators have a responsibility to help students understand the importance of collaboration in decision making but also should emphasize that the students must be prepared to support and to be accountable for their decisions. The focus on collaboration in the self-directed nursing program may detract from the development of autonomous decision makers. If that occurs, we must consider how to promote collaboration while ensuring that students recognize the need for autonomy in decision making. This is not to suggest that students must engage in decision making that would be disadvantageous to patients, but rather that educators should promote autonomy when students are faced with situations that are familiar and not life threatening. If nurse educators fail to promote and support independence in the decision making process, then we are setting up students to fail on entry into the workplace.

Helping students realize the transferability of many of the nursing skills they already possess and to realize the importance of cognitive and decision making skills over technical (psychomotor) skill acquisition is important for providing a foundation for safe patient care. To guarantee that nursing students learn the skill of decision making, nurse educators must ensure that curricular materials provide a clear description of nurse decision making, as well as the elements involved in the decision making process. Strategies to facilitate the development of decision making must be clear to both students and educators. Several studies have suggested that course goals and objectives regarding decision making be deliberately developed and taught (Jenkins, 1985; Mallory, Konradi, Campbell, & Redding, 2003; Thiele, Holloway, Murphy, Pendarvis, & Stucky, 1991). Findings from this study suggest that this action must be taken at the commencement of the program. Efforts must be made to ensure that what is taught in the theoretical component of nursing education will correspond, at least to some degree, with what occurs in the clinical setting. The curriculum must demonstrate an understanding of the development of student decision making and the factors that influence it. The curriculum must also include strategies for both faculty and students to use in, to enhance, and to promote the development of decision making.

CONCLUSION

Knowing the kinds of decisions students are making, and sometimes not making, should prompt nurse educators to reevaluate whether clinical and theoretical curricula provide the necessary tools to facilitate the development of decision making and whether students are sufficiently encouraged to engage in making all kinds of decisions (McCaughan, 2002). It is also imperative that nursing students openly discuss their decision making and subsequent actions (whether proposed or actual) so they can receive encouragement from various sources (e.g., nurse educator, nurse, preceptor) when they have made correct decisions or feedback when they have not. Understanding the kinds of decisions students make will bring us one step closer to improving our nursing curriculum and will ultimately lead to nursing graduates who are more prepared to be sound autonomous decision makers when they enter the workplace.

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