Clinical Reasoning on an Assignment: Perceptions of Third Year Baccalaureate Nursing Students

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Introduction

Nurses are challenged to make clinical judgments that impact the lives of patients. In order to make these clinical judgments, clinical reasoning must be employed. Clinical reasoning is “the process by which nurses collect cues, process the information, come to an understanding of a patient problem or situation, plan and implement interventions, evaluate outcomes and reflect on and learn from the process.” Nurses educators aim to prepare students to use clinical reasoning skills for the purpose of clinical decision making in order to provide excellent patient care. Considerable literature exists regarding the acquisition of clinical reasoning skills in nursing students and how this may be impacted through the use of educational interventions. What has been less well studied is how nursing students understand the development and application of their clinical reasoning skills. An increased understanding of student perceptions regarding clinical reasoning may have implications for nurse educators as they develop curriculum and design classroom and clinical experiences to promote the development of clinical reasoning.

Purpose

Purpose: To explore the clinical reasoning skills of students who, during their third year of their baccalaureate nursing program, applied the nursing process to complete a Clinical Judgment Exercise (CJE) assignment.

Research Questions:
1. What are the third year baccalaureate nursing students’ perceptions of how they apply the nursing process to demonstrate clinical reasoning on the CJE assignment?
2. What are the third year baccalaureate nursing students’ perceptions of how prior knowledge and experience informs their clinical reasoning?
3. How do third year baccalaureate nursing students describe the impact of the CJE assignment on future clinical reasoning with respect to other written assignments or patient care?

Description of the assignment: The assignment referred to as the Clinical Judgment Exercise (CJE) is administered to students once in each of the first three years of a four-year Bachelor of Science in Nursing program in Western Canada. Students are provided with a patient scenario and are expected to independently brainstorm questions about the patient and identify, prioritize and address the patient’s problems in the form of a written care plan. The assignment is levied across the years of the program. The CJE assignments are graded with a marking rubric as part of the final grade for a classroom tutorial course in a Context Based Learning (CBL) program.

Methods

A qualitative research method was used to better understand the perceptions of the nursing students’ clinical reasoning skills. The method used was Thorne’s Interpretive Description which uses inductive reasoning and begins with specific observation followed by an open exploratory manner to develop broad generalizations. The sample was composed of eight students who had completed the CJE assignment and were in their third year of a four-year baccalaureate nursing program. All of the students were female and identified as Caucasian. Five of the students were 24-25 years of age, two were 25-30 years of age and one student identified as being 31-40 years of age.

Data collection employed semi-structured, individual face-to-face interviews. Data analysis involved coding of verbatim transcripts followed by immersion in the data and identification of emerging themes.

The research ethics boards of Trinity Western University and the Regional College attended by the participants approved this research.

Findings

OVERARCHING THEME: Over Time

Students reflected on how their clinical reasoning had evolved from the beginning of year one, through to the completion of year three. The students spoke about the growth of their clinical reasoning, comparing their abilities at earlier points in time with their present capabilities. They also spoke about how they used their clinical reasoning skills to make sense of the assignment in a progression of increasing knowledge and understanding that took place over the time it took to complete the assignment.

THEME ONE: Understanding of Clinical Reasoning

In the beginning, students perceived they were unaware of both the definition and the practice of clinical reasoning. Once a foundational understanding of clinical reasoning was established, they perceived that additional knowledge could be added in order to increase understanding and begin application of clinical reasoning skills to nursing practice. Finally, clinical reasoning was perceived as valuable and essential to the provision of excellent patient care.

Sub-theme: Not knowing

“In first year...you don’t have any patient care experiences to relate it to” (3).

“Being able to critically look at another person and be like, what do they need, was kind of difficult for me” (5).

Sub-theme: Knowing

“Second year really took me from just that kind of simple, linear thinking to a deeper level of understanding” (8).

“At what point does all the information come together and make sense to us? It clicked for me between second and third year” (2).

Sub-theme: Applying knowing

“take all the information from ‘patho’ and nursing and pull it all together” (1).

“just in a simple act of being curious, like are you ok?” (5).

Sub-theme: Valuing knowing

“If you have a patient who all of a sudden goes your right in front of you, you have to be able to think your way through it, you’re not going to have your textbooks to rely on and you know, if you’re in the situation and something does happen and you can’t critically think your way through it, something bad is going to happen” (6).

THEME TWO: Making Sense of the Assignment

Students reflected on their clinical reasoning as they recalled working through the patient scenario provided to them on the written assignment (CJE). They spoke about the strategies they used to identify the main problem, as well as their utilization of the nursing process to establish a prioritized plan of care. There was a clear arc of time over the process of making sense of the assignment, which was similar to the progression of knowing seen in Theme One.

Sub-theme: Not knowing

“I was just scared I wasn’t going to come up with anything before the due date, so I went to my textbooks and just wrote what they had in there” (7).

“What if I put two and two together and it was the wrong four?” (5).

Sub-theme: Knowing

“I had a big piece of paper...had sepsis, infection, drug use...lab values scribbled down and the relevant vitals beside each diagnosis...I had sticky notes so I could move it around...it’s kind of how it ended up making sense” (4).

“See if the book has the same data and how it would apply to the patient on the CJE” (6).

Sub-theme: Applying knowing

“You use what you already know, experiences that you already have, to try to picture in your head what this person may be like” (2).

Sub-theme: Valuing knowing

“Being able to walk into a patient’s room, see that something’s not right, think about what needs to happen or what am I seeing” (6).

“Every step of it there are certain questions like trigger questions that you should be asking yourself...from your assessment data...does this make sense? Is this painting a picture I’ve seen before, is there more to this?” (8).

Discussion

Theme One:
• Several studies found similarly, that clinical reasoning develops over time and that students perceive their clinical reasoning to improve over time.

Theme Two:
• Studies in the literature showed similar findings with respect to not knowing (confusion), prioritizing and hypothesis generation.
• Students expressed frustration with the nature of the assignment. Some studies found working in pairs, utilizing simulation or utilizing virtual patients to be beneficial in promoting clinical reasoning.
• Students described being challenged by their lack of experience. Some studies found that experienced nurses used pattern recognition as a clinical reasoning strategy. This strategy may be less available to student nurses.
• Tanner suggests student nurses are confined to using analytic skills because of their lack of experience.
• Two studies reported similar findings with respect to students or newly graduated nurses using the nursing process in clinical practice.
• The study findings were compared to the findings of Goudeau, Boyer and Letourneau who proposed stages of clinical reasoning as a result of their “think aloud” study with students, newly graduated nurses and experienced nurses. Similarities were found between the student participants' description of their thinking during each year of their program and what was present in the “think aloud” data from Goudeau et al.
• The findings from Theme Two were explored in relation to Tanner’s five conclusions from her review of the clinical judgment literature. Clinical reasoning is complex and influenced by more than cognitive processes. Factors such as what the student brings to the assignment, the context in which the assignment is written and the learning that occurs upon reflection were elements of clinical judgment that were exposed by examining the conclusions derived from Tanner’s synthesis of the literature.
• The limitations of the CJE assignment were also more fully understood by realizing that elements of clinical judgment identified by Tanner such as knowing the patient, use of intuition based on experience and the ability to enter into the patient narrative were unavailable to the student participants.

Conclusions

Conclusions were that student participants: 1) understood their clinical reasoning skills to have progressed from year to year in their educational program, 2) perceived that their understanding of the patient’s problem and the required nursing actions deepened over the time of writing the assignment, 3) were challenged by never having had a patient as complex as the one described on the assignment, 4) perceived they were able to apply learning from the CJE to their nursing practice, and 5) perceived writing the CJE to be a stressful experience.

Insights / Recommendations

Implications for nursing education:
• Level learning experiences according to the stage of clinical reasoning
• Promote a variety of problem solving strategies
• Have students work in pairs or small groups
• Consider simulation or virtual patient scenarios to provide an unfolding element to the assignment
• Consider how feedback could be provided to enhance student learning

Recommendations for nursing research:
• Seek to further understand the development and use of clinical reasoning
• Employ qualitative methods such as focus groups or “think aloud” methods
• Conduct interviews with students in other years of their program

References