

Teaching Undergraduate Nurses Nursing Phenomena

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Nursing phenomena, complex and dynamic conceptual building blocks, are the basis of our nursing language. Students have difficulty understanding what nursing phenomena are and how to link them to practice and research. The authors describe incremental experiential learning strategies that were used to help students learn and apply the basic concepts of their nursing language.

An understanding of nursing phenomena provides the critical cognitive building blocks by which baccalaureate nursing students attain nursing knowledge. Nursing phenomena provide cognitive representations of the body of nursing knowledge and are important tools in clinical reasoning.¹⁻³ Nursing phenomena provide the research framework for many schools of nursing and are the philosophical basis for curricula that unify the essential phenomena of interest to nursing: the concepts of nursing, health, person, and environment.^{4,5} They are the basis for electronic information systems that are increasingly important for healthcare institutions and essential to making nursing visible and valued.⁶⁻¹⁰ Acquiring knowledge and understanding nursing phenomena are vital for students to begin applying evidence to their current practice, ultimately improving nursing education and research.

The Problem

We found that our students, who were licensed registered nurses (RNs) enrolled in a baccalaureate completion program taking a clinical nursing phenomena course early in the curriculum, frequently failed to understand the complex and dynamic nature of nursing phenomena and dismissed presented content as trivial or irrelevant. As a result, they lacked the ability to identify a patient's care needs and intervene,¹¹ succeed in research and theory classes, and apply best evidence to their clinical practice. Compounding students' perplexity were the multiplicity of nursing phenomena "labels." Nursing phenomena have been defined as *concepts, constructs, nursing diagnoses, human responses to actual or potential illness, life processes, behaviors (signs), or experiences (symptoms)*.^{2,3,12-15} In addition,

nursing phenomena exist along abstract to concrete cognitive continua, can be viewed using 4 different perspectives, should be measurable, and change depending on the individual's characteristics such as age, sex, ethnicity, and course of disease.¹⁵ The faculty felt that our nursing students lacked an understanding of nursing phenomena and their link to research, quality improvement, and current practice.

Our RN-BSN students were widely diverse in their nursing education backgrounds, years of nursing experience, and vocabulary used to describe nursing practice. Most of these students were in the beginner or advanced beginner stages of practice¹⁶ and had great difficulty thinking conceptually, cognitively desiring quick, short, concrete explanations and exemplars to define nursing phenomena ("Just give me the information and I'll memorize it"). It was very difficult for them to accept that nurses treat human responses; in contrast, they were very comfortable with and defaulted to the medical paradigm as a basis for nursing practice. As a result, students were very frustrated and dissatisfied, and "cognitive paralysis" frequently resulted.

Faculty expected that critical thinking skills acquired in an earlier course and the conceptual content and thinking from this course would be used in subsequent classes. For example, in the research course that followed, students were expected to identify nursing phenomena or concepts, locate evidence-based literature, and discuss how the literature could be used to improve their own practices. We found that this did not occur in most learners. In addition, because students were still grappling with "what is a phenomena?" they did not have the basis upon which to build their understanding of the research process and synthesis of literature.

Addressing the Problem

We were challenged to develop our students' abilities to engage in the abstract, critical thinking, and reflection

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processes surrounding nursing phenomena so that students could then directly apply them to their nursing practice. We looked for a teaching/learning process that facilitated students moving out of their cognitive zone of comfort. Simultaneously, we needed to maintain student interest and enthusiasm for nursing phenomena and develop the capacity for students to link this to their current practices.

Therefore, a carefully planned course, based on requisite knowledge and skills using a mixture of teaching strategies, was essential. Although a course on nursing phenomena is required in some baccalaureate nursing programs, a review of literature illustrated a big gap in current research about nursing phenomena and any respective teaching methods. Consequently, the primary goal of this pilot project was to teach nursing phenomena and their application to current evidence-based practice (EBP) using participatory and incremental experiential learning strategies. This teaching method has been used successfully in undergraduate nursing research courses.¹⁷ We applied this same process to teaching nursing phenomena using group evidence-based projects.¹⁸ These projects are the optimal example of incremental experiential learning.

Evidence-Based Projects

The first step in preparing a teaching and learning experience for students was to carefully plan content presentation in the allowed instructional time. Didactic knowledge was given in small incremental blocks of 45 minutes, followed immediately by an experiential exercise, which resulted in a gradable product or assignment designed to measure the extent of students' comprehension and their ability to advance to the next thinking skill level.

Students were initially put at ease with didactic instruction and discussion on the development of nursing classification systems and their relationship to the definition of nursing as a professional discipline. The North American Nurses Association (NANDA)¹⁹ and the alternative conceptual taxonomy of midrange theorists²⁰ provided concrete examples of nursing phenomena; students particularly appreciated the concrete examples. Subsequent didactic instruction included The Iowa Model of EBP,²¹ defining and describing EBP, explaining evidence grading,²² constructing an evidence matrix,²³ and developing posters.²⁴

A variety of teaching strategies were used to provide experiential exercises. Individual and group strategies were used to provide redundant learning experiences for each learning objective. Individual strategies were implemented before collaborative group projects to allow individuals time to grasp the concepts before moving into more complex group exercises. The assumption was that this would provide those who required more time to cognitively process and assimilate the new information an opportunity for success before working in a group in which they would be carried along by the stronger members of the group without really grasping the needed concepts. This was often the case with students for whom English was their second language. Brainstorming current practice problems provided students with a list of nursing phenomena. Written clinical scenarios provided information from which

students identified the phenomenon of concern, composed a nursing problem using the PICO (problem, intervention, comparison, outcome) format,²² and extracted the key concepts to use in a computerized library evidence search.

The university nursing librarian was invited to teach 3 periods of instruction in the computer laboratory. The first session consisted of an introduction to EBP databases, search engines, and searching strategies. The second was a self-paced module of instruction, which required the students to search the EBP databases based on a given nursing problem. The last period of instruction required group collaboration to produce a search map of their PICO key concepts using the problem identified in their brainstorming exercises. The last period also required locating an instrument measuring the selected phenomenon, one criterion in the search map.

Based on their search map, students selected 5 evidence-based references to be used in resolving their current practice problem identified using PICO. In-class exercises were implemented to assist the students' information management and to promote critical thinking and analysis at this phase. A matrix strategy²³ was used to assist students in synthesizing and analyzing evidence from their selected sources. To document and summarize their findings, the project culminated in a collaborative poster presentation. Students were involved in grading and critiquing their peers' posters. Other faculty members were invited as expert panel members to grade the final group posters and presentations.

Outcomes and Lessons Learned

One measure of the effectiveness of teaching/learning strategies is student ratings of select aspects of the course. Our standardized assessment of teaching surveys uses responses to 4 items to calculate a median score. The 4 items ask students to rate the course as a whole as well as the content, instructor's contribution, and instructor's effectiveness in teaching. In the case of this course, ratings improved from fair to good (median, 2.6) to good to very good (medium, 3.4) on a 6-point Likert scale, which was a 31% improvement. There were, however, no remarkable differences in student grades.

We found that students needed collaborative strategies, such as brainstorming, to generate a list of nursing phenomena from their current clinical practice. Close monitoring by the instructor was necessary to stimulate their thought processes and interaction. We found that students generally reverted to medical diagnoses, not nursing phenomena. We found that a sequential questioning method encouraged students to generate a list of nursing interventions. We started by asking "What are some of the things you do for your patients every day during clinical?" It was more problematic for our students to generate the corresponding nursing phenomenon and sometimes needed to be asked a further question, "Why are you doing this nursing intervention for your patient?" If we had students who were knowledgeable and used NANDA terminology, we asked them to identify nursing care problems, which enabled an easy extraction of the phenomenon of concern. Group learning activities resulted in additional positive outcomes, such as a more diverse and comprehensive list

of phenomena and synergistic learning experiences among students and from course faculty.

Grade inflation in higher education is significant in most institutions,²⁵⁻²⁷ causing students to be anxiously motivated in maintaining high grade point averages. Having objective grading criteria that clearly delineate a cumulative point structure for their final grade affects student motivation, decreases instructional ambiguity and student anxiety, and provides additional instructor time for student interaction and mentoring. We used short online quizzes for didactic instruction, self-paced modules for computer exercises, and poster grading sheets. Examples from journal articles, posters, and tools for assignment completion were included in a student packet and accessible electronically. Electronic group forums facilitated group communication.

Several outstanding resources provided background instructional material and concrete examples. We used the Iowa Model of EBP²¹ to provide an organizational context and an algorithm to make EBP decisions. Madsen et al²¹ provided an excellent example of a collaborative EBP project. Adopting the PICO format facilitated the development of well-designed student questions, narrowed the phenomenon of concern, and efficiently used student time searching for best evidence. Vermeersch and Beavers²⁸ provided an excellent algorithm for students to use when selecting instruments to measure their selected nursing phenomenon and evaluate their use in clinical practice. A matrix strategy²³ was adapted for students to use in managing best evidence and facilitating critical thinking and analysis.

Because students enrolled in the course early in their curriculum, we found that they had varying degrees of expertise in library skills and electronic databases. The computer laboratory exercises ensured that all students had the requisite skills to complete assignments. Students with good computer skills completed the assignments quickly, increasing instructors' time with students needing extra assistance. We also found that an instructor and librarian were required to meet student skill acquisition and answer questions during computer laboratory exercises.

Instructor involvement and monitoring of student work groups provided early identification of student learning problems. One of the recurrent student problems was the misconception that ideal sources of evidence comparing nursing interventions would be available to answer their PICO nursing question. Rarely is this the case. Usually, 1 intervention is discussed, not a comparison of selected interventions. We also found that course faculty needed to review the hard copies of evidence that students selected to ensure that these resources were the best evidence and applicable to student assignments. Lastly, students had the most difficulty answering their clinical question as supported by the evidence. We used a discussion forum, in which students discussed the applicability of the evidence to their current practice, and grounded their decision in current practice, organizational vision, and patient preference. In the future, we would consider managing this discussion as an online forum, in a Web-based interface.

Feedback from the students rated the poster development as the most fun. They enjoyed seeing the culmination of their class assignments. The last day of class was full of

excitement as the faculty panel members reviewed the posters and listened to the presentations. The student posters received appropriately colored award ribbons.

Conclusion

Because evidence pertaining to nursing phenomena is dynamically changing, teaching the process prepares the nursing students with skills and abilities directly applicable to their current practice, stimulates critical thinking, and develops the skills required by nurses to improve their clinical practice and research. Using a variety of teaching strategies that entail skills that students can use in clinical practice energizes and motivates their desire to participate and learn. It just doesn't happen, it needs careful planning. We recommend that faculty consider using our strategies and our "lessons learned" when teaching conceptual content or complex content, particularly to those novice nurses, novice learners, and learners for whom English is a second language.

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\$33 million Available to Train Health Professionals

Health and Human Services (HHS) Secretary Kathleen Sebelius announced in September of 2009 the availability of awards totaling up to \$33 million to assist in training health care professionals. The funds represent a portion of the \$500 million allocated to HHS' Health Resources and Services Administration (HRSA) to address workforce shortages under the American Recovery and Reinvestment Act (ARRA). Funds will be used to help rebuild the infrastructure needed to produce more skilled health care professionals and assist in expanding primary care services provided through the HHS health center system, explained HRSA Administrator Mary Wakefield, PhD, RN.

The funds will be distributed to 6 HRSA programs, including *Nursing Workforce Diversity*. This program was allocated \$2.6 million to assist in increasing nursing education opportunities for individuals from disadvantaged backgrounds via student scholarships or stipends, pre-entry preparation, and retention activities. The \$19.3 million designated for *Scholarships for Disadvantaged Students* will fund schools in health professions and training programs to provide scholarships to full-time health professions students with priority designated for students with financial need. The *Centers for Excellence* funds health professions schools to establish or expand programs for minority individuals. The \$4.9 million allocated to this branch of HRSA will be used to improve student academic performance, recruit and retain minority faculty, and expand opportunities to train at off-campus, community-based health care sites.

HRSA has received an additional \$2 billion through ARRA to expand health care services to low-income and uninsured individuals through the health center program. By September 2009 more than \$1.3 billion of these funds had been awarded to community-based organizations throughout the U.S. This funding supports the HRSA-supported health centers where 40% of the 17 million patients treated in 2008 had no health insurance. For additional Health Professions Awards by Program information, go to <http://www.hhs.gov/recovery/programs/hrsa/healthprofessionsawardees.html> and for Awards by State go to <http://www.hhs.gov/recovery/programs/hrsa/healthprofessionsawardeesbystate.html>.

Source: HHS.gov. US Department of Health and Human Services. Secretary Sebelius Releases \$33 Million in ARRA Funds to Train Health Professionals. September 11, 2009. Available at <http://www.hhs.gov/news/press/2009pres/09/20090911d.html>. Accessed on September 19, 2009.

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