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Simulation Elective: A Novel Approach to Using Simulation for Learning

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KEYWORDS

undergraduate students; nursing; simulation elective; course development; teaching methods **Abstract:** Simulation has been shown to be an effective learning method. However, most undergraduate nursing programs substitute simulation for only 10%-25% of clinical experiences. In an attempt to increase the use of simulation in the undergraduate program, faculty designed an elective course that uses simulation as the primary learning method. This article outlines the faculty struggles, triumphs, and lessons learned as the course evolved over the last eight years.

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The purpose of this article is to outline the development of a simulation elective course and the evolution of the course over time. The course allowed faculty to integrate simulation on a weekly basis for progressive student growth and learning.

The use of simulation methods shows promise to increase student knowledge, critical thinking, confidence, and communication skills (Cant & Cooper, 2010; Lewis, Strachan, & Smith, 2012; Stroup, 2014), but its use may be underutilized. The National Council State Boards of Nursing National Simulation Study identified that up to 50% of traditional clinical experience can be substituted with simulation in prelicensure nursing programs with similar outcomes in nursing knowledge and clinical competency (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). Most undergraduate programs of nursing substitute simulation for a small portion of clinical

experience. Beroz (2017) found that among the undergraduate nursing schools in Maryland that substituted simulation for traditional clinical experience, 67% substituted only between 10% and 15%. There were no schools who substituted simulation for clinical experience at 50%.

To supplement the low incidence of simulation use, faculty embedded simulation scenarios into classroom or other courses for select content (Starkweather & Kardong-Edgren, 2008; Thomas & Mackey, 2012). To increase the frequency of simulation methods for student learning, we designed a weekly simulation elective course. Students who favored this active method of learning were now able to participate in simulations on a weekly basis. This article outlines the faculty struggles, triumphs, and lessons learned as the course evolved over the last 9 years.

Nine years ago, our nursing program experienced the struggles of implementing simulation across the curriculum (Adamson, 2010; Beroz, 2017). Lack of time, space, and resources made it difficult to implement a high amount of simulation learning experiences. Faculty experience, competence, and comfort in using simulation were limited. In the beginning,

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only a few faculty were using simulation. Of those faculty using simulation, some attended formal training, whereas others learned through mentors, experience, and reading literature. Administration supported the purchase of manikins using internal and external grants, however, did not fiscally support addi-

Key Points

- If given the choice, many students will choose the interactive nature of simulation for learning nursing knowledge, skills, and attitudes.
- Simulation can be used as the primary learning method in an undergraduate course.
- Evaluation of simulation related assignments needs to support student psychological safety.

tional IT staff to implement multiple scenarios or further faculty training in the design and implementation of simulation. The purchase of additional disposable supplies for use during simulation was a struggle. This made systematic integration into the curriculum impossible at that time. The faculty using simulation did so, but as an addition to their other clinical teaching responsibilities. Therefore, to make simulation a formal part of their workload and a primary learning method for students, a 3-credit elective course that used simulation as the principle learning method was developed.

Course Development

The course was first introduced as a special topic elective course. To provide flexibility in providing students new or innovative content, the nursing department used a freestanding special topic course designation. This was done because special topic elective courses did not have to go through the formal time-intensive process of university approval before implementation (see Course Description and Objectives). This allowed the course to be placed into the university schedule only a few months after development and approval by the nursing department faculty. The course became a formal part of the faculty 12-credit workload. This provided more time for scenario development and standardized cases. The course was soon submitted to and approved by the university curriculum committee. As a formal class, faculty had more time for advanced planning for the course.

Course faculty chose to develop their own scenarios and revise a few of the National League for Nursing prepared scenarios appropriate for the student level and course needs. The beginning scenarios focused on care of patients with common disease process (asthma, hypertension, anaphylaxis, and so forth) and nursing procedures (intravenous [IV] therapy, blood transfusions, chest tube care). Patient safety quickly became another focus of this course.

Before this course, other nursing elective courses used primarily didactic and small group activities to support student learning. All students were introduced to simulation when it was implemented as a replacement for a portion of their clinical course. Most students perceived this change as positive, and when the course was announced, registration for the course filled early. It was evident that although not all students favored this experiential learning method, many did.

The time investment of set up and tear down of simulation activities made it necessary to schedule the course once a week for 3 hours. This allowed faculty to manage multiple simulations and other activities once a week. Class enrollment was limited in the beginning to 18 students. Typical student enrollment for most other elective courses was 25 to 30. This was to provide time for individualized student interaction and feedback during the class. Owing to the need for implementing multiple scenarios and debriefing sessions during the 3 hours of class, it was negotiated that two faculty would teach the course. However, each of the faculty would receive only 1.5 credits or weekly contact hours of workload for the 3 hours of course. Although not optimal, this was viewed as a compromise. Full-time university faculty credit load is 12 credits or student contact hours per week for each 15-week fall and spring semester. The course faculty felt strong about the benefits of the course and split the credit load assignment. Assigning laboratory space for simulation became a higher priority as it was now a scheduled course. The laboratory/room assignment was placed on the university schedule in the afternoon/evening as a routine practice, and other laboratory activities were scheduled around it.

Elective courses in the nursing department typically expand on nursing concepts or issues already discussed in the curriculum and can be taken by students at any time during their four-year program. The necessary assessment and beginning-level clinical decision-making skills required for student scenario performance and discussion during debriefing warranted setting prerequisite completion of the fundamentals and pathophysiology courses for enrollment. This allowed for some mixing of junior and senior students in the course, but all students would have previous and/or concurrent clinical experiences during the semester.

Advantages

A major advantage to having a simulation elective course is that it is an interactive course with experiential learning being the primary method. Students are assigned patients and navigate care similar to being in the clinical area. This type of approach allowed students to become engaged active learners (Jefffries & Clochsy, 2012). Students were also able to participate in patient care that they might not have exposure to a clinical practicum, such as a patient experiencing cardiac arrest or a difficult conversation regarding the care of a loved one. In using active teaching Download English Version:

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