OB Boot Camp: Maternity Simulators in Clinical Education

Clinical simulation models have been shown to be an effective nursing education technology (Johnson, Zerwic, & Theis, 1999). This technology has undergone recent innovations in the area of birthing simulation. Maternity simulators are life-like manikins that can represent maternity clients for nursing and medical students. Simulators can vary from simple partial body models to full-body electronic simulators with fetal heartbeats and mechanical mechanisms to propel a manikin fetus through the pelvis. These simulators perform the cardinal movements of labor and birth, and the neonatal models can simulate the transition of the newborn to extra-uterine life. Some models can be attached to a computer so students can practice live-action fetal heartbeat and labor scenarios.

Background

The theoretical basis for this teaching strategy can be found in Bandura's (1977) Social Learning Theory. Bandura, a Stanford psychologist married to a nurse, is well known for demonstrating the effects of modeling behavior through his Bobo doll, or punching bag, research. With learning through modeling, the processes of observational learning can occur. If the process has functional value and salience for students, learning will increase. Rehearsing and enacting are important steps in observational learning. For psychomotor activities, students must organize responses, initiate the activity, monitor the process, and refine it with corrective moves after the first tries (Bandura, 1977).

Maternity simulators are especially well suited for applying the steps of this theory to maternity nursing education. Childbirth is difficult to describe in words or two-dimensional representations. It also has strong emotional reactions associated with it. The use of maternity simulators provides the opportunity for students to practice nursing actions to help with childbirth multiple times, so faculty can provide feedback, and students can advance their knowledge and skills in labor support, assistance with childbirth, newborn stabilization, and early breastfeeding.

Activity Description

In the Maternal, Newborn, and Women's Health undergraduate nursing course, students participate in a clinical simulation laboratory experience called "OB Boot Camp," prior to commencing their maternity clinical rotations. The primary learning goal for the OB Boot Camp activity is for the students to experience and apply their nursing skills to pregnancy, intrapartum, postpartum, newborn, and women's health clinical situations. Modeling for students is provided through videos, clinical simulation, and standardized patients.

Stations related to women's health, pregnancy, the intrapartum period, the postpartum period, newborn care, and breastfeeding are set up with models, equipment, posters, and sample critical thinking questions. At each station, the instructor performs a demonstration for the students, followed by student practice sessions that include critical thinking scenarios (**Figure**). To promote transfer of knowledge from simulation to the clinical environment, the students perform a postpartum interview and assessment using a standardized patient.

The creation and use of simulated learning experiences as an active learning strategy requires coordination among faculty and simulation specialists (Seropian, Brown, Gavilanes, & Driggers, 2004). Standardization of the OB Boot Camp requires prior development of objectives and scenarios, resource acquisition (e.g., equipment, supplies, simulators), set up of materials, and faculty orientation.

Response

The clinical faculty members have voiced support for the "jump start" students get through this clinical simulation experience. In course evaluations, students rated OB Boot Camp, maternity simulators, and standardized patients as good to excellent learning experiences. Bandura's legacy of improved teaching through effective modeling of skills, behaviors, and beliefs is operationalized in the OB Boot Camp.

Figure. Students apply their nursing skills related to pregnancy, intrapartum, postpartum, newborn, and women's health clinical situations in the simulated environment.

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One-Minute Paper

Learner evaluation of a large group of students in a lecture setting rarely provides a benefit for those enrolled at the time. Summative assessment of instructional success tends to benefit future students by bringing about changes the next time the course is taught. One solution to formative evaluation aimed at a current cohort of students is the "one-minute paper." The goal of the one-

minute paper is to assess students' reactions to and understanding of the instructional material presented or discussed (Draper, 2005; Ross, 1988; Ross & Angelo, 2001). This teaching tool can be used to help nurse educators assess students' understanding in classroom, laboratory, and clinical settings.

Activity Description

Students are given one minute to provide written feedback about a specific learning session. The process begins with the instructor defining the purpose and developing a plan for the feedback. Next, feedback questions are selected or developed. Following the learning session, students answer the feedback questions on an index card or half-sheet of paper provided.

Student anonymity is considered prior to requesting feedback. When used solely to assess the accomplishment of instruction, student identification may not be relevant. However, if formative feedback is needed to monitor individual student progress, the rationale for identifying individual respondents should be shared with students prior to the evaluation (Draper, 2005; Ross & Angelo, 2001).

Written responses are collected and reviewed by faculty and/or students, depending on the predetermined purpose. Analysis of the results and rapid follow up with students are critical to the process and help emphasize the importance of their input (Ross & Angelo, 2001).

Use in a Senior Leadership Course

The one-minute paper was recently used to assess the instructional methods used and learning achieved by more than 100 undergraduate nursing students in a senior didactic leadership course. Blank 4 × 6 index cards were handed to each student at the conclusion of the lecture and discussion. Feedback questions were displayed on a PowerPoint® slide as the students completed their one-minute papers. (In this activity, students' names were optional.)

The feedback questions used and several students' responses were as follows:

- Please list three items from today's class that you found useful. "Guest speakers, fish market videos, individual wrap-up."
- What topics during today's class would you like to know more about? "I would like to know more about how to implement changes in quality care."
- What will you take away from today's class and/or what would you tell someone about as a result of this class? "Be mindful of the medications you give; don't be too proud to have someone double check your work—someone's life is depending on it."
- Do you have any additional comments? "I don't like change but can adapt with little resistance."

The index cards were collected and reviewed by the teaching team. A thorough analysis of the responses was conducted, and a brief summary was reported to the students the next week. Changes in teaching methods, strategies, or content were made when and where necessary. For example, based on a number of student responses indicating their desire to learn more about how to implement changes in quality care, a brief discussion about how new nurses can implement such changes was included in the next week's class. In addition, a handout containing more information and resources on this topic could be provided.

Following the response analysis, data from the index cards were entered into an electronic database to be used for additional weekly course changes and future course planning. The one-minute paper is an effective, efficient, and relatively simple way to collect formative evaluative data that can positively influence nursing education.

The author acknowledges the determined assistance of Barbara Holtzclaw, PhD, RN, FAAN, in the making of this article.

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