

Simulation as an Innovative Teaching Pedagogy for Baccalaureate Male Students Undertaking a Maternal Health Course in the Arab world: A Pilot Project

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Abstract

Background: The nursing profession is attracting more male students at the baccalaureate level. Nursing faculty face difficulty in finding appropriate clinical opportunities in obstetrics for male baccalaureate nursing students in the conservative Arab culture.

Methods: A simulated environment was created comprising four beds in a ward setting. A standardized patient (SP) was placed on each bed. Each SP was trained to provide a history and respond to triggers based on questions posed by male students. The scenarios were: an antenatal patient admitted for induction of labor, a primipara with edema and severe headache, a multigravida who delivered spontaneously and was preparing for discharge, and a cesarian case on the first postoperative day. In the latter two scenarios, newborns were placed in bassinets near the SP's and the male students were also expected to take care of the baby. This innovative educational project highlighted simulation using low fidelity manikins and SPs. Male students reported simulation was an effective teaching strategy to acquire obstetric knowledge and develop critical thinking as they responded to cues given by the SP (e.g., antenatal abdominal pain). In addition, the students gained a level of proficiency in examining antenatal and postnatal women. Furthermore, they reported that debriefing following the training consolidated their learning.

Conclusion: Male students reported they would not have been able to achieve the course outcomes for the maternity clinical rotation without the introduction of simulation. This project sets the stage for introducing simulation into other clinical courses across the baccalaureate curriculum.

Key words: baccalaureate nursing education, educational pedagogy, simulation, standardized patients, Arab culture, male students

Introduction

As male students enter nursing programs, the maternal health course has emerged as an area

in which they face major challenges. In addition, the conservative Arab culture makes it difficult for nursing faculty to find appropriate clinical

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opportunities in obstetrics for male baccalaureate nursing students¹, especially as cultural constraints mean they are not allowed to enter the maternity ward. This feedback has been received in course evaluations from preceding years. To overcome these cultural barriers to clinical learning, and ensure attainment of the maternal course competencies students were provided with simulated experiences so they could learn the skills that were necessary for the maternal health course. Simulation allows for a replication of real-life experiences and development of competencies, including communication and clinical decision making², thereby supporting student learning, and enabling them to perform nursing actions within cultural boundaries and achieve outcomes along with reflective debriefing³. Furthermore, this educational strategy supported student-centered learning and enabled them to learn in a setting as close to the real world as possible⁴.

The use of simulation in nursing education provides opportunities for students to practice in a controlled environment. Simulation provides an excellent teaching environment that links instruction with the cognitive processes of perceiving, thinking, and processing information. Reflective thinking is part of the teaching repertoire as students recall the encounter, reflect on what took place and why. In this process, they review what they learned from the experience and reflect on what they could do if they had opportunity to repeat the same scenario⁵.

The purpose of this paper is to showcase both the creation and implementation of an innovative teaching pedagogy in the maternal health course for male baccalaureate students through the use of simulation in an educational setting. In line with International Nursing Association for Clinical Simulation and Learning (INACSL) 2021, the design of the simulation encompassed clear objectives that were communicated to the students in a pre-briefing session to acquaint learners with what was expected of them in the simulation activity⁶. The information was provided by email to all the students three days prior to the activity. A list of videos was shared with the students to further consolidate their learning. This was considered a flipped classroom approach and keeping in mind the principles of adult learning the students could view the information and videos

at their own pace prior to the simulation⁷. In this way, the educational outcomes aimed to increase knowledge, improve skill performance satisfaction, and enhance critical thinking and self confidence in their repertoire of skills.

Methods

The simulation experience.

The simulation experience was provided in the sixth and seventh weeks of the maternal health course (approximately halfway through the semester). By this stage, students had learned sufficient theoretical concepts as part of their didactic lectures and were prepared to encounter the concepts of the maternal course in a simulated setting, thereby bridging the theory to practice gap.

The skills laboratory was set up to resemble a four-bedded ward and male students participated in four simulated scenarios with low fidelity manikins and standardized patients (SPs). The four obstetric scenarios were developed by the course faculty and validated by another faculty member with midwifery qualifications. Scripts were developed for the SPs along with prompts and triggers, so they were prepared to enact the various roles. The four scenarios were as follows.

1. A 30-year-old antenatal woman who was admitted to the labor room for induction of labor. The student was instructed to assess the woman in the labor room.
2. A 25-year-old primipara who presented with edema and was complaining of a severe headache.
3. A 35-year-old woman who had delivered her third baby by spontaneous vaginal delivery. The student was expected to care for the mother and baby and prepare them for discharge.
4. A 28-year-old woman who had delivered her first baby by cesarian section and was at the first day postoperative. The student was expected to take care of the mother and baby.

The participating students' female classmates played the SP roles. They also acted out various roles of relatives, or doctors, nurses, and head nurses giving instructions to the male students. The SPs received extensive training to ensure they could provide a

patient history and verbalize signs and symptoms, thereby adding realism to the scenarios. The SPs wore patient gowns and identification bracelets and were given a cue card detailing their role and timed triggers (e.g., an antenatal patient who exhibited false labor). In addition, a head nurse toured the ward and asked for the fetal heart rate and vital signs of the mother or asked to see the lochia. Moulage was used to display soaked sanitary pads and lochia, and wounds that depicted episiotomy cuts and surgical incisions for the cesarian section.

Each simulation had an unfolding case scenario and students were expected to respond to the scenario in real time. For example, in the third scenario, the male student had to prepare for the discharge of the mother and baby. It was expected that the discharge teaching would include demonstrating how to give the baby bath and change the diaper and then watching a return demonstration from the mother.

Each simulation lasted about for 20-30 minutes. The faculty made notes on the students' performance. At times, it was considered important to freeze the scene⁸ to allow for timely intervention by the faculty and ensure critical thinking by the student. In some cases, the faculty had to intervene to prompt students to think critically. For example, in the encounter with the woman who had edema and headache, students were expected to check her blood pressure. If the student did not show any action towards checking the blood pressure, the faculty would intervene and ask the student, "What should be your immediate action based on the history you have obtained? Which vital sign should you check and monitor right away for this patient?"

After the full run of the simulation, the student was asked to reflect on their performance in the scenarios and what learning had taken place, and if they would do something different if the scenario was to be repeated⁹. This was followed by a formal debrief, which was led by a faculty member who had received extensive training in debriefing techniques at the Centre of Medical Simulation in Boston. Debriefing is an integral part of simulation and engages the learner to link theory to action¹⁰. Debriefing focused on the positive aspects of the simulation and highlighted areas for improvement. In this way, the students gained a deeper understanding of the course

materials and linked theory with practice. Students also developed teamwork and inter professional skills while learning to appreciate the contributions of other healthcare team members. Students were more engaged with course content and able to engage in meaningful discussions after the simulation, thereby leading to transformative learning.

Discussion

Student evaluation

The students reported that the simulation enabled them to meet the course objectives and noted that each unfolding simulation "kept them on their toes." In addition, the moulage meant that they got to see soaked sanitary pads, lochia, a surgical incision for cesarian section, and an episiotomy cut. The male students also received hands-on practice in performing psychomotor skills for both antenatal and postnatal cases on low fidelity manikins. They reported that they felt a level of proficiency in examining antenatal and postnatal patients. Furthermore, the students reported improved confidence, knowledge, and communication skills in dealing maternity cases. The simulation also taught them critical thinking and how to deal with other health professionals.

The SPs were their female classmates, and they reported they felt they needed to give non-verbal cues when the male students were off track. They also noted it was sometimes hard to keep a straight face. Additionally, SPs were able to provide the male students with feedback on their communication skills.

Faculty evaluation

The faculty appreciated this novel method of teaching maternal concepts to male students within the conservative Arab culture. In addition, they believed simulation could be extended to other courses in the curriculum.

Conclusion

This paper has showcased an innovative pedagogical approach to address contemporary issues and overcome the pragmatic constraints which are seen in the obstetrical and gynecological areas. As this was a curriculum evaluation activity, no formal ethics approval was required. However,

the Dean of the College and Head of the Department and were informed about the simulation activities. Male students reported that they would not have been able to achieve the course outcomes for their maternity clinical rotation without the introduction of simulation. With the growing number of males entering the nursing profession in the United Arab Emirates, simulation in maternity courses may become a necessary part of the baccalaureate nursing curriculum. Subsequent to this educational project, the Department of Nursing has acquired a high fidelity child birth manikin Lucina who has been nicknamed "Amna" for cultural appropriateness, to support the maternal course in the baccalaureate program.

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Ethical clearance: Ethical clearance was not taken as this was a course related activity on the maternity curriculum in the baccalaureate program. Permission was obtained from the Dean of the College of Health Sciences and Head of Nursing Department about the teaching pedagogy which was used.

References

1. Saber NM, Ibrahim RE. Challenges facing male students nurses during attending maternity nursing clinical course: Suggested guidelines of actions. *American Journal of Nursing Research*. 2019;7(2):160-6.
2. Aebersold M. Simulation-based learning: No longer a novelty in undergraduate education. *Online Journal of Issues in Nursing*. 2018 May 1;23(2).
3. Chernikova O, Heitzmann N, Stadler M, Holzberger D, Seidel T, Fischer F. Simulation-based learning in higher education: A meta-analysis. *Review of Educational Research*. 2020 Aug;90(4):499-541.
4. Faulcon RY. Innovative teaching strategies with simulation technology in nursing education. *Journal of Bermuda College*. 2015 Jun;1:47-50.
5. Shepherd I, Burton T. A conceptual framework for simulation in healthcare education—The need. *Nurse education today*. 2019 May 1;76:21-5.
6. McMahon E, Jimenez FA, Lawrence K, Victor J. Healthcare Simulation Standards of Best Practice™ evaluation of learning and performance. *Clinical Simulation in Nursing*. 2021 Sep 1;58:54-6.
7. Phillips J, Wiesbauer F. The flipped classroom in medical education: A new standard in teaching. *Trends in Anesthesia and Critical Care*. 2022 Feb 1;42:4-8.
8. Moss B. The use of large-group role-play techniques in social work education. *Social Work Education*. 2000 Oct 1;19(5):471-83
9. Lavoie P, Pepin J, Cossette S. Contribution of a reflective debriefing to nursing students' clinical judgment in patient deterioration simulations: A mixed-methods study. *Nurse Education Today*. 2017 Mar 1;50:51-6.
10. Fanning RM, Gaba DM. The role of debriefing in simulation-based learning. *Simulation in healthcare*. 2007 Jul 1;2(2):115-25.