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Effects of a Simulation Education Program on Faculty Members' and Students' Outcomes

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Background: High-fidelity simulation (HFS) is a student-centered innovative teaching and learning strategy that allows nursing students to gain experience without harming patients in a simulated environment that is very similar to clinical settings. Although nursing education is based on both theory and practice, the latter is of considerable importance in nursing education. Nursing students are expected to apply theoretical knowledge gathered during class to practice and transform this into behavior; however, they experience difficulty in doing so. In addition, as a solution to the global nursing shortage, the number of students accepted into nursing programs has increased in many countries, including Turkey; however, the number of educators available to guide students individually in practice has decreased. Therefore, the acquisition of targeted skills prior to graduation has become more difficult for nursing students. As in all types of education, educators are essential for the provision of successful learning experiences and serve as facilitators and evaluators in HFS. The International Nursing Association for Clinical Simulation and Learning published nine standards for simulation, one of which is related to educators. According to these standards, facilitators play an important role in simulation-based learning, should attend courses and receive education concerning simulation continuously, and study with experienced mentors. While simulation laboratories have been designed and space has been provided for simulators, training for educators is often overlooked. With the exception of training in simulator use provided by manikin vendors, no educational programs have been established for nursing educators in Turkey. Therefore, this study was conducted to contribute to the development of knowledge and skills regarding simulation strategies for faculty members using HFS, the effective implementation of this strategy, and the nursing literature. Specifically, the study aimed to examine the effects of a simulation education program (SEP) on outcomes in nursing students and faculty members. The two research questions were as follows: (a) is the nursing SEP effective in improving faculty members' outcomes and (b) is the nursing SEP effective in improving students' outcomes?

Materials and Methods: The aim of this research was to evaluate the outcomes of a simulation education program in faculty members and students as a quasi-experimental, single group, pre-posttest design. Ethical approval for the study was granted by the institution with which the first author was affiliated. The institution also granted permission for the use of classrooms and the simulation laboratory during simulation training. Written informed consent was obtained from all participants after they had received explanations regarding their responsibilities and the aim, method, and duration of the study. Thirty faculty member who had access to a high-fidelity simulator, wanted to use simulation as a teaching strategy was participated in to the simulation education program, and 249 volunteer students were included in the study. Data was collected by using the "Determination of Educational Needs", "Faculty Members' Sociodemographic Characteristics", "Knowledge Test for Faculty Members", "Faculty Members' Self-Assessment", "Students' Sociodemographic Characteristics", "Test of Students' Knowledge Regarding Hypovolemic Shock" and the "Student Satisfaction and Self-Confidence in Learning Scale". Data was collected three times: before and after the simulation education program and after the high-fidelity simulation with the student. The data analysis included descriptive statistics (means, standard deviations, and frequencies), the Mann-Whitney *U* test, Friedman test, and Cochran's *Q* test. Paired-samples *t*-tests were performed to analyze the variance for some variables. The significance level was set at $p < .05$.

Results: Faculty members showed significant improvements in knowledge ($p < .01$) and self-assessment scores. In addition, students' knowledge scores increased following the simulation experience, and they reported high satisfaction and self-confidence levels.

Conclusions: The simulation education program was effective in improving faculty members' and students' outcomes. The study can be considered to have contributed to the correct implementation of HFS with simulators. The findings indicate that SEPs should be implemented periodically by experienced simulation facilitators and practical elements should be included in these programs to increase faculty members' knowledge and skills regarding simulation and to ensure efficient use of the simulators available in laboratories.

Title:

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References:

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Abstract Summary:

Study evaluated the outcomes of a simulation education program in faculty members and students in a quasi-experimental study. The results indicated that faculty members showed significant improvements in knowledge and self-assessment scores. In addition, students' knowledge scores increased following the simulation experience, and they reported high satisfaction and self-confidence levels.

Content Outline:

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Professional Experience: She graduated from Istanbul University, Institute of Health Sciences, Florence Nightingale Faculty of Nursing and she got some courses from Binghamton University State University of New York Decker School of Nursing in 2013 fall semester as a PhD student. She graduated in 2017. She is an instructor at Koç University School of Nursing. She set up the simulation lab and developed simulation teaching strategies for school of nursing. She is the charge of the simulation laboratory since 2011. Also she is working for postgraduate course at Sanerc (Semahat Arsel Nursing Education and Research Center).

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