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Featured Article

Comparing Traditional and Simulation-Based Experiences in Pediatrics with Undergraduate Nursing Students in Turkey

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KEYWORDS

anxiety;
nursing student;
pediatric;
self-efficacy;
simulation

Abstract

Background: Simulation-based nursing training helps students develop skills, such as critical thinking, decision making, and the ability to manage cases.

Method: A two-group, nonrandomized, and quasi-experimental study examined the effect of using classical and simulation-based pediatric nursing training on students' perception of self-efficacy and anxiety levels as measured by the State–Trait Anxiety Scale. Cognitive learning and social learning theories guided our study. Participants were third-year undergraduate nursing students taking a pediatric nursing course from the same instructor during two different academic years in Turkey. The control group included 115 students selected from the spring term of the 2013 to 2014 education year, and the experimental group included 112 students selected from the spring term of the 2014 to 2015 education year.

Results: The simulation-based nursing training group's perception of self-efficacy was significantly higher in pediatric assessment, taking anthropometric measurements and vital signs, some medication administration, and care activities ($p < .05$). This study found no difference between the groups in the state anxiety mean scores of the students. The simulation-based nursing training group's trait anxiety mean scores were significantly lower ($p < .05$).

Conclusion: Simulation-based nursing training enhances pediatric nursing students' perception of self-efficacy about their practice skills while reducing their anxiety level.

Cite this article:

Arslan, F.T., Türkmen, A.S., Çelen, R., Özkan, S., Altıparmak, D., & Şahin, A. (2017, March). **comparing traditional and simulation-based experiences in pediatrics with undergraduate nursing students in turkey.** *Clinical Simulation in Nursing*, 16(C), 62-69. <https://doi.org/10.1016/j.ecns.2017.10.012>.

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This study was presented as a poster in 5th International and 16th National Nursing Congress, on 5th November– 8th November 2017, in Ankara, Turkey.

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Pediatric nursing education provides basic professional knowledge, promotes clinical practice, ensures the quality and safety of pediatric patient care (Broussard, Myers, & Lemoine, 2009; Khalaila, 2014; Shin, Park, & Kim, 2015), and helps students develop skills such as active

Key Points

- The self-efficacy perception levels of students in simulation-based nursing training group were higher than in classical nursing training group for most implementation areas ($p < .05$).
- There was no difference in child identification (ID) check, subcutaneous drug application, and establishing intravenous access/drawing blood ($p > .05$).

learning and critical thinking (Goris, Bilgi, & Korkut Bayındır, 2014; Terzioğlu et al., 2012a, 2012b). Different education styles are used to achieve these goals, including classical (traditional) nursing training. It can be defined as an educational process in which the lecturer is an authority figure and students are mostly passive listeners in the classroom. Then, nursing skills are practiced in clinical areas (Uysal Toraman, Bayık Temel, Kalkım, & Balyacı Erkin, 2013). This training might increase knowledge, but retention of knowledge and application to patient care remains uncertain. In addition,

increased student numbers, clinical area needs, shortage of pediatric nursing instructors, concerns about pediatric patient safety, and the complex health care environment prompted a re-evaluation of classical nursing training (Broussard et al., 2009). Studies found that classical nursing training could result in insufficient clinical skills, fear of using nursing knowledge, and a lack of critical thinking and problem-solving skills (Ozbiçakcı, Gezer, & Bilik, 2015; Uysal Toraman et al., 2013). Therefore, simulation-based nursing training is seen as an important component of contemporary nursing education (Lubbers & Rossman, 2017).

Task trainers, virtually created patients, high-fidelity human simulators, and standardized patients are used in simulation-based nursing training (Oh, Jeon, & Koh, 2015). The literature indicates effective learning outcomes from simulation-based nursing training when created using appropriate standards, methods, training, and outcome measurements. For example, simulations offer experience-based learning to develop students' self-confidence, self-efficacy, and clinical decision-making skills (Broussard et al., 2009; Foronda et al., 2013; Lubbers & Rossman, 2016). Moreover, this method helps students provide proper nursing care safely and efficiently without fear of their professional skills and knowledge (Goris et al., 2014). Working with simulation manikins accelerates the learning process (Shepherd, McCunnis, Brown, & Hair, 2010), reduces students' preclinical anxiety, and develops students'

communication skills (Gore, Hunt, Parker, & Raines, 2011; Goris et al., 2014; Karadag, Caliskan, & Iseri, 2015). Systematic reviews suggest that simulation-based methods are superior to classical ones in nursing training (Sendir & Dogan, 2015).

In the literature, there are various studies about simulation-based training in nursing and pediatric nursing. They evaluate simulation-based nursing training but mostly focus on communication, nursing competence, learning motivation, problem solving, designing curriculum, and opinions on the simulations (Erickson Megel et al., 2012; Hollenbach, 2016; Karadag et al., 2015; Oh et al., 2015; Ozkal & Cayır, 2016; Sendir & Dogan, 2015; Terzioğlu et al., 2012a, 2012b). In addition, there are studies about simulation-based nursing training effects on students' perception of self-efficacy and anxiety levels in pediatric nursing courses.

Self-efficacy is one of the components of Bandura's social cognitive theory and is associated with the interaction between behavioral, cognitive, and social factors and the learning process. It was described as being "concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982). Multiple studies show that self-efficacy is a substantial contributor to student learning and accomplishment that evolves depending on individual experiences (Bartimote-Aufflick, Bridgeman, Walker, Sharma, & Smith, 2016; Zimmerman, 2000).

We found no study about perception of self-efficacy and anxiety levels in pediatric nursing students in Turkey. This article aims to determine the effect of classical and simulation-based pediatric nursing training on students' perception of self-efficacy and anxiety levels in clinical practice in Turkey. Cognitive learning and social learning theories guided the study.

Study Hypotheses

- Students' perception of self-efficacy in pediatric practice skills differs between students who received simulation-based nursing training and classical nursing training.
- Students' anxiety levels differ between students who received simulation-based nursing training and classical nursing training.

Methods

Participants

This two-group, nonrandomized, and quasi-experimental study was conducted with students who attended the pediatric nursing course in one of the health sciences

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