Implementing Hybrid Simulation: A Novel Approach Combining Standardized Patients and High-Fidelity Mannequins in Pediatric Clinical Education

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Introduction

Background and Significance

- Pediatric nursing care is specialized and requires nursing students to learn specific skills related to the pediatric population.
- The development of a pediatric asthma simulation allowed students to participate in a standardized simulation with a standardized patient for the first time in their BSN experience at California State University, Bakersfield (CSUB).
- The development of new simulations at CSUB aligns with competency-based education.

Problem

- Prior to faculty completing the INACSL courses, 2nd year BSN students did not utilize standardized simulation in pediatric courses.
- Prior to the simulation, a needs assessment identified a gap of knowledge for the undergraduate students regarding appropriate pediatric vital signs and family communication specific to the pediatric population.

Purpose

The purpose of this study was to expose undergraduate pediatric nursing students to standardized simulation while addressing gaps in learning identified by pediatric clinical faculty.

Subjects

Setting, Recruitment, & Sample

The simulation was conducted in a nursing simulation lab. A total of 39 students who were within their 2nd year of the BSN program and in the pediatric rotation participated in the simulation. The simulation was 15 minutes, followed by a 30-minute debrief session.

Methods

Design

Faculty created a pediatric asthma simulation aimed at closing the learning gaps for pediatric students while adhering to INACSL best practice standards.

Procedure

- Students prework included lectures on physical assessment and asthma in pediatric populations. Prework also included a video on nebulizer techniques.
- During the simulation, the undergraduate students navigated care of the high-fidelity mannequin (patient) and and standardized patient (anxious mother).
- The debrief reflected on challenges associated with care of pediatric patients and their families

Methods

Data was collected using a post-simulation survey with areas addressing:

- Rating pediatric asthma simulation experience
- Discussion of “aha” moment and personal improvement for future simulations and pediatric patient care

Results

- All students acknowledged that the use of an SP and a high-fidelity mannequin greatly enhanced their learning in the pediatric course
- All students unanimously agreed the simulation was high in realism and were highly satisfied with the simulation
- Students acknowledged the learning gap of pediatric vital signs and the benefit of practicing family communication techniques within the simulation
- The written survey revealed high satisfaction with the simulation and key take aways for each student participating

Discussions

Implications

Utilizing high-fidelity mannequins and standardized patients with INACSL best practice standards greatly improved student experiences and knowledge in pediatric clinical education. Development of the pediatric asthma simulation enhanced the learning experience for undergraduate nursing students and will be implemented into cohorts each semester.

Limitations

- Evaluation tool was not standardized.
- Larger clinical groups meant more than desired observers within the simulation.

Discussion

The introduction and use of high-fidelity mannequins and standardized patients within the pediatric clinical education courses greatly enhanced undergraduate learning. The development of a new pediatric asthma simulation using INACSL best practice standards addressed learning gaps while practicing within the safe learning environment of simulation. In the upcoming school year, new faculty will be trained on running the simulation with the goal to have all BSN students within the pediatric courses participate in the simulation.

References

Disclosures

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