Investigation of nursing students’ clinical decision making using high fidelity simulation

Naim Abdulmohdi, PhD candidate

Abstract

The shortage of clinical placement and the emphasis on quality and safety initiatives have driven the increasing use of simulation in nursing education. Effective decision making is important in nursing to ensure that nurses’ decisions positively affect patient care and patient outcome. The education of nursing graduates needs to prepare them for the demands of the acute care units, particularly in relation to the development of cognitive skills such as clinical decision-making. High Fidelity Simulation (HFS) provides healthcare educators with a tool and opportunities to refine a learner’s decision-making skills. Exploration of the cognitive processes of nursing students can help in understanding how they make decisions in simulation settings. The examination of a HFS session effects on nursing students’ decision-making scores may lead to improvements in educational and simulation design. The study used a mixed methods multiphase design to explore third-year nursing students’ clinical decision making (CDM) process using HFS and to examine the impact of the simulation experience on their clinical decision-making measures.

Methods used included a think aloud protocol to determine the type of decision making process during the simulation session, observation to collect data about non-verbalised decisions and the Health Science Reasoning Test (HSRT) as a valid test to assess CDM score. Phase two also used semi-structured follow up interview to assess the transferability of learning to students’ clinical practice. The study included 23 students. Nursing students used both type one and type two CDM but type 2 was the dominant type. For type two, they used both forward and backward reasoning and the initial analysis of phase 1 found that forward reasoning was used more frequently but less effectively. Students spent 49.7% of their cognitive processing in gathering and reviewing patient data, 10.6% on analysis, 6% on inference, 3% on diagnosing the problem, 1.1% for both using pattern recognition and evaluating the hypothesis and finally 28.6% on setting goals and taking actions. There was an improvement in the overall HSRT score after the simulation experience with significant difference in the HSRT mean score (p=0.01). The subcategories of HSRT showed significant improvement in the deduction (p=0.012) and analysis (p=0.02) scores but did not show significant improvement in induction (p=0.3), inference (p=0.8) and evaluation (p=0.5) categories. The results of this study indicate that high fidelity simulation may improve nursing students’ decision-making skills.

Abdulmohdi, N. 2017. Investigation of nursing students’ clinical decision-making using high fidelity simulation. *BMJ Simulation and Technology Enhanced Learning*;**3:** A72.

<http://dx.doi.org/10.1136/bmjstel-2017-aspihconf.147>