Abstract

Aim: The purpose of this project is to compare the use of low-fidelity simulation with high-fidelity simulation during the Neonatal Resuscitation Program and to examine if the use of different types of simulation will have an impact on nursing confidence and nursing competence during neonatal resuscitation scenarios. *Methodology:* The project design was a non-blinded randomized control trial with a control group that used low-fidelity simulation and an experimental group that used high-fidelity simulation during the NRP training course. Registered nurses that were in both the control group and the experimental group completed a demographic questionnaire about their experience in nursing, neonatal resuscitation, and simulation. Each of the registered nurses completed a self-report questionnaire on their confidence level using NRP resuscitation skills after using either the low-fidelity mannequin or high-fidelity simulator. Additionally, each of the nurses were observed during a mock code scenario to evaluate their competence in completing resuscitation skills on the low-fidelity mannequin or the high-fidelity simulator. *Results*: The results of this study demonstrated that the registered nurses who used the high-fidelity simulator self-reported a higher confidence rating ($p = 0.0156$) and scored higher on their competency evaluation ($p < 0.001$) during the mock codes. *Conclusion:* This study has shown that the confidence and competence of registered nurses can be positively impacted during the NRP training course. Therefore the use of high-fidelity simulation in the NRP training course would be an effective learning tool to promote nursing confidence and nursing competence, which will ultimately affect patient outcomes.

Keywords: Simulation, high-fidelity simulation, confidence, competence, neonatal resuscitation, NRP