

Evaluate the Effectiveness of Scenario-based Learning on Knowledge and Skills Regarding Breast Complications during Puerperium among Nursing Students: A Pilot Study

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ABSTRACT

Introduction: The puerperium is a vital transitional period characterised by significant physiological changes, during which women are particularly susceptible to breast feeding complications. The complications can hinder effective breastfeeding and negatively impact maternal and neonatal outcomes. Nursing students, as future healthcare providers, must be adequately prepared to identify and manage these conditions. In order to close the gap between academic understanding and real-world application, scenario-based learning is one of the methods that uses simulated or real-world clinical scenarios to improve students' knowledge, critical thinking and clinical skills.

Aim: To evaluate the effectiveness of scenario-based learning on knowledge and skills regarding breast complications during puerperium among nursing students.

Materials and Methods: A pilot quasi-experimental study with a non-equivalent control group pre-test-post-test design was conducted among nursing students. The sample size for the study was calculated using Cohen's d formula, with an estimated effect size of 0.60 and a statistical power of 0.80. Based on these calculations, the required sample size for the final study was determined to be 88 students, with 44 students in each group. A total of 19 students were recruited through convenience sampling for the pilot study. Students were divided into experimental and comparison groups. Data were collected using a structured knowledge questionnaire and an observational checklist. First pre-test (day 1) and post-test (day 7) of comparison was completed by using structured knowledge questionnaire and structured observational checklists. Then pre-test

of experimental group was done (day 1), experimental group received scenario-based learning on day 2, day 3 and day 4. Scenario-based learning is the use of pre-designed case-based scenarios to teach concepts regarding identification and management of breast-feeding complications, during the case scenarios discussion, structured questions and trigger points were introduced to stimulate further discussion. At day 7 post-test of experimental group were completed by using a structured knowledge questionnaire and an observational checklist. Data were analysed using descriptive and inferential statistics, including independent t-test, paired t-test and Pearson's correlation coefficient.

Results: The findings of the pilot study revealed that there was no significant difference in pre-test knowledge and skills scores between the experimental and comparison groups ($p>0.05$). However, a significant improvement in post-test knowledge and skills scores was observed in the experimental group as compared to the comparison group ($p<0.05$). Paired t-test results also showed significant improvement between pre-test and post-test scores within the experimental group. Further findings reported that, there was positive correlation was between knowledge and skills score of the nursing Students.

Conclusion: The study concluded that scenario-based learning is an effective teaching strategy for improving the knowledge and skills of nursing Students regarding breast complications during the puerperium. Furthermore, the findings of the pilot study confirmed the feasibility of conducting the main study.

Keywords: Breast complications, Knowledge, Nursing students, Puerperium, Scenario-based learning, Skills.

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