

Effectiveness of Neonatal Resuscitation Programme (NRP) Training on Knowledge among BSc Nursing Internship Students

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ABSTRACT

Introduction: Neonatal resuscitation is a critical lifesaving intervention for newborns who do not initiate spontaneous breathing at birth. About 10% of newborns require assistance to establish effective respiration, and birth asphyxia remains a leading cause of neonatal mortality in India. Competent knowledge and skills in neonatal resuscitation among nursing students are essential for timely, effective emergency care. Simulation-based Neonatal Resuscitation Programme (NRP) training aims to improve knowledge, confidence, and psychomotor skills.

Aim: This study assessed baseline knowledge of neonatal resuscitation among BSc Nursing fourth-year students, evaluated the effectiveness of a simulation-based NRP training intervention, and examined associations between selected demographic variables and post-training knowledge scores.

Materials and Methods: A quantitative, one-group pre-test/post-test design was conducted in the Simulation Lab, MMIMS&R Hospital. The population comprised BSc Nursing fourth-year interns; 130 students were enrolled using total convenience sampling. Inclusion criteria were interns available during data collection and willing to participate; exclusions were those with prior advanced neonatal resuscitation certification or absent during the intervention. Data were collected using a structured knowledge questionnaire administered before and after the NRP training. The NRP intervention comprised structured teaching sessions,

demonstrations of neonatal resuscitation procedures, hands-on practice with neonatal manikins, and simulation-based learning activities. Descriptive statistics and inferential tests (paired t-test, chi-square) were used to analyse the data.

Results: The findings revealed that before the NRP training, the majority of students had inadequate to moderately adequate knowledge regarding neonatal resuscitation. After the training programme, a marked improvement in post-test knowledge scores was observed, with most students attaining adequate knowledge levels. The paired t-test demonstrated a highly significant difference between pre-test and post-test scores ($p < 0.001$), indicating the effectiveness of the NRP training programme. Significant associations were found between post-test knowledge scores and previous exposure to NRP training ($p = 0.008$) as well as attendance at workshops/seminars ($p = 0.02$).

Conclusion: The study concluded that the NRP training was highly effective in improving the knowledge and competency of BSc Nursing internship students regarding neonatal resuscitation. Regular simulation-based NRP training programmes should be integrated into nursing education to enhance preparedness in managing neonatal emergencies and improving neonatal outcomes.

Keywords: Competency, Neonatal emergencies, Nursing students, Simulation training.

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