

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Skill regarding Cardiopulmonary Resuscitation among the Staff Nurses Working in Pediatric Department Lucknow

Sakshi Srivastava

Professor, Kailash Institute of Nursing and Paramedical Sciences

Abstract: Neonatal resuscitation is a crucial intervention to address respiratory failure and birth asphyxia in newborns. Despite significant advances in medical protocols, neonatal asphyxia remains a leading cause of neonatal morbidity and mortality worldwide. Effective resuscitation can significantly reduce these adverse outcomes, yet challenges persist, particularly in low - resource settings. Health team members should be equipped with the skills of cardio pulmonary resuscitation not only to practice in the hospital setting, but act as a good Samaritan where ever required. Preexperimental one group pretest post test research study was done among 30 staff nurses' purpose was to improve nurses' knowledge and skill regarding CPR. Data was collected using structured questionnaire and checklist. Tool was prepared by researcher. After 7 days of planned teaching programme post test was conducted. Result reveal that planned teaching programme was effective in improving knowledge and skill of nurses regarding CPR.

Keywords: Neonatal Resuscitation Program (NRP), Apgar Score, Airway Management, Positive Pressure Ventilation (PPV), Chest Compressions, Endotracheal Intubation, Oxygen Saturation (SpO₂), Thermoregulation, Meconium Aspiration

1. Introduction

It is not the strongest of the species that survives, nor the most intelligent. It is the one that is most adaptable to change”

Charles Darwin

Neonatal resuscitation is a critical intervention performed to support newborns who experience difficulty initiating and maintaining adequate respiration at birth. This procedure is essential in reducing neonatal morbidity and mortality. The need for effective neonatal resuscitation is underscored by the high incidence of birth asphyxia, which remains a significant contributor to neonatal deaths worldwide. According to the World Health Organization, approximately 10% of newborns require some form of assistance to begin breathing at birth, with 1% requiring extensive resuscitative efforts.

The current standard of care for neonatal resuscitation is guided by protocols established by organizations such as the American Academy of Pediatrics (AAP) and the International Liaison Committee on Resuscitation (ILCOR). These guidelines emphasize the importance of the "Golden Minute," the first 60 seconds after birth, during which effective intervention can drastically improve outcomes. The Neonatal Resuscitation Program (NRP), developed by the AAP, provides a structured approach to resuscitation, encompassing initial steps such as providing warmth, clearing the airway, and stimulating breathing, as well as more advanced procedures like positive pressure ventilation, chest compressions, and medication administration.

2. Review of Literature

According to the World Health Organization [W. H. O] Cardio vascular disease such as heart disease and stroke are the leading causes of death globally killing more than 17 million in 2005. Each year 3.8 million men and 3.4 million women worldwide die from coronary heart disease. Since 1990 more people have died from coronary heart disease than from any other causes. With the increase in the sedentary life style and changes in the diet pattern are increasing the number of cardiac patients' day by day.

According to a survey in every 33 second a person dies in India due to heart attack. India witnesses 30 million of heart cases in every year. With the current numbers India will soon become the nation to have highest number of heart disease cases. Indian heart association says that out of all heart attack in India, 50% take place in people below 50 year of age and 25% take place in people under 40 year of age.

J. M. King et. al (2011) conducted a study to compare the effectiveness of static simulation to high - fidelity simulation when teaching advanced cardiac life support guidelines. Using a quasi - experimental design, 49 BSN students were randomly assigned to 2 groups of either static or high - fidelity simulation. There were no significant differences between the static and high - fidelity simulation groups on the written examination. The high - fidelity simulation group outperformed the static simulation group on mega code performance.

Patricia Josipovic, Ian Mc Grath, Michael Webb (2009) A study was conducted on 'Basic Life Support knowledge of undergraduate nursing students and chiropractic students' by

Volume 13 Issue 8, August 2024

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

www.ijsr.net

the aim of this study was to examine retention of cardiopulmonary resuscitation and basic life - support (CPR/BLS) knowledge of third year nursing and fourth year chiropractic students following instruction and assessment of CPR/BLS skills and knowledge as part of their undergraduate degree program. It was a nonexperimental exploratory survey to determine perceived ability and knowledge of CPR/BLS following completion of CPR/BLS instruction.

Research Statement

Objectives:

- To assess the existing knowledge and skill regarding cardiopulmonary resuscitation among the staff nurses working in pediatric ward
- To determine the effectiveness of planned teaching Programme on knowledge and skill regarding Cardiopulmonary resuscitation.
- To compare the pre - test and post - test score.

3. Research Methodology

In this study

Research Approach - Quantitative Approach

Design - Pre - Experimental Research Design

Setting - Nishat hospital, Lucknow

Population – Staff Nurses

Target Population - Staff Nurses Working in Hospital

Accessible Population - Staff Nurses Working in Nishat Hospital

Sample Size - 30

Sampling Technique - Convenient Sampling

Tool - Structured Questionnaire, Overt Observation Checklist

Development and Description of the Tools:

It included structured questionnaire and observation checklist to assess the knowledge and skill regarding CPR among the

staff nurses working at paediatric ward carrying 1 mark each for correct answer and 0 for incorrect one.

4. Analysis and Interpretation

Section I:

Table I: Frequency and percentage distribution of demographic data

Samples n=30

S. no.	Demographic Variable	Components	F	%
1	Age	21 - 25	11	36.7
		26 - 30	15	50
		31 - 35	2	6.7
		More than 35 years	2	6.6
2	Gender	Male	9	30
		Female	21	70
3	Area of working	Emergency and triage	11	36.7
		General ward	14	46.7
		Critical ward	5	16.7
4	Working Experience	Less than 1 year	5	16.7
		2 - 4 years	10	33.3
		5 - 7 years	10	33.3
		More than 7 years	5	16.7
5	Previous experience on CPR	Yes	16	53.3
		No	14	46.7
6	Certified training for CPR	Yes	8	26.7
		No	22	73.3

Data presented in the table illustrates sociodemographic characteristics of staff nurses majority of the staff nurses (50%) were among 26 - 30 years age group. Most (70%) of staff nurses were female. Mostly (46.7%) of staff nurses were working in general wards. Most (33.3%) had 21 - 4 years of work experience. Most (73.3%) staff nurses had not taken any certified training for CPR. Most (53.3%) staff nurses had an experience on CPR.

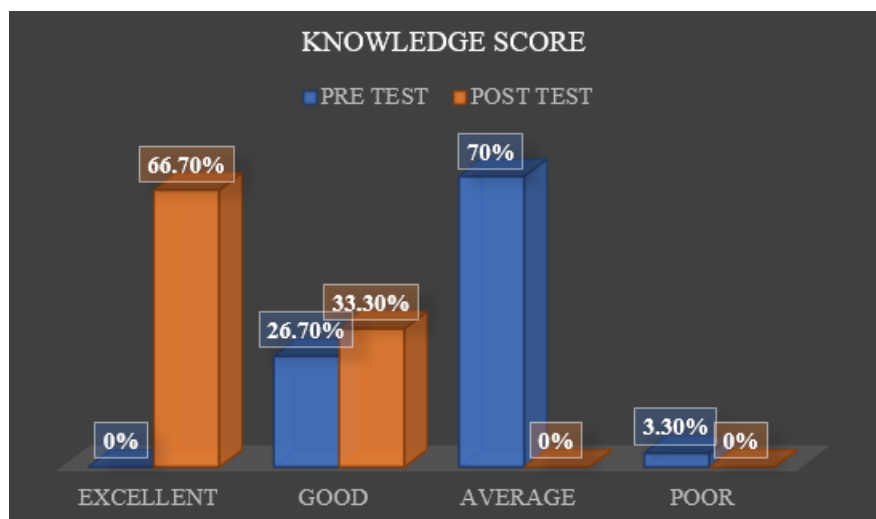


Figure I: Chart Shows Pre - Test and Post - Test Knowledge Score

Fig 1 depicts that majority of staff nurses having average knowledge (70%) before administering planned teaching programme. After administering planned teaching programme majority of staff nurses having excellent knowledge (66.7%) regarding CPR.

TABLE 2

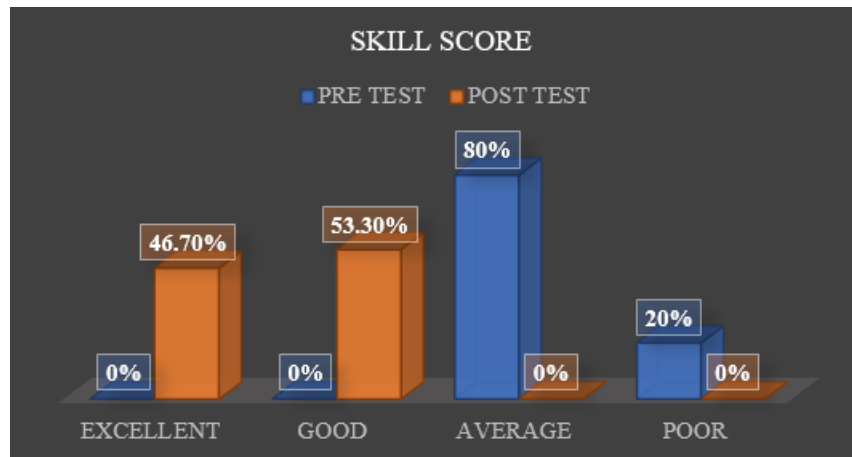


Figure II: Chart showing the Comparison of Pre - Test and Post - Test Score of Skill

Fig 2 depicts that majority of staff nurses having average skill (80%) before administering planned teaching programme. After administering planned teaching programme majority of staff nurses working in pediatric ward having excellent skill (46.7%) regarding CPR.

TABLE 3

5. Discussion

This study result illustrated that the pre test knowledge mean score was 09.13 ± 2.3 and post test knowledge mean score 15.97 ± 1.245 which was found to be highly effective in increasing level of knowledge of staff nurses regarding CPR and that the pre - test skill mean score was 6.37 ± 1.033 and post - test skill mean score 15.57 ± 1.431 which was found to be highly effective in increasing level of skill of staff nurses regarding CPR

6. Conclusion

It can be recommended that planned teaching programme on knowledge and skill regarding cardiopulmonary resuscitation can be introduced for improving and upgrading knowledge and skill regarding cardiopulmonary resuscitation. In future, various measures should be taken to improve nurses' knowledge and skill regarding cardiopulmonary resuscitation working in paediatric ward

References

- [1] Ghai. o. p Ghai's Essential Pediatrics 6th Edition (revised) B. S. Publishers Distributors NEW DELHI; 2005 page no.150.
- [2] Sharma Rimple, Essentials of Pediatrics Nursing 1st Edition Published by Jaypee Brothers, page no.171.
- [3] Children's Hospital Central California. The children's health encyclopedia sponsored by the Dyer family foundation April 2009; Available from: URL.
- [4] Robin L Bissinger, Bryan L Ohning. Neonatal resuscitation. Medical University of South Carolina Sep.21 2006.
- [5] Jayasree Mondkar, Ranjan Kumar Pejaver. NNF Manual of neonatal care. 1st ed. Bangalore: Prism Books Pvt. Ltd; 2004. p.517.
- [6] Deorari AK, Paul VK, Singh M, Vidyasagar D. The National Movement of Neonatal Resuscitation in India. J Trop Podiatry.2000 Oct; 46 (5); 315 - 7.
- [7] World Health Organization Basic Newborn Resuscitation: A practical guide 2006.
- [8] Ryan CA, Clark LM, Malone A, Ahmed S. The effect of a structured neonatal resuscitation program on delivery room practices. Neonatal Netw.1999 Feb; 18 (1): 25 - 30.
- [9] Perveen Mufti, Faridon Setna, Kausar Nazir. Early neonatal mortality: Effects of interventions on survival of low birth babies weighing 1000 - 2000g.
- [10] Prof Sudha Salhan, MBBS (Hons). Department of Obstetrics and Gynecology. VMMC and Safdarjung Hospital New Delhi. Jaypee Brothers Medical Publishers (P) Ltd. New Delhi. p.517.
- [11] Benazeera, Shilpa G. S, Umarani J. Assessment of Student's knowledge on neonatal resuscitation. Journal of Biomedical and Pharmaceutical Research.2014; vol 3 No 2.
- [12] Textbook of Neonatal Resuscitation (NRP) by American Academy of Pediatrics and American Heart Association. This is the primary reference for the Neonatal Resuscitation Program (NRP).
- [13] Neonatal Resuscitation: A Practical Guide by Dr. Mike T. J. de Boode and Dr. Henry L. Halliday.
- [14] Merenstein & Gardner's Handbook of Neonatal Intensive Care by Sandra Lee Gardner, Brian S. Carter, and Mary I. Enzman - Hines.
- [15] American Academy of Pediatrics and American Heart Association "Neonatal Resuscitation Program (NRP) Guidelines. " Available through AAP and AHA official websites.
- [16] International Liaison Committee on Resuscitation (ILCOR) "Consensus on Science with Treatment Recommendations (CoSTR) for Neonatal Resuscitation. "

Author Profile

Sakshi Srivastava, Professor, Kailash Institute of Nursing and Paramedical Sciences