

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

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**Abstract:** Sudden cardiac death is a major clinical problem, causing 300,000 to 400,000 deaths annually and 63% of all cardiac deaths as per 2007-2008. Despite of the overall decrease in cardiovascular mortality, the proportion of cardiovascular death from sudden cardiac death has remained constant. Investigator believes that by broadening training and encouraging the public and the health care professionals specially the nurses to perform cardio pulmonary resuscitation can save thousands of lives. 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. Pre-experimental one group pre-test 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 reveals that planned teaching programme was effective in improving knowledge and skill of nurses regarding CPR.

**Keywords:** Planned Teaching Programme, Teaching, Knowledge, Skill, Nurse

## 1. Introduction

*“Life you save may be your loved once” Learn CPR for a loved one”*

- David Foster.

Cardiopulmonary resuscitation involves physical interventions to create artificial circulation through rhythmic pressing on the patient's chest to manually pump blood through the heart, called chest compressions, and usually also involves the rescuer exhaling into the patient (or using a device to simulate this) to inflate the lungs and pass oxygen in to the blood, called artificial respiration. Cardiopulmonary resuscitation is unlikely to restart the heart; its main purpose is to maintain a flow of oxygenated blood to the brain and the heart, thereby delaying tissue death and extending the brief window of opportunity for a successful resuscitation without permanent brain damage.

Heart disease is the world's largest killer, claiming 17.5 million lives every year. About every 29 seconds, an Indian dies of heart problem. As many as 20,000 new heart patients develop every day. In India 9 core Indian suffer from heart disease and 30% more are at high risk. Cardiovascular diseases are now more prevalent in India and China than all economically developing countries in the world combined. Cardiovascular disease in India quadrupled in the last 40 years. WHO estimates that by 2020 close to 60% of cardiac patients worldwide will be Indian. Basic life support is commonly taught to the general public and the new generation as these may be the only ones present in the crucial few minutes before emergency personnel are available.

## 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 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 non experimental exploratory survey to determine perceived ability and knowledge of CPR/BLS following completion of CPR/BLS instruction.

### 3. Research Statement

A study to assess the effectiveness of planned teaching programme on knowledge and skill regarding cardiopulmonary resuscitation among the staff nurses working in Era Hospital Lucknow.

### 4. Objectives

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

### 5. Research Methodology

#### In this study

|                       |   |
|-----------------------|---|
| Research Approach     | Quantitative Approach                                 |
| Design                | Pre-Experimental Research Design                      |
| Setting               | Era Hospital, Lucknow                                 |
| Population            | Staff Nurses  |
| Target Population     | Staff Nurses Working in Hospital                      |
| Assessable Population | Staff Nurses Working in Era Hospital                  |
| Sample size           | 30  |
| Sample 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 carrying 1 mark each for correct answer and 0 for incorrect one.

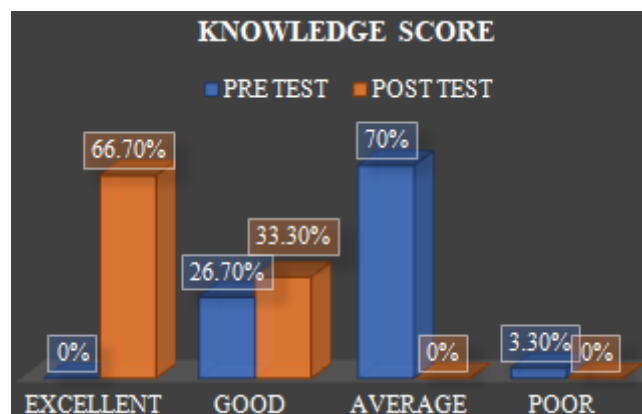
#### Analysis And Interpretation:

**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.

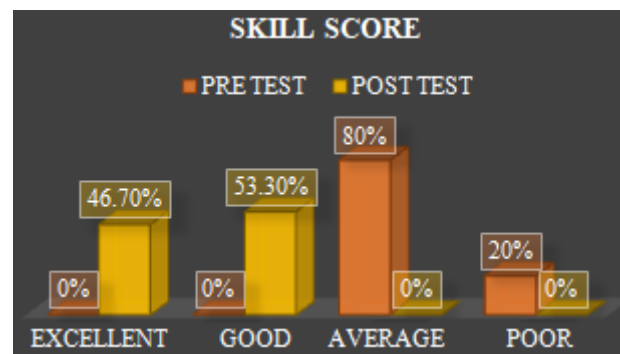


**Figure I:** Chart Shows Pre-Test and Post-Test Knowledge Score

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:** Effectiveness of planned teaching programme on knowledge regarding cardiopulmonary resuscitation among the staff nurses

| Knowledge Score | Range score | Mean ± SD     | Mean Difference | df | t score | P score |
|-----------------|-------------|---------------|-----------------|----|---------|---------|
| Pre-test score  | 05-13       | 09.13 ± 2.300 | 6.833           | 29 | 14.106  | 3.396   |
| Post-test score | 14-18       | 15.97 ± 1.245 |                 |    |         |         |



**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 having excellent skill (46.7%) regarding CPR.

**Table 3:** Effectiveness of planned teaching programme on skill regarding cardiopulmonary resuscitation among the staff nurses

| Skill Score     | Range score | Mean $\pm$ SD     | Mean Difference | df | t score | P score |
|-----------------|-------------|-------------------|-----------------|----|---------|---------|
| Pre-test score  | 05-08       | 6.37 $\pm$ 1.033  | 9.2             | 29 | 27.581  | 27.581  |
| Post-test score | 14-18       | 15.57 $\pm$ 1.431 |                 |    |         |         |

## 6. Discussion

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

## 7. 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.

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