

**“A STUDY TO ASSESS THE EFFECTIVENESS OFSTRUCTURED  
TEACHING PROGRAMME ONKNOWLEDGE REGARDING  
CARDIOPULMONARY RESUSCITATION AMONG B.SC  
NURSING 3<sup>rd</sup> YEAR STUDENTS OF GOVT. COLLEGE  
OF NURSING, KOTA, RAJASTHAN.”**

**By**

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## CHAPTER-I

### INTRODUCTION

*“Intelligence Without Ambition is a Bird Without Wings”*

*– Solonar*

Each year, a number of persons suffer with an accident or illness, severe enough to stop their breathing and leads to respiratory arrest. In a small number of these cases, it will even stop their heart beating and leads to cardiac arrest. Sudden cardiac arrest is a major cause of death in developed countries. Sudden death occurs when heartbeat and breathing stops.

The other common causes of sudden death include heart attack, electrical shock, drowning, choking, suffocation, trauma, drug reactions, and allergic reactions. The best chance of ensuring their survival is to give them emergency treatment known as cardiopulmonary resuscitation (CPR).<sup>3</sup>

CPR can consist of many different things, but the initial, vital part is Basic Life Support (BLS). Cardio means “of the heart” and pulmonary means “of the lungs”. Resuscitation is a medical word that means “to revive” or bring back to life. Sometimes cardio pulmonary resuscitation (CPR) can help a person who has stopped breathing, and whose heart may have stopped beating, to stay alive. Despite advances in cardiopulmonary resuscitation (CPR) methods, including the introduction of the automatic electrical defibrillator (AED) and therapeutic hypothermia, only about 10 % of adult out-of-hospital cardiac arrest (OHCA) victims survive to hospital discharge, and the majority of survivors have moderate to severe cognitive deficits 3 months after resuscitation.<sup>4</sup>

### **NEED FOR THE STUDY**

Several authors described the problem of poor performance in CPR, even when provided by medical professionals. Numerous investigations have reported the problem of poor skills retention after various CPR courses. Studies reporting the need for improvement of resuscitation techniques led to the recent changes in BLS and ALS algorithms.<sup>6</sup>

Dangers of Sudden Cardiac Arrests (SCA) that can lead to death of an individual within a few minutes. As per WHO census statistics mortality due to cardiac arrest approximately 4280 out of every one lakh people die every year from SCA in India alone. After a cardiac arrest there are four to six minutes before brain death and death occur. Chances of survival reduce by 7-10 percent with every passing minute. It is a silent epidemic. Cardiac arrest is reversible if the victim is administered prompt and appropriate emergency care. This generally involves administration of cardiopulmonary resuscitation (CPR), shock treatment to the chest to reset the heart's rhythm (defibrillation) and advanced life support.<sup>7</sup>

In India the annual incidence of sudden cardiac death accounts for 0.55 per 1000 population. The survival rate of a sudden cardiac arrest is almost less than 1%. Sudden cardiac death constitutes 40-45% of cardiovascular deaths and out of this almost 80% are due to heart arrhythmia disturbances or arrhythmia.

Maximum arrests were because of cardio respiratory arrests. Immediate survivors were 5 out of 6 (83.3%), out of 5 patients only 2 were alive at the end of 24 h (40%), and none of them survived to be discharged. Overall survival to hospital discharge was 3.8% (1.7-13%) of a 3,220 pooled patient group. Analysis of their functional recovery found good outcome in 86.7% (44-89%), moderate impairment in 10.2% (8.5-44%) and severe impairment in 3.1% (2-36%) of survivors from a cohort of 1679 pooled patients. Although, survival from pre-hospital arrest is diminished in geriatric groups, those who survive often have good functional recovery.<sup>8</sup>

## **STATEMENT OF THE PROBLEM:**

“A study to assess the effectiveness of structured teaching programme on knowledge regarding cardio-pulmonary resuscitation among B.Sc. Nursing 3<sup>rd</sup> year students of Govt. College of nursing Kota Raj.”

## **OBJECTIVES OF THE STUDY:**

1. To assess the pre-test knowledge on regarding cardiopulmonary resuscitation among B.Sc. Nursing 3<sup>rd</sup> year students.
2. To assess the post-test knowledge on regarding cardiopulmonary resuscitation among B.Sc. Nursing 3<sup>rd</sup> year students.
3. To assess the effectiveness of Structured Teaching programme on regarding cardiopulmonary resuscitation among B.Sc. Nursing 3<sup>rd</sup> year students.
4. To find out the association between knowledge scores with the selected demographical variables among B.Sc. Nursing 3<sup>rd</sup> year students.

## **RESEARCH DESIGN**

Research design refers to the researchers overall plan for obtaining answer to the research questions and it spells out the strategies that the research depots to develop information that is adequate, accurate objective and interpretable.

(Polit and Hungler, 2002)

It is the overall plan for obtaining answer to the questions being studied and for handling some of the difficulties encountered during the research process.

The term 'research design' refers to the plan or organization of a scientific investigation. Research design helps the researcher in selection of subjects, manipulation of experimental variables, control of extraneous variables, procedure of data collection and the type of statistical analysis to be used to interpret the data. In the present study, quasi experimental one group pre-test post-test design was selected for the study. The primary objectives of the study were to find the effectiveness of Structured Teaching Programme.

The design chosen for the study is presented in the table as:

**Table 1: One group pre-test & post-test design**

GROUP	PRETEST	INTERVENTION	POSTTEST
B.Sc. nursing 3 <sup>rd</sup> year students	O <sub>1</sub>	X	O <sub>2</sub>

$$O_2 - O_1 = E$$

**Key:**

O<sub>1</sub> = Assessment of knowledge by pre-test.

X = Structured Teaching Programme on Cardio Pulmonary Resuscitation.

O<sub>2</sub> = Assessment of knowledge by post-test.

E= Effectiveness of Structured Teaching Programme.

**POPULATION**

The term population refers to the aggregate or totality of all objects, subjects, or members that confirm to a set of specification.

The requirement of defining a population for a research project arises from the need to specify the group to which the result of the study can be applied.

In the present study the population consists of B.Sc. nursing 3<sup>rd</sup> year students of Govt. college of nursing, Kota Rajasthan

**SAMPLE AND SAMPLE SIZE**

Sample consists of a subset of a population selected in a research study. The samples selected for the present study comprises of 60 B.Sc. nursing 3<sup>rd</sup> year students of Govt. college of nursing, Kota Rajasthan

## **SAMPLING TECHNIQUE**

Sampling is the process of selecting a group of people, event, behavior or other elements with which to conduct a study.

Sample is used in research when it is not feasible to study the whole population from which it is drawn. The process of sampling makes it possible to accept a generalization to the intended population based on careful observation of variables, within a relatively small proportion of population. In the present study purposive sampling technique was taken to select 60 B.Sc. nursing 3<sup>rd</sup> year students of Govt. college of nursing, Kota Rajasthan.

## **DESCRIPTION OF THE TOOL:**

The self-administered questionnaire consists of two sections:

**Section I:** Consist of selected socio-demographic variables like age, gender, residential area, previous knowledge Cardio pulmonary resuscitation, sources of information.

This section consists of 5 items.

**Section II:** Consist of structured knowledge questionnaire regarding Cardio Pulmonary resuscitation. This section consists of 40 items on selected aspects. The selected aspects are:

- Knowledge regarding anatomy and physiology of heart (11)
- Knowledge regarding Cardiac arrest (5)
- Knowledge regarding CPR (24)

Each items had only one correct response and each correct response was scored one. The total possible score of the Structured Knowledge Questionnaire was 40. The same questionnaire was used for the assessment of knowledge level in pre and post-test.

## **BACKGROUND OF THE STUDY:**

The heart is the center of cardiovascular system and it is vitally responsible for just about everything that gives body life ranging from the transportation of oxygen to the success of the immune system. The other common causes of sudden death include heart attack, electrical shock, drowning, choking, suffocation, trauma, drug reactions, and allergic reactions. The best chance of ensuring their survival is to give them emergency treatment known as cardiopulmonary resuscitation (CPR).

In India the annual incidence of sudden cardiac death accounts for 0.55 per 1000 population. The survival rate of a sudden cardiac arrest is almost less than 1%. Sudden cardiac death constitutes 40-45% of cardiovascular deaths and out of this almost 80% are due to heart arrhythmia disturbances or arrhythmia. Maximum arrests were because of cardio respiratory arrests. Immediate survivors were 5 out of 6 (83.3%), out of 5 patients only 2 were alive at the end of 24 h (40%), and none of them survived to be discharged. Overall survival to hospital discharge was 3.8% (1.7-13%) of a 3,220 pooled patient group. Analysis of their functional recovery found good outcome in 86.7% (44-89%), moderate impairment in 10.2% (8.5-44%) and severe impairment in 3.1% (2-36%) of survivors from a cohort of 1679 pooled patients. Although, survival from pre-hospital arrest is diminished in geriatric groups, those who survive often have good functional recovery

The purpose of the study is to assess the effectiveness of structured teaching programme on knowledge regarding cardio-pulmonary resuscitation among B.sc Nursing 3<sup>rd</sup> year students of Govt. College of nursing Kota Raj.

## **OBJECTIVES OF THE STUDY:**

1. To assess the pre-test knowledge on regarding cardiopulmonary resuscitation among B.sc Nursing 3<sup>rd</sup> year students.
2. To assess the post-test knowledge on regarding cardiopulmonary resuscitation among B.sc Nursing 3<sup>rd</sup> year students.

3. To assess the effectiveness of Structured Teaching programme on regarding cardiopulmonary resuscitation among B.sc Nursing 3<sup>rd</sup> year students.
4. To find out the association between knowledge scores with the selected demographical variables among B.sc Nursing 3<sup>rd</sup> year students.

## **RESEARCH METHODOLOGY:**

The structured teaching programme was prepared on the basis of the content of Cardio Pulmonary Resuscitation. The conceptual framework used for study was based on “Ludwing Von Beralanaffy” General system theory, (1968). The research approach adopted for the study was evaluative approach design was quasi-experimental. The study was conducted in Govt. College of Nursing, Kota among 60 B.sc nursing 3<sup>rd</sup> year students by purposive sampling method. Data was collected by using a structured knowledge questionnaire which was administered to B.sc nursing 3<sup>rd</sup> year students for pre-test. STP was given on the 7<sup>th</sup> day after pre-test. Post-test assessment was done by using same structured questionnaire after 14<sup>th</sup> day from the pre-test to assess the effectiveness of Structured teaching programme.

## **RESULTS:**

The data was analyzed by descriptive and inferential statistics. The result showed that in the pre-test 6.66% B.sc nursing students had adequate knowledge regarding Cardio Pulmonary Resuscitation, 21.66% B.sc nursing students had inadequate knowledge & 71.66% B.sc nursing students had moderate knowledge regarding Cardio Pulmonary Resuscitation.

After giving Structured Teaching Programme, in the post test most of the B.sc nursing students gain adequate knowledge regarding Cardio Pulmonary Resuscitation that was 78.33% where as 21.66 B.sc nursing students had moderate knowledge & 0% B.sc nursing students had inadequate adequate knowledge regarding Cardio Pulmonary Resuscitation

The result showed that in pre-test the mean percentage obtained by the B.sc nursing 3<sup>rd</sup> year students was 85.30% with SD of 0.77 in the aspect of



knowledge regarding Anatomy and physiology of heart, Mean percentage 77% with SD of 0.86 in the aspect knowledge regarding Cardiac arrest & mean percentage obtained by the B.sc nursing 3<sup>rd</sup> year students is 59.23% with SD of 2.88 in the aspect of knowledge regarding Cardio Pulmonary Resuscitation, The mean percentage of overall knowledge obtained by the B.sc nursing 3<sup>rd</sup> year students is 68.70% with SD of 3.66.

The result showed that in post-test the mean percentage obtained by the B.sc nursing 3<sup>rd</sup> year students was 93.18% with SD of 0.0.67 in the aspect of knowledge regarding Anatomy and physiology of heart, Mean percentage 90% with SD of 0.81 in the aspect knowledge regarding Cardiac arrest & mean percentage obtained by the B.sc nursing 3<sup>rd</sup> year students is 84.17% with SD of 2.56 in the aspect of knowledge regarding Cardio Pulmonary Resuscitation, The mean percentage of overall knowledge obtained by the B.sc nursing 3<sup>rd</sup> year students is 87.41% with SD of 2.98.

The Chi square test was carried out to determine the association between the knowledge score with selected demographic variables such as age in years, gender, previous knowledge of Cardio pulmonary resuscitation, residential area, sources of information. There is no significant association of knowledge of B.sc nursing 3<sup>rd</sup> year students and demographic variables Gender and types of residential area, previous knowledge of Cardio pulmonary resuscitation and sources of information and There is significant association of knowledge of B.sc nursing students and demographic variables such as age in year.

The 't' test, which was computed between pre-test and post-test knowledge scores, indicated a true gain in the knowledge. Hence it was concluded that STP was effective method to improve knowledge among B.sc nursing 3<sup>rd</sup> year students.

## **CONCLUSION**

The study concluded that the Structured Teaching Programme regarding Cardio Pulmonary Resuscitation was an effective method for providing inadequate to adequate knowledge and help B.sc nursing 3<sup>rd</sup> year students to enhance their knowledge.

## **IMPLICATION FOR CLINICAL PRACTICE**

On the basis of findings, it is recommended that a similar study may be replicated to a large number of respondents. It is also recommended that the other method of teaching with frequent reinforcement be implemented for improving the knowledge regarding Cardio Pulmonary Resuscitation.