

# A study to assess the knowledge regarding cardiopulmonary resuscitation (CPR) among 1st Year GNM (diploma nursing students) students studying in SND college of nursing with a view to develop an information booklet

## Abstract

The cardiopulmonary resuscitation (CPR) guidelines of compression-only life support (COLS) for management of the victim with cardiopulmonary arrest in adults provide a stepwise algorithmic approach for optimal outcome of the victim outside the hospital by untrained laypersons. "A study to assess the knowledge regarding Cardiopulmonary resuscitation(CPR) among 1<sup>st</sup> Year GNM (diploma nursing students) students studying in SND College of nursing with a view to develop an information booklet". Objectives are to assess the knowledge regarding CPR among 1<sup>st</sup> Year GNM students. To find out the association between knowledge scores with their selected demographic variables & to prepare an information booklet. 50 samples were included in the study who all are fits in inclusive criteria, this is a descriptive design and analysis were done by using inferential statistics. The finding clearly shows that there is no one student had poor knowledge regarding CPR among the 1<sup>st</sup> year RGNM students. There is 38% of adequate knowledge regarding CPR and the majority of 62% students having good knowledge about cardiopulmonary resuscitation (CPR). No one students of diploma nursing (GNM) belongs to nil knowledge regarding CPR. The study concludes that the GNM students required more knowledge and skill regarding CPR to practice effectively to save life of a victim. Even though majority of the GNM (diploma nursing students) had good knowledge but still perfection is required to practice it whenever needed in emergency.

**Keywords:** CPR, GNM (diploma nursing students) students, AHA and knowledge

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## Introduction

Cardiopulmonary resuscitation is a lifesaving technique for victims of sudden cardiac arrest. Despite advances in resuscitation science, basic life support remains a critical factor in determining outcomes. The American Heart Association recommendations for adult basic life support incorporate the most recently published evidence and serve as the basis for education and training for laypeople and healthcare providers who perform cardiopulmonary resuscitation. The cardiopulmonary resuscitation (CPR) guidelines of compression-only life support (COLS) for management of the victim with cardiopulmonary arrest in adults provide a stepwise algorithmic approach for optimal outcome of the victim outside the hospital by untrained laypersons. These guidelines have been developed to recommend practical, uniform and acceptable resuscitation algorithms across India. As resuscitation data of the Indian population are inadequate, these guidelines have been based on international literature. The guidelines have been recommended after discussion among Indian experts and the recommendations modified to ensure its practical applicability across the country.<sup>1</sup>

## Need for study

According to statistics nearly 7.5 lakh people die of sudden cardiac

arrests every year in India. On an average, a victim begins to suffer irreversible brain damage four minutes after the cardiac arrest takes place and if no CPR administered.<sup>2</sup> For every minute that a cardiac arrest victim does not receive CPR, his chances of survival drops by 10 per cent. An effective CPR from a bystander can double a victim's chances of surviving a cardiac arrest. While several countries across the world are training the common man - in schools, colleges and work places about chest compressions or CPR to save sudden cardiac victims from dying, the World Heart Federation (WHF) says less than one per cent Indians would presently know how to carry out a CPR.<sup>3-5</sup>

## Review of literature

A study was conducted by Prafulla A. Salunkhe to explore the Effectiveness of Demonstration Regarding Cardiopulmonary Resuscitation on Knowledge and Practice among Policemen, Quantitative research approach and one group pre-test and post-test design was used Non-probability convenient sampling method was used to select 50 policemen as a study subjects. Conclusion- equal positive response to the demonstration and teaching was found really useful to them, which will help them to take prompt decisions, perform cardiopulmonary resuscitation and save many lives of out-of-hospitals cardiac arrest victims.<sup>6-10</sup>

## Statement of the problem

A study to assess the knowledge regarding Cardiopulmonary resuscitation(CPR) among 1<sup>st</sup> Year GNM students studying in SND College of nursing with a view to develop an information booklet.

## Objectives

- i. To assess the knowledge regarding CPR among 1<sup>st</sup> Year GNM students.
- ii. To find out the association between knowledge scores with their selected demographic variables.
- iii. To prepare an information booklet.

## Operational definition

### Knowledge

In this study it refers to understanding the knowledge of the 1<sup>st</sup> year RGNM students regarding cardiopulmonary resuscitation.

### Cardiopulmonary resuscitation

Cardiopulmonary resuscitation (CPR) is a procedure to support and maintain breathing and circulation for and infant, child, and adolescent who has stop breathing (Respiratory arrest) and /or whose heart has stopped (Cardiac Arrest)

cardiopulmonary resuscitation is a emergency procedure that combines chest compression often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.<sup>11-13</sup>

### Assumptions

- i. 1<sup>st</sup> Year GNM students regarding CPR may have adequate knowledge regarding kangaroo mother care
- ii. The knowledge regarding CPR among 1<sup>st</sup> Year GNM students may be influenced by their selected Demographic variables.<sup>14-16</sup>

### Variables

- i. **Independent variables:** Information booklet on cardiopulmonary Resuscitation.
- ii. **Dependent variables:** Knowledge
- iii. **Demographic variables:** Age, Gender, Educational status, attain any CNE, Religious.

### Hypothesis

**H1:** There is a significant association between the selected demographic variables and knowledge score of 1<sup>st</sup> Year RGNM students.

**H2:** - There will be no relationship between demographic variables and Knowledge on CPR among RGNM students.

### Delimitations

- i. The study is delimited to GNM students

- ii. Students studying in only SND college of nursing
- iii. The study is delimited to 1<sup>st</sup> Year GNM students.
- iv. The study is delimited to 50 samples.

## Material and methods

Methodology of research indicates the general pattern of organizing the procedure for gathering valid and reliable data for problems under investigation.

### Source of data

The data will be collected from 1<sup>st</sup> year RGNM student in S.N.D College of Nursing at Yeola.

## Research design

Descriptive Design.

### Research approach

To assess the knowledge regarding CPR among the 1<sup>st</sup> year RGNM students.

### Setting

The study will be conducted in 1<sup>st</sup> year RGNM students.

### Population

The population for the study comprises of 1<sup>st</sup> year RGNM student in Yeola.

### Methods of data collection

### Sampling procedure

1<sup>st</sup> year RGNM student will be selected by using convenient sampling technique.

### Sampling size

The sample for the study would consist of 50 in 1<sup>st</sup> year RGNM student.

### Inclusive criteria

Both male and female included in this study,

- i. The 1<sup>st</sup> year RGNM students can able to read and write English.
- ii. The 1<sup>st</sup> year RGNM students who are present during the time of study.
- iii. The 1<sup>st</sup> year RGNM student who are willing the participate.

### Exclusive criteria

- i. The students are not willing to participant at study period.
- ii. The students who are not present during the time of study.

### Instruments intended to be used

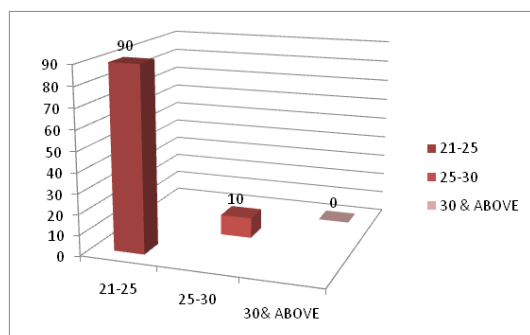
- a) Structured knowledge questionnaire.
- b) Information booklet for giving education about Cardiopulmonary Resuscitation (CPR).

## The findings were presented under the following headline

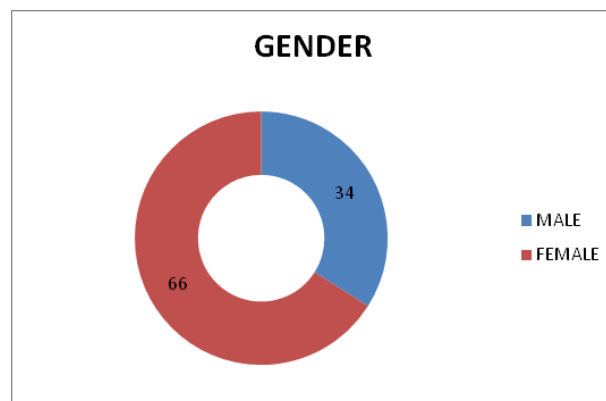
The above table reveals that out of 50, the age group 21 to 25 undergone the 45 (Table 1) students, about 90% percentages. In the age group 25 to 30 the frequency is 5 and the percentage is 10. In the age group 30 and above about 0%. Graphs 1-4

**Table 1** Frequency & percentage distribution of 1<sup>st</sup> year RGNM student according to the age

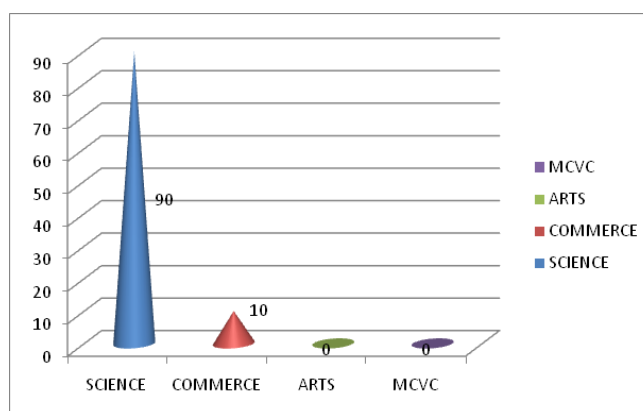
Age	Frequency	Percentage
21-25	45	90
25-30	5	10
30 & Above	0	0
Total	50	100
Gender	Frequency	Percentage
Male	17	34
Female	33	66
Total	50	100
Educational qualification	Frequency	Percentage
Science	45	90
Commers	0	0
Arts	5	10
Mcv	0	0
Total	50	100
Religion	Frequency	PERCENTAGE
Hindu	50	100
Muslim	0	0
Christian	0	0
Other	0	0
Total	50	100
CNE Participation	Frequency	Percentage
YES	0	0
NO	50	100
TOTAL	50	100



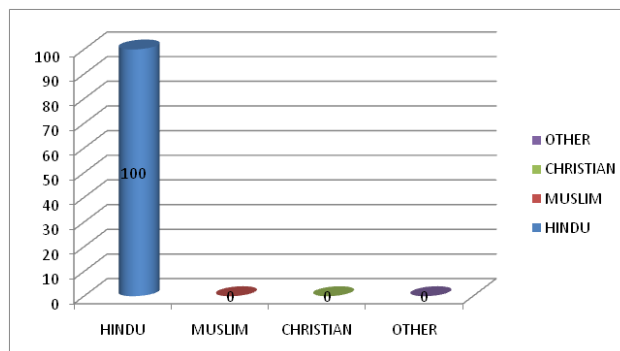
**Graph 1** According to the frequency and percentage of age.



**Graph 2** According to the frequency and percentage of gender.



**Graph 3** The above table reveals that majority of the respondents 50(100%) were Hindu, 0(0%) were Muslim, 0(0%) were Christian, 0(0%) were other.



**Graph 4** The above table reveals that, 0(0%) of the respondent were yes, 50(100%) and remaining of the respondent were No.

## Plan for data analysis

The analysis of data involves the translation of information collected during the course of research project into an interpretable and manageable form. It involves the use of statistical procedure to give an organisational meaning of the data. The descriptive and the inferential statistics will be used for data analysis. Table 2 The various categories for analysis numerical data based on the objective on the study on given below.

- Demographic data will be analysed using frequency and percentage.<sup>17</sup>

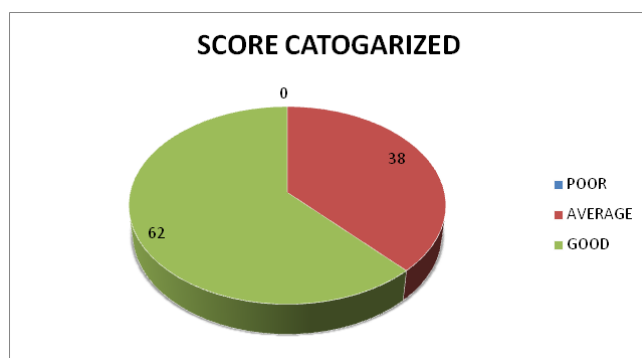
- ii. Knowledge of the students will be analysed by computing frequency, percentage, mean, median, mean percentage and standard deviation.

**Table 2** Knowledge score categorized

Marks [Gread]	Frequency	Percentage
0-6 (Poor)	0	0
7-14 (Average)	19	38
14-20 (Good)	31	62
Total	50	100

## Section II: knowledge questionnaires

The findings clearly show that there is no one student had poor knowledge regarding CPR among the 1<sup>st</sup> year RGNM students. Graph 5 There is 38% of adequate knowledge regarding CPR and the majority of 62% students having good knowledge about cardiopulmonary resuscitation (CPR).



**Graph 5** Graphical representations of the knowledge questionnaires.

## Conclusion

The findings indicate that the GNM students required more knowledge and skill regarding CPR to practice effectively to save life of a victim. Even though majority of the GNM (diploma nursing students) had good knowledge but still perfection is required to practice it whenever needed in emergency.

## Ethical clearance

Permission got from principal SND College of Nursing.

## Funding

Self

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## Conflict of interest

The author declares that there is no conflict of interest.

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