



A Study To Assess The Level Of Knowledge Regarding Cardiopulmonary Resuscitation Among Graduate Students In Selected Colleges Of Indore (2024–2025)

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ABSTRACT

Background: Cardiopulmonary Resuscitation (CPR) is a life-saving emergency procedure, but awareness and skills among the general youth population remain inadequate.

Aim: To assess and compare the level of knowledge regarding CPR before and after a structured demonstration among graduate students in selected colleges of Indore.

Methods: A pre-experimental one-group pre-test and post-test design was used among 50 graduate students selected through purposive sampling. A structured knowledge questionnaire was administered before and after an educational session on CPR.

Results: The mean pre-test knowledge score was 11.2, and the post-test mean was 17.4. The difference was statistically significant ($p < 0.05$), indicating improved knowledge.

Conclusion: The structured demonstration was effective in improving CPR knowledge among graduate students. Educational institutions should incorporate CPR training into their curriculum.

INTRODUCTION

Cardiac arrest is one of the leading causes of sudden death globally. Immediate CPR can significantly increase the survival rate. Graduate students, as active members of society, should be equipped with basic life-saving skills. However, awareness remains low among this group, especially non-medical students.

NEED FOR THE STUDY

In India, limited research focuses on CPR knowledge among college students. With increasing cardiac emergencies occurring in public spaces, this study aims to assess the baseline knowledge and determine the effectiveness of structured CPR education.

OBJECTIVES

1. To assess the pre-intervention knowledge regarding CPR among graduate students.
2. To evaluate the post-intervention knowledge after a structured demonstration.
3. To compare pre-test and post-test knowledge scores.
4. To assess the association between demographic variables and knowledge level.

HYPOTHESIS

- H_0 (Null Hypothesis): There is no significant difference in the knowledge score before and after the demonstration on CPR.
- H_1 (Alternative Hypothesis): There is a significant difference in the knowledge score before and after the demonstration on CPR.

REVIEW OF LITERATURE-

- 1. Sharma et al. (2022) conducted a cross-sectional study among 150 undergraduate students in Delhi and found that only 18% had adequate knowledge about CPR, while 56% had moderate and 26% had poor knowledge. The study recommended mandatory CPR education as part of college curriculum.
- 2. Patel M. (2021) surveyed 100 physiotherapy students in Gujarat. The findings revealed that despite being from a medical background, only 34% had adequate CPR knowledge. The study emphasized the need for practical CPR training using mannequins and simulation.

METHODOLOGY

Research Design - Pre-experimental, one-group pre-test post-test design.

Research Setting – Renaissance University, Indore, Madhya Pradesh.

Population- Graduate students from science, commerce, and arts streams.

Sample Size - 50 students.

Sampling Technique - Purposive sampling.

Inclusion Criteria

- Students enrolled in graduate programs.
- Willing to participate and provide consent.

Exclusion Criteria

- Students with prior CPR certification.
- Students absent on data collection days.

Tool for Data Collection

Structured questionnaire (25 MCQs) on CPR knowledge based on AHA guidelines.

Scoring Interpretation

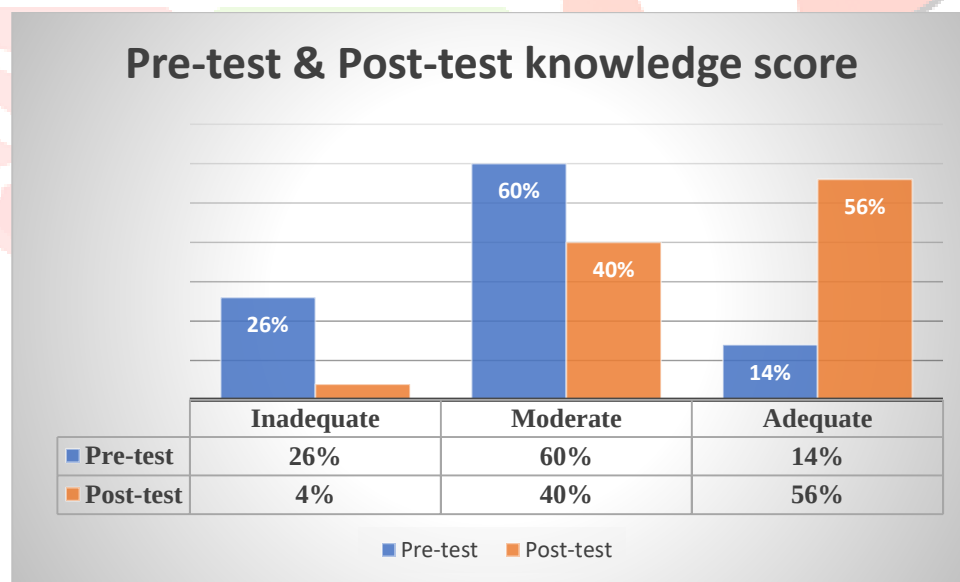
Score Range	Level of Knowledge
0–8	Inadequate
9–17	Moderate
18–25	Adequate

RESULTS

Pre-Test and Post-Test Knowledge Scores

Level of Knowledge	Pre-Test (n)	Pre-Test (%)	Post-Test (n)	Post-Test (%)
Inadequate (0–8)	13	26%	2	4%
Moderate (9–17)	30	60%	20	40%
Adequate (18–25)	7	14%	28	56%

After the intervention the researcher found the knowledge where pre-test knowledge score (%) is inadequate (0-8) have 13(26%), Moderate (9–17) 30(60%) and Adequate (18–25) 7(14%) or post-test knowledge score is Inadequate (0–8) 2(4%), Moderate (9–17) 20(40%) and Adequate (18–25) 28(56%).



(Bar chart on the knowledge score regarding CPR)

Mean, Standard Deviation, and t-Test Analysis

Test	Mean Score	Standard Deviation
Pre-Test	11.2	3.9
Post-Test	17.4	4.1

Paired t-test:

- t-calculated: 8.62
- Degrees of Freedom: 49
- p-value: 0.0001
- Significance: Highly significant ($p < 0.05$)
- Interpretation: There is a statistically significant improvement in CPR knowledge after the intervention.

INTERPRETATION AND DISCUSSION**Interpretation**

- The pre-test knowledge score indicates a moderate level of understanding.
- Post-test scores show substantial improvement, with 56% of students achieving adequate knowledge.
- The statistical analysis supports the effectiveness of the demonstration method.

Discussion

This study aligns with findings from Sharma et al. (2022) and Thomas & Roy (2023), where structured CPR training significantly improved knowledge scores. The gap between pre-test and post-test scores confirms that graduate students benefit from focused health education interventions. The statistically significant improvement also validates the effectiveness of visual and practical demonstration-based teaching over passive learning methods.

CONCLUSION

The study concludes that graduate students have limited baseline knowledge of CPR. A single educational session significantly improved their understanding. These findings suggest the importance of CPR awareness campaigns and curriculum integration.

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