

“Effectiveness Of A Training Programme On Knowledge, Beginning Skill In Providing Cardiopulmonary Resuscitation (CPR) Among First Year Students Of Selected College Bardoli, Gujarat State – Pre-Experimental Study”

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Abstract

Background: Cardiopulmonary resuscitation (CPR) is an emergency procedure that combines chest compression often with artificial ventilation in an effort to manually preserve intact brain functions until further measures are taken to restore spontaneous blood circulation and breathing in a person who is taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest. It is recommended in those who are unresponsive with no breathing or abnormal breathing.

Methods:- A Quantitative research approach was adopted with Pre experimental one group pretest posttest study was conducted at selected college of Bardoli, Gujarat state. Sample comprised of 38 students. Data collection done on 23-08-2024 to 28-08-2024. Data was analyzed by using descriptive and inferential statics.

Result:- The result of study showed 26(68.42%) students having average knowledge, 2(5.26%) students having good knowledge but after training programme 26(68.42%) students having average knowledge, 7(18.42%) students having good knowledge.

Majority of the students having unfavorable skill 23(60.52%) but after training programme students having favorable skill 23(60.52%)

Knowledge: There was significant association between socio demographic variables in area of residency, any previous knowledge on CPR. The calculated Chi-square values for this variable were higher than the table values at the 0.05 level.

Begging Skill: There was significant association between socio demographic variables in Gender, Any Previous knowledge on CPR. The calculated Chi-square values for this variable were higher than the table values at the 0.05 level.

Conclusion:- The main objective of the study was to assess the knowledge and begging skill on CPR among college students of Bardoli in Gujarat state. The statistical analysis revealed that posttest score was higher than the Pretest score hence it indicate training programme was effective in improving knowledge, beginning skill on CPR among students.

Keywords: CPR

INTRODUCTION:

Health is the level of function & metabolic efficiency of a living organism. In human it is the ability of individual to adopt and self-manage when facing physical, mental, psychological changes with environment. According to WHO health is a state of complete physical, mental, social well-being and not merely the absence of disease or infirmity.

Cardiopulmonary resuscitation (CPR) is an emergency procedure that combines chest compressions often with artificial ventilation in an effort to manually preserve intact brain functions until further measures are taken to restore spontaneous blood circulation and breathing in a person who is taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest. It is recommended in those who are unresponsive with no breathing or abnormal breathing, for example, vaginal respiration.

NEED FOR THE STUDY:

Cardiopulmonary resuscitation (CPR) in out-of-hospital cardiac arrest (OHCA) in India the survival rate to hospital admission was 32.5% the survival rate to hospital discharge was 8.8% & with good cerebral performance category (CPCI) neurological status was 3.8% . Majority of OHCA was seen in elderly individuals between 51 to 60 years, predominately in males. Majority of OHCA were witnessed arrests (56.5%) with 1.3% bystander CPR rate, 92.5% arrest occurred at home, 96% presented with initial non-shakable rhythm & 92.5% with presumed cardiac etiology but survival was better in those who experienced OHCA at public place, in witnesses arrest, in patients who had shakable presenting rhythm & in those where CPR duration was <20 minutes. If bystander CPR was initiated more consistently, if AEDs were more widely available & if every community could achieve a 20% cardiac arrest survival rate, an estimated 40,000 more lives could be saved each year.

Recently American Heart Association (AHA - 2020) has revised CPR guideline in the year 2020. Many changes have been in co-operated in the new recommendation to improve the outcome of patient. In past CPR was administered through the ABC- Airway, Breathing and circulation. While the order has changed to CBA. First 30 compression are given then the airway is open, then two rescue breath are administer.

Problem statement:

“Effectiveness of a training programme on knowledge, beginning skill in providing cardiopulmonary Resuscitation (CPR) among first year students of selected college Bardoli, Gujarat state - Pre-experimental Study”

Objectives:

- 1 To assess the level of knowledge scores of students before and after training programme.
- 2 To assess the level of beginning skill scores of students before and after training programme.
- 3 To find out association between pretest knowledge scores with their selected socio demographics variables.
- 4 To find out association between pretest beginning skill scores with their selected socio demographics variables.

HYPOTHESIS:

- H1: There will be significant difference between the pretest knowledge scores and posttest knowledge scores of college students on CPR.
- H2: There will be significant difference between the pretest beginning skill scores and posttest beginning skill scores of college students on CPR.
- H3: There is a significant association between pretest knowledge scores of college students with their selected socio demographic variables.
- H4: There is a significant association between pretest beginning skill scores of college students with their selected socio demographic variables.

Operational definition:

- **Effectiveness:** Refers to degree to which something is successful in producing a desired result.
- **Training programme:** a program designed for training in specific skills. Educational program - a program for providing education.
- **CPR:** According to AHA “CPR is an emergency lifesaving procedure performed when the heart stops beating. Immediate CPR can double or triple chance of survival after cardiac arrest.”
- **Knowledge:** Knowledge refers correct response of college students on CPR, gaining the knowledge through training programme.
- **Begging Skill:** Refers to observation of skill and techniques performed by the students as per the steps of observational checklist, designed by the investigator. Begging is a skill that, other than role play, only really comes into its own

RESEARCH METHODOLOGY:

Research Approach: Quantitative research approach

Research Design: Pre experimental ne group pretest- posttest

Research Setting: Selected college students of Bardoli

Population: College students

Target Population: F.Y. Students of Arts & Commerce

Sample: Students

Sample Size: 38

Sampling Technique: Purposive sampling technique

Instruments: Knowledge- Self-administered structured knowledge questionnaires

Begging Skills: Observational Checklist

Analysis & Interpretation of data: Descriptive and inferential analysis

Selection of tool:

In this self-administered structured knowledge questionnaires was used to assess the knowledge on CPR among college students.

Begging skill for that observed checklist was used to assess the begging skill on CPR

Description of the tools:

Section 1: socio demographic data

Socio demographic variables include Age, Gender, Area of residency, Religion, Any previous knowledge on cardiopulmonary resuscitation (CPR).

Section 2: Self-administered Structured knowledge questionnaires

Self-administered structured knowledge questionnaires regarding cardiopulmonary resuscitation (CPR). It included 30 questions regarding cardiopulmonary resuscitation (CPR) each right answer carries 1 mark and maximum score is 30 and minimum score is 0.

Section 3: Begging Skill Checklist

Checklist to assess the steps of procedure performed correctly or not. Each right steps carries 1 mark and maximum score is 18 and minimum score is 0.

Ethical Consideration: Informed consent was obtain from each participants, ensuring confidentiality.

RESULT:

Section: 1 data collecton of socio demographic variables:

Most of the students 31(81.6%) were belonged to 18 years, 25(65.8) were males, 19(50%) were living in rural area, 28(73.7%) were belonged to Hindu religion, 35(92.1%) had no any previous knowledge on CPR.

SECTION: 2 Finding related to knowledge on CPR.

[Table 1: Knowledge Mean, Median, Mode, SD and Range]

Knowledge score	Mean	Median	Mode	SD	Range
Pre-test	13.92	12	10	4.32	16
Post-test	16.55	15.50	15	4.57	16
Difference	2.63	3.5	5	0.25	0

Table 1 showed that The Mean difference is 2.63, median 3.5, mode 5, SD 0.25 and range is 0

[Table 2: Frequency and Percentage distribution of knowledge scores]

level of knowledge	Poor 1-10	average 11-20	Good 21-30
Pre Test	10(26.31%)	26(68.42%)	2(5.26%)
Post Test	5(13.15%)	26(68.42%)	7(18.42%)

Table 2 showed that Majority 26(68.42%) students having average knowledge, 2(5.26%) students having good knowledge but after training programme 26(68.42%) students having average knowledge, 7(18.42%) students having good knowledge.

SECTION: 3 Finding related to Begging skill on CPR.

[Table 3: Beginning Skill Mean, Median, Mode, SD and Range]

Beginning skill score	Mean	Median	Mode	SD	Range
Pre-test	7.89	6.00	5	3.42	11
Post-test	10.74	10.00	10	2.80	10
Difference	2.85	4.0	5	-0.62	-1

Table 3 showed that The Mean difference is 2.85, median 4, mode 5, SD -0.62 and range is -1

Table 4: Frequency and Percentage distribution of beginning skill scores.

Beginning Skills	Unfavorable 1-9	Favorable 10-18
Pre Test	23(60.52%)	15(39.47%)
Post Test	15(39.47%)	23(60.52%)

Table 4 showed that Majority of the students having unfavorable skill 23(60.52%) but after training programme students having favorable skill 23(60.52%).

Section- 4 Data on effectiveness of training program.

H1: There will be significant difference between the pretest knowledge score and posttest knowledge score of college students on CPR.

[Table 5: Knowledge Paired t test of knowledge]

Knowledge score	Mean	Mean difference	SD difference	SEMD	Paired t test	Tabulated value	D F	Signi.
Pretest	13.92	2.63	1.36	0.22	11.89	2.02	37	S
Posttest	16.55							

Table 5 showed that Paired t test analysis showed a significant difference between the mean knowledge scores indicate training programme was effective in improving knowledge on CPR

H2: There will be significant difference between the pretest beginning skill score and posttest beginning skill score of college students on CPR.

[Table 6: Beginning skill Paired t test]

BeginningSkill score	Mean	Mean difference	SD difference	SEMD	Paired t test	Tabulated value	DF	Signi.
Pretest	7.89	2.85	1.05	0.17	16.63	2.02	37	S
Posttest	10.74							

Table 6 showed that Paired t test analysis showed a significant difference between the mean beginning skills scores indicate training programme was effective in improving beginning skill on CPR.

Section- 5: Data on association

The findings related to association between knowledge scores with their socio demographic variable:

H3: There is a significant association between pretest knowledge scores of college students with their selected socio demographic variables.

There was significant association between socio demographic variables in area of residency, any previous knowledge on CPR. The calculated Chi- square values for this variable were higher than the table values at the 0.05 level.

H4: There is a significant association between pretest beginning skill scores of college students with their selected socio demographic variables.

There was significant association between socio demographic variables in Gender, Any Previous knowledge on CPR. The calculated Chi- square values for this variable were higher than the table values at the 0.05 level.

CONCLUSION:

The main objectives of the study was to assess the knowledge and begging skills on CPR among college students of Bardoli in Gujarat state. The statistical analysis revealed that majority of the sample having average knowledge and unfavorable skills score on CPR but after training programme knowledge and skills scores were increased. So it indicate that training programme was effective. In knowledge score association found in socio demographic variables like area of residency, any previous knowledge on CPR. In begging skill association found in socio demographic variables like Gender, Any Previous knowledge on CPR.

Recommendations:

On the basis of findings of the study, the following recommendations have been made:

- A similar study can be replicated on a large sample to generalize the findings.
- A similar study can be conducted by using different research design like quasi experimental method.
- A similar study can be replicated to other health care team members.

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