



## ASSESS THE EFFECTIVENESS OF SELF-STRUCTURAL TEACHING PROGRAM ON CARDIO PULMONARY RESUSCITATION

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### ABSTRACT

**Introduction:** (CPR) is an emergency procedure which is attempted in an effort to return life to a person in cardiac arrest. It is indicated in those who are unresponsive with no breathing or only gasps. It may be attempted both in and outside of a hospital. An administering of an electric shock to the heart, termed defibrillation, is usually needed to restore a viable or "perfuming" heart rhythm.

**Methodology:** The research method adopted for the present study was a quasi-experimental study. The study was conducted in regency institute of nursing, Kanpur nagar. The target population of the study was B.Sc nursing 2<sup>nd</sup> year student. A simple random sampling technique was used to collect the samples. Size of the sample is 40 students.

**Results:** The comparison pretest and posttest knowledge on experimental group. The mean (8.33) of pretest than the mean (17.86) of posttest. The compare the pretest and posttest knowledge had significant difference with 't' value (2.04) at  $p < 0.05$  level of significance. Hence it was concluded that there was significant difference between pretest and posttest knowledge on experimental group.

**Conclusion:** The compare the pretest and posttest knowledge had significant difference with 't' value (2.04) at  $p < 0.05$  level of significance.

**Keyword:** Assess, effectiveness, self-structural teaching program, cardio pulmonary resuscitation



## INTRODUCTION

Poor knowledge and skill retention following cardiopulmonary resuscitation teaching for B.Sc. nursing 2nd year student cardiopulmonary resuscitation teaching is mandatory for student and important for student often discover the knowledge about cardiopulmonary resuscitation many different method of improving this retention have been devised and evaluated, to provide basic life support till medicine and advanced life support.

### OBJECTIVE OF THE STUDY

01. To assess the pretest knowledge score on cardio pulmonary resuscitation among B.Sc. nursing 2<sup>nd</sup> year student.
02. To assess the posttest knowledge score on cardiopulmonary resuscitation among B.Sc. nursing 2nd year student.
03. To compare the pretest and posttest knowledge score on cardiopulmonary resuscitation among B.Sc. nursing 2nd year student.
04. To find association between pretest and posttest knowledge score on cardiopulmonary resuscitation with selected variable.

## METHODOLOGY

**Research approach:** The research method adopted for the present study was aquasi-experimental study

**Setting of this study-** The study was conducted in regency institute of nursing, Kanpur nagar.

**Study population-**The target population of the study was B.Sc. nursing 2<sup>nd</sup> year student.

**Sample and sampling techniques:** A simple random sampling technique was used to collect the samples. The samples were selected from the B.Sc. nursing 2<sup>nd</sup> year student in regency institute of nursing, Kanpur nagar the size of the sample is 40 student.

### Development collection tool of data

PART –1: The part 1 socio demographic data ,which consist of age, sex, Educational qualification, and previous knowledge, areas.

PART -2 -It consist of fourteen multiple choice questions about CPR guidelines

### Data collection

The researchers met the students and explained the purpose of the study. The



research tool was administered to assess the pretest knowledge score to the student nurses and then 30 minutes were taken to administer the structured teaching program. The post test was conducted on the 8<sup>th</sup> day after administering of STP, by using the same structured knowledge questionnaire.

**HYPOTHESES:** (Level of significance at  $p < 0.05$ )

$H_1$ : There is a significant difference in the mean pretest and mean posttest knowledge score on cardiopulmonary resuscitation among experimental group.

$H_2$  : There is a significant difference in the mean pretest and mean posttest knowledge score on cardiopulmonary resuscitation among control group.

## RESULTS

### 1. SECTION-I: DISTRIBUTION OF THE DEMOGRAPHIC VARIABLES OF THE SAMPLES.

This section dealt with the analysis of the distribution of samples according to frequency and percentage. The selected demographic variables are age, gender, education, previous knowledge, income.

Table1: Frequency and percentage distribution of demographic variables of the students.

N=30

| Sl.No<br>m. | Socio<br>Demographic<br>Variables | Experimental<br>group |       | Control group |      |
|-------------|-----------------------------------|-----------------------|-------|---------------|------|
|             |                                   | (f)                   | (%)   | (f)           | (%)  |
| 1.          | Age (in years)                    |                       |       |               |      |
|             | a) 17-19                          | 07                    | 46.66 | 6             | 40   |
|             | b) 20-22                          | 07                    | 46.66 | 8             | 53.3 |
|             | c) 23-25                          | 01                    | 6.66  | 01            | 6.66 |
|             | d) 26-28                          | 00                    | 00    | 00            | 00   |
| 2.          | Gender                            |                       |       |               |      |
|             | a) Male                           | 5                     | 33.33 | 8             | 53.3 |
|             | b) Female                         | 10                    | 66.66 | 7             | 46.6 |
| 3.          | Educational<br>qualification      |                       |       |               |      |
|             | a) Intermediate                   | 11                    | 73.33 | 09            | 60   |
|             | b) Graduation                     | 02                    | 13.13 | 06            | 40   |
|             | c) post graduation                | 02                    | 13.13 | 00            | 00   |
| 4.          | Previous<br>knowledge             |                       |       |               |      |
|             | a) Yes                            | 11                    | 73.33 | 13            | 86.6 |
|             | b) No                             | 04                    | 26.66 | 02            | 13.2 |
| 5.          | Income (monthly<br>income)        |                       |       |               |      |
|             | a) Less than 5000                 | 06                    | 40    | 07            | 46.6 |
|             | b) 5000 -10,000                   | 04                    | 26.66 | 03            | 20   |
|             | c) 11000-15000                    | 02                    | 13.13 | 03            | 20   |
|             | d) 16000-& above                  | 03                    | 20    | 02            | 13.3 |



Table 1 reveals the frequency and percentage distribution of socio-demographic variables.

According to age group in experimental group majority of sample 7 (46.66%) belong to age group of 17-19yrs, 7(46.66%) belong to age group 20-22 years, 1(6.66%) in the age group of 23-25 years and none in the age group of 26-28 year. And in control group 17-19 years, 6(40%) belong to age group 20-22 years, 8 (53.3%) in the age group of 23-25yrs 1,( 6.66%) and none in the age group of 26-28 year.

In gender majority of the samples in experimental group 5 (33.33%) were male and 10 (66.66 %) were female. In control group majority of the subject of 8(53.3%), were male and 7 (46.6%) were female.

Educational qualification in experimental group majority of the samples 11(73.33%) were intermediate and 2 (13.13%) were graduation and 2(13.13%) were post-graduation. In control majority of the samples 9(60%) were intermediate and 7 (40%) were graduation and none in the post-graduation

Previous knowledge in experimental group majority of the samples 11(73.33%)

were yes and 4 (26.26%) were having no previous knowledge. In control group majority of the subjects 13 (86.6%) were yes and 2 (13.3%) were having no previous knowledge.

Income (Monthly) in experimental group 6 (40%) belongs to less than 5000, 4(26.66%) belongs to less than 5001-10,000, 4 (26.26%) were in 11000-15000, and 2 (13.13%) were in above 15001. In control group 3, (20%) belong to less than 5000, 7 (46.6%) were in 5001-10,000 4,(20%) were in 10001-15000 and 2 (20%) were in 15001 & above.

SECTION-II: Analysis and Comparison Of Pre Test And Post Test Knowledge Score On Cardiopulmonary Resuscitation Among Experimental Group And Control Group.

This section dealt with the details of analysis on regard to pretest and posttest knowledge score on cardiopulmonary resuscitation among experimental group and control group.

This section is divided into following sub headings:

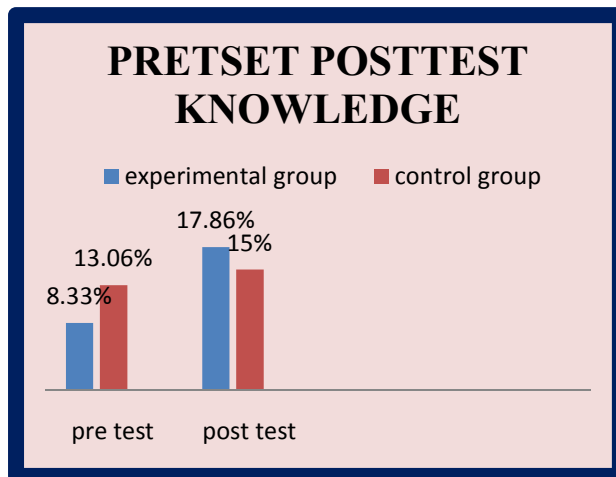
SECTION-II (a): Percentage of pretest and posttest level of knowledge score on



cardiopulmonary resuscitation among experimental group.

Fig 2: Bar diagram on percentage distribution of pretest and posttest level of knowledge scores on cardiopulmonary resuscitation among experimental group and control group.

Fig 2: Bar diagram on percentage distribution of pretest and posttest level of knowledge scores on cardiopulmonary resuscitation among experimental group and control group.



The above Fig 2 bar diagram shows that among 30 samples in pretest 90% had inadequate knowledge and 5(10%) had moderately adequate knowledge on hazards of watching television. In post test among 30 samples 16(32%) had adequate knowledge, 27(54%) had moderately

adequate knowledge and 7(14%) had inadequate knowledge on hazards of watching television.

SECTION-II (b): Comparison of mean pretest and mean posttest knowledge scores on cardiopulmonary resuscitation among experimental group.

Table 2: Comparison of mean, standard deviation and paired 't' value on mean pretest and posttest knowledge score on cardiopulmonary resuscitation among students of experimental group.

N=30

| S.No | Level of knowledge | Mean  | SD   | Paired t test | Table value |
|------|--------------------|-------|------|---------------|-------------|
| 1    | Pre test           | 8.33  | 3.15 | 6.80*         | 2.04        |
| 2    | Post test          | 17.86 | 1.53 |               |             |

P<0.05\*-significant.

The comparison pretest and posttest knowledge on experimental group. The mean (8.33) of pretest than the mean (17.86) of posttest. The compare the pretest and posttest knowledge had significant difference with 't' value (2.04) at p<0.05 level of significance.

Hence it was concluded that there was significant difference between pretest and posttest knowledge on experimental group.

SECTION-II (c): Comparison of mean pretest and mean posttest knowledge scores on



cardiopulmonary resuscitation among control group.

Table 3: Comparison of mean, standard deviation and paired' value on mean pretest and posttest knowledge score on cardiopulmonary resuscitation among students of control group.

N=30

| S.No | Level of knowledge | Mean  | SD   | Paired t test      | Table value |
|------|--------------------|-------|------|--------------------|-------------|
| 1    | Pre test           | 13.06 | 3.52 | 1.42 <sup>NS</sup> | 2.04        |
| 2    | Post test          | 15    | 4.26 |                    |             |

P<0.05 NS-Non-significant.

The comparison pretest and posttest knowledge on control group the mean (13.06)of pretest than the mean (15) of posttest the compare the pretest and posttest knowledge had significant difference with 't' value (1.42) at p<0.05 level of significance

Hence it was concluded that there was no any significant difference between pretest and posttest knowledge on control group.

SECTION-III (a): Comparison of mean pretest and mean posttest knowledge scores on cardiopulmonary resuscitation between experimental group and control group.

Table 4: Comparison of mean, standard deviation and unpaired' value on mean pretest and posttest knowledge score on cardiopulmonary resuscitation among experimental group and control group.

N=30

| S.No | Level of knowledge | Mean  | SD   | Unpaired t test | Table value |
|------|--------------------|-------|------|-----------------|-------------|
| 1    | Experimental group | 17.86 | 1.53 | 2.42*           | 1.70        |
| 2    | Control group      | 15    | 4.26 |                 |             |

P<0.05 \*-significant.

The table2 reveals that in experimental group I and control group the mean were 0.6 and 1.8. The data underwent statistical analysis and the obtained calculated t value was 4.2 which is greater than the table value at 0.05 level of significance.

This indicates that Structured teaching programme on cardiopulmonary resuscitation was effective in terms of knowledge. Hence Null hypothesis  $H_0$  (1) was rejected and research hypothesis  $H_1$  was accepted. Hence it was concluded that there is a significant difference between posttest knowledge score on experimental group and control group.

SECTION-IV: ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORE ON CARDIOPULMONARY RESUSCITATION AMONG STUDENTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES



SECTION-IV (a): Association between the pretest knowledge score on cardiopulmonary resuscitation among students with their age.

Table 5: Chi-square value on pretest knowledge scores on cardiopulmonary resuscitation among students with their age.  
N=30

| Age   | Moderately adequate | inadequate | Chi square value   | Table value |
|-------|---------------------|------------|--------------------|-------------|
| 17-19 | 09                  | 04         | 0.19 <sup>NS</sup> | 5.99        |
| 20-22 | 11                  | 04         |                    |             |
| 23-25 | 02                  | 0          |                    |             |

P<0.05 N.S – Not Significant

The table 5 indicates that there is no significant association between mean pretest knowledge score on cardiopulmonary resuscitation among students with their age. Hence hypothesis  $H_{4(a)}$  is rejected and null hypothesis  $H_{04(a)}$  is accepted.

SECTION-IV (b): Association between the pretest knowledge score on cardiopulmonary resuscitation among students with their gender.

Table 7: Chi-square value on pretest knowledge score on cardiopulmonary resuscitation among students with their gender.

| Gender | Moderately adequate | inadequate | Chi square value   | Table value |
|--------|---------------------|------------|--------------------|-------------|
| Male   | 10                  | 02         | 1.01 <sup>NS</sup> | 3.84        |
| Female | 12                  | 06         |                    |             |

P<0.05 N.S – Not Significant

The table 6 indicates that there is no significant association between mean pretest knowledge score on cardiopulmonary resuscitation among students with their gender.

Hence the hypothesis  $H_{4(b)}$  is rejected and null hypothesis  $H_{04(b)}$  is accepted.

SECTION-V(d): Association between the pretest knowledge score on cardiopulmonary resuscitation among students with their education.

Table 6: Chi-square value on pretest knowledge score on cardiopulmonary resuscitation among students with their education.

N=30

| Education       | Moderately adequate | inadequate | Chi square value | Table value |
|-----------------|---------------------|------------|------------------|-------------|
| Intermediate    | 16                  | 06         | 0.74             | 5.99        |
| Graduation      | 06                  | 01         |                  |             |
| Post graduation | 1                   | 0          |                  |             |

P<0.05 N.S – Not Significant





The table 4.6 indicates that there is no significant association between mean pretest knowledge score on cardiopulmonary resuscitation among students with their education.

Hence the hypothesis  $H_{4(c)}$  is rejected and null hypothesis  $H_{04(c)}$  is accepted.

SECTION-V (d): Association between the pretest knowledge score on cardiopulmonary resuscitation among students with their previous knowledge.

Table 8: Chi-square value on pretest knowledge score on cardiopulmonary resuscitation among students with their previous knowledge.

| Previous knowledge | Moderately adequate | Inadequate | Chi square value               | Table value |
|--------------------|---------------------|------------|--------------------------------|-------------|
| Yes                | 15                  | 9          | 1.55 <sup>N</sup> <sub>S</sub> | 3.84        |
| No                 | 06                  | 0          |                                |             |

$P < 0.05$  N.S – Not Significant

The table 4.6 indicates that there is no significant association between mean pretest knowledge score on cardiopulmonary resuscitation among students with their previous knowledge.

Hence the hypothesis  $H_{4(d)}$  is rejected and null hypothesis  $H_{04(d)}$  is accepted.

SECTION-V (e): Association between the pretest knowledge score on cardiopulmonary resuscitation among students with their income.

Table9: Chi-square value on pretest knowledge score on cardiopulmonary resuscitation among students with their income. N=30

| Income      | Moderately adequate | inadequate | Chi square value | Table value |
|-------------|---------------------|------------|------------------|-------------|
| <5000       | 09                  | 04         | 1.49             | 7.81        |
| 5000-10000  | 6                   | 1          |                  |             |
| 11000-15000 | 4                   | 1          |                  |             |
| >16000      | 3                   | 2          |                  |             |

$P < 0.05$  N.S – Not Significant

The table.6 indicates that there is no significant association between mean pretest knowledge score on cardiopulmonary resuscitation among students with their income.

Hence the hypothesis  $H_{4(e)}$  is rejected and null hypothesis  $H_{04(e)}$  is accepted.





## CONCLUSION

knowledge on control group the mean (13.06) of pretest than the mean (15) of posttest the compare the pretest and posttest knowledge had significant difference with 't' value (1.42) at  $p < 0.05$  level of significance.

The data underwent statistical analysis and the obtained calculated t value was 4.2 which is greater than the table value at 0.05 level of significance.

Also need some education program and seminars regarding cardiopulmonary resuscitation.

## IMPLICATIONS:

### Nursing Practice:

The present study implicates that the existing knowledge regarding cardiopulmonary resuscitation. It offers the school health nurses and other health workers to create an awareness about cardiopulmonary resuscitation by using structured teaching programme.

### Nursing Education:

This study provides the wide knowledge about cardiopulmonary resuscitation to the nursing students. So that they are able to

inculcate and deliver the excellent knowledge to the society.

### Nursing Administration:

Nursing administration should take consideration about cardiopulmonary resuscitation among students and they should take footsteps to create awareness through educational programs. Nursing personnel should conduct awareness program to the students.

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