Original Research Paper

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PRE EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF WORKSHP ON CARDIO PULMONARY RESUSCITATION

Mr Jonils Macwan Senior Nursing Superintendent Divisional Railway Hospital Vadodara

Dr.(Lt.Col,) Brhamprakash* Chief Medical Superintendent Medical Department Scientific Railway Nurses Association Of Vadodara Division Divisonal Railway Hospital Pratapnagar *Corresponding Author

ABSTRACT **STATEMENT OF THE PROBLEM:** "A pre experimental study to assess the effectiveness of simulation based workshop on knowledge and skill regarding cardio pulmonary resuscitation among selected Nursing Professionals of Indian Railways."

KEYWORDS :

BACKGROUND OF THE STUDY

Cardiac arrest is a common medical emergency with grave consequences. Cardiac arrest occurs when the heart ceases to produce an effective pulse and fails to circulate blood throughout the body. It is manifested by loss of consciousness, and absence of pulse and blood pressure.

A cardiac arrest can occur at anytime and anywhere even when the health care professionals are not available. By the time the patient is shifted to the hospital it may be too late. If family members know how to give a CPR, it can save the life of the person. Only 1/3 of the adults who have an out of hospital cardiac arrest receive timely and appropriate care.

THE OBJECTIVES OF THE STUDY WERE:

1. To assess the knowledge regarding cardio pulmonary resuscitation among Nursing Professionals working in Indian Railways.
2. To assess the skill in performing cardio pulmonary resuscitation among Nursing Professionals working in Indian Railways.
3. To determine the effectiveness of simulation based workshop on knowledge and skill regarding cardio pulmonary resuscitation among Nursing Professionals working in Indian Railways.
4. To identify the association between pretest knowledge and selected baseline variables.
5. To identify the association between pretest skill and selected baseline variables.

HYPOTHESES:

H1: The mean posttest knowledge score of Nursing Professionals will be significantly higher than their mean pretest knowledge score at 0.05 level of significance.

H2: The mean posttest skill score of Nursing Professionals will be significantly higher than their mean pretest skill score at 0.05 level of significance.

H3: There will be a significant association between pretest knowledge and selected baseline variables at 0.05 level of significance.

H4: There will be a significant association between pretest skill and selected baseline variables at 0.05 level of significance.

METHODS

An evaluative approach was adopted for this study as it aimed to determine the effectiveness of simulation based workshop on knowledge and skill regarding cardio pulmonary resuscitation among Nursing Professionals of Indian Railways Health Services. A pre experimental one group pretest- posttest design was adopted for the present study. A structured questionnaire to assess the knowledge and a checklist to assess the skill regarding cardio pulmonary resuscitation was used. Nursing Professionals were selected by simple random sampling technique.

The validity of the tool was done by 05 experts. The reliability of the questionnaire was done by test- retest method and reliability coefficient r = 0.89. Inter- rater reliability was used to establish the reliability of the checklist. Reliability coefficient of the checklist r = 0.95. Knowledge and skill regarding cardiopulmonary resuscitation was assessed before workshop and 1 day after workshop. The data collected were analyzed using both descriptive and inferential statistics.

RESULT

Distribution of subjects according to the age shows that majority (55%) of the subjects were in the age group of 20-25 years.Distribution of subjects according to the gender shows that majority (57.5%) of the Nursing Professionals were males.Distribution of subjects according to the Course of the study shows that majority (50%) of the subjects were holding GNM.Distribution of subjects according to the family history of cardiac diseases shows that majority (77.6%) of the subjects had no family history of cardiac diseases.Distribution of subjects according to the source of the information shows that majority (70%) of the subjects got information through Media. Analysis of the level of knowledge shows that in pretest, 23 (28.75%) subjects had inadequate knowledge, 57(71.25%) subjects had average knowledge, none of the subjects had good and very good knowledge, whereas in posttest 65 (81.25%) subjects had very good knowledge, 15 (18.75%) subjects had good knowledge, no one had average knowledge, and none had inadequate knowledge regarding cardiopulmonary resuscitation. Analysis of the level of skill shows that in pretest, 77 (96.25%) subjects had inadequate skill, 03(3.75% had average skill, none of the subjects had good, very good skill regarding CPR. Whereas in posttest, 78 (97.50 %) subjects had very good skill, 02 (2.5%) subjects had good skill and none had average or inadequate skill regarding cardiopulmonary resuscitation. In the present study, the mean pretest knowledge score was 8.12 and mean posttest knowledge score was 24.68. The mean difference was 16.56 and SD was 1.98. The calculated _t' test value was greater than the table value ($t_{(79)}$= 56.34, p< 0.001). Hence, H1 was accepted at 0.001 level of significance (table 4). Therefore, it was concluded that there was significant gain in knowledge through structured teaching programme regarding cardio pulmonary resuscitation. The mean pretest skill score was 3.22, posttest skill score was 15.07 and SD was 1.13. The calculated t value was greater than the table value ($t_{(79)=}$ 56.67, p< 0.001). Hence, H_2 was accepted at 0.001 level of significance (table 5). Therefore it was concluded that there was significant gain in skill through structured teaching programme. In the present study, there was statistically significant association between the pretest knowledge and selected baseline variable such as Gender about CPR (p< 0.05). Hence, H_3 was accepted for this variable at 0.05 level of significance. There was no statistically significant association between pretest knowledge and other baseline variables like age (F= 0.3914, p>0.05), course of study ($\chi 2$ = 0.542, p>0.05) ,family history of cardiac diseases (F = 0.448, p>0.05)

and Source of Information (F=2.82, p>0.05). Hence H_3 was accepted for these baseline variables at 0.05 level of significance. The data presented in table 7.2 shows that association was found between pretest skill and Gender gender (F= 0.517, p>0.05),The data presented in table 7 depicts that no association was found between pretest skill and selected baseline variables such as age (F= 0.617, p> 0.05), course

of study (F= 0.959, p>0.05), family history of cardiac diseases (F=0.510, p>0.05) and awareness about cardio pulmonary resuscitation (F= 0.329, p>0.05). So the formulated hypothesis H_4 was accepted at 0.05 level of significance.

FIGURES AND TABLES

SECTION-I ANALYSIS OF BASELINE DATA OF SUBJECTS

The data presented in fig. depicts that greater percentage (55%) of subjects were in the age group of 20-25 years, (25%) of subjects were in the age group of 26-30 years, whereas (11.25%) of subjects were in the age group of 31-40 years and remaining (8.75%) were 41 & above.

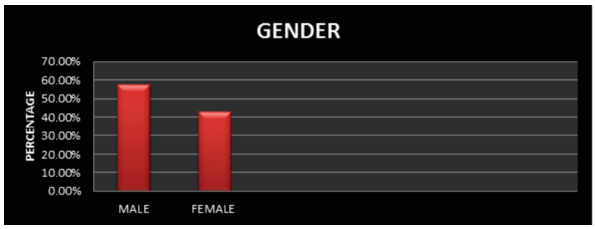

Fig 1 : Distribution Of Subjects According To The Gender

Table 1: Pretest and posttest knowledge of subjects regarding CPR (N=80)

Level of Knowledge	Pretest		Posttest	
	F	%	F	%
Inadequate(1-25%)	23	28.57	00	00
Average(26-50%)	57	71.25	00	00
Good (51-75%)	00	00	15	18.75
Very Good (76% and above)	00	00	65	81.25

The data presented in table 1 reveled that, in pretest 23(28.75%) subjects had inadequate knowledge, 57(71.25%) subjects had average knowledge, whereas in posttest 65(81.25%) subjects had very good knowledge, 15(18.75%) subjects had good knowledge, and none had inadequate knowledge regarding CPR.

Table 2: Pretest and posttest skill of subjects regarding CPR (N=80)

Level of Skill	Pretest		Posttest	
	F	%	F	%
Inadequate(1-25%)	77	96.25	00	00
Average(26-50%)	03	3.75	00	00
Good (51-75%)	00	00	02	2.5
Very Good (76% and above)	00	00	78	97.5

The data presented in table 2 depicts that, in pretest 77(96.25%) subjects had inadequate skill, 3(3.75%) had inadequate skill, whereas in posttest, 78(97.5%) subjects had very good skill, 2(2.5%) subjects had good skill and none had average or inadequate skill regarding CPR.

Table 3: Mean, standard deviation and t value of pretest and posttest knowledge Score of subjects regarding cardio pulmonary resuscitation (N=80)

KNOWLEDGE	MEAN	MD	SD of mean difference	Df	't' value	P value
PRETEST	8.12	16.56	1.98	79	56.34	0.001*
POSTTEST	24.68					

*Significant ($p < 0.001$)

The data presented in table 4 depicts that mean pretest knowledge score was 8.12 and mean posttest knowledge score was 24.68. The mean difference was 16.56 and SD was 1.98 . The calulated_t' value was greater than the table value ($t_{(79)} = 56.34$, $p<0.001$). Hence H_1 was accepted at 0.001 level of significance. Therefore it was concluded that there was significant gain in knowledge through structured teaching programme regarding cardio pulmonary resuscitation.The means of Prestest & Posttest are significantly different at P<0.001.The absolute value of the calculated 't' exceeds the critical value (56.3406>3.435), so the means are significantly different.

Table 4: Mean, standard deviation and t value of pretest and posttest skill score of subjects regarding cardio pulmonary resuscitation(N = 80)

SKILL	MEAN	MD	SD of mean difference	Df	't' value	P value
PRETEST	3.22	9.145	1.13	79	56.67	0.001*
POSTTEST	15.07					

*Significant ($p < 0.001$)

The data presented in table 5: depicts that the mean pretest skill score was 3.22, posttest skill score was 15.07. The mean difference was 9.145 and SD was 1.13. . The calculated_t' value was greater than the table value ($t_{(79)} = 56.6795$, $p< 0.001$). Hence H2 was accepted at 0.001 level of significance. Therefore it was concluded that there was significant gain in skill through structured teaching programme. The absolute value of the calculated 't' exceeds the critical value(56.6795>3.435), so the means are significantly different.

SUMMARY

The findings of the present study revealed a significant gain in knowledge and skill regarding CPR following a structured teaching programme. This study also revealed that there was association between pretest knowledge and selected variable such as Gender of the samples. So the formulated hypothesis H3 was accepted for this variable. There was association between pretest knowledge and gender other baseline variables such as age, course of study and family history of cardiac diseases do not shows significant association. Hence H3 was accepted for these variables. This study also revealed that there was association between pretest skill and selected variable such as Gender of the samples. Hence, H4 was accepted for these variable. There was no association between pretest skill and baseline variables such as age, course of study, family history of cardiac diseases and and source of information. This indicated that structured teaching programme was effective in improving the knowledge and skill regarding cardio pulmonary resuscitation irrespective of variations in their baseline data.