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Efficacy of Demonstration on Practice Regarding Cardio Pulmunory Resusitation among Teaching and Non Teaching Staff at M.G.M Co.Ed School and Kemfort Public School of Bhopal

Mr. Jubin Varghese, Mrs. Saniya Susan Issac

PhD Scholar, J. J. T. University, Jhunjhunu, Rajasthan, India

ABSTRACT

The present study has been conducted to know the effectiveness of demonstration on practice regarding cardio pulmonary resuscitation among teaching and non-teaching staff at M.G.M co.ed school and Kemfort public school of Bhopal, M.P. In order to achieve the objectives one group pretest posttest research design with interventional approach was adopted. The selection of the sample was done by convenient sampling. The sample size was 30. The method of data collection was using demographic variables questions and observational practice check list related to cardio pulmonary resuscitation. Results show that demonstration was effective in improving the practice regarding cardio pulmonary resuscitation and there was no significant association between pretest practice score with any selected demographic variables.

KEYWORDS: *cardio pulmunory resusitation, teaching and non teaching faculty, demonstration*

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INTRODUCTION

Sudden cardiac death (SCD) is a major clinical event which causes adverse effect on every country. In India 10% mortality occur due to heart attack. In India the cardiac arrest rises by around 34% from 155.7 to 209.1 deaths per one lakh population. Punjab, Haryana, Tamil nadu have highest burden of cardiac disease.

Heart attack (also called Myocardial infarction or MI) is one of the dreaded complications of heart disease (coronary artery disease or CAD), resulting from an accumulation of cholesterol plaque inside the coronary arteries.

Need for the study:-

According to world health organization report cardiovascular diseases are the number 1 cause of death globally taking an estimated 17.9 million lives each year an estimated 31% of all deaths worldwide. Greater than 75% deaths occur in low and middle income countries. 85% of cardio vascular disease is due to heart attacks and strokes.

More than three millions Indians die from cardiovascular disease every year and are expected to cross four million by the end of 2020. Estimates from World health organization (WHO) show that by 2030, cardiovascular disease will be the main cause of death throughout India, accounting for more than 35% of all deaths.

A heart attack occurs when a plaque suddenly ruptures, causing a rapid accumulation of clotting factors at the rupture site. This results in a sudden obstruction of blood flow in the coronary artery. This sudden obstruction prevents any blood from reaching the heart muscle. Without this vital supply of oxygen-rich blood, the heart muscle begins to die. The longer the obstruction persists, the greater the amount of heart muscle that dies.

Heart attack is a sudden event occurring in minutes as opposed to heart disease which is a chronic process, developing over several decades. Heart attack is an extremely serious condition, requiring immediate medical attention.

Without immediate treatment, a heart attack can cause permanent damage to the heart muscle and every minute 10% chance reduce to save the person and it can lead to death. Heart attack is about 10 times more common among

Indians younger than 40-45 years than Americans, with 30% of death occurring in people <40years of age Although severe chest pain is the classical symptom of a heart attack, up to one-fourth of it especially among people with diabetes, occurs without any chest pain. Such silent heart attacks are detected when an EKG is done for some unrelated reason.

Due to increase number of cardiac arrest cases per year and the main management is immediate care of victim with cardio pulmonary resuscitation, the medical source reach will take some time in such golden minutes if the CPR performed by common people they can prevent death of victim and able to become a savior so researcher planned to teach teaching and non-teaching staff the steps of CPR through demonstration to prevent anyone from cardiac arrest in their presence.

The aim of my study is to teach teaching and non-teaching staff of selected schools how to help people in cardiac arrest and be a part of life saving through learning effective method of CPR.

OBJECTIVES

1. To assess the pretest practice regarding cardio pulmonary resuscitation among teaching and non-teaching faculty of selected schools.
2. To prepare a demonstration schedule on CPR.
3. To demonstrate CPR among teaching and non-teaching faculty of selected schools.
4. To assess the difference between pretest practice and posttest practice score regarding CPR among teaching and non-teaching staff of selected schools.
5. To find out the association between pretest practices score regarding CPR with selected demographic variables of teaching and non-teaching staff.

Hypotheses

HO_1 :- There will be no significant difference between pretest and posttest practice score regarding CPR among teaching and non-teaching staff at selected school.

H_1 :- There will be significant difference between pretest and posttest practice score regarding CPR among teaching and non-teaching staff at selected school.

HO_2 :- There will be no significant association between pretest practice score of teaching and non-teaching staff regarding CPR with selected demographic variables.

H_2 :- There will be significant association between pretest practice score of teaching and non-teaching staff regarding CPR with selected demographic variables.

MATERIALS AND METHODS:-

RESEARCH APPROACH AND DESIGN:-

The research approach in the study was interventional approach.

The Research design used for this study is pre-experimental one group pretest posttest design.

Setting of the study:- The study was conducted in selected schools of Bhopal.

Study duration: 4 weeks.(May 2018)

Study population: consisted of teaching and non-teaching staff of M.G.M co.ed school and Kemfort public school of Bhopal.

Sample size: 30

Inclusion criteria

1. Teaching and non-teaching staff who was interested to participate in the study.
2. Teaching and non-teaching faculty of selected schools.
3. Who did not participated in any kind of CPR classes.

Exclusion criteria

1. The teaching and non-teaching staff who participated/ attending the CPR demonstration

Data collection procedure

The formal permission was obtained from the principal of M.G.M co.ed school and Kemfort public school. A total of 30 teaching and non-teaching staff was selected for the study as per the inclusion criteria of study. Self-introduction was given to the samples. The purpose of the study was explained to them and practice check list used for assessment of practice regarding CPR and then provided demonstration on CPR. And on fifth day posttest conducted by using same practice check list.

Statistical analysis:-

Analysis of data was done in accordance with the objectives. The data was analyzed using frequencies and percentage for demographic variables. Mean,range, standard deviation was used to describe the level of practice score. Paired "t" test was also done to find out the effectiveness of demonstration in terms of practice. Chi-square was used to describe the association between the pretest score of practice with the selected demographic variables.

RESULTS

A total of 30 teaching and non-teaching staff of selected M.G.M school and Kemfort public school of Bhopal participated in the study. The demographic variables of the study subjects were analyzed using descriptive statistics and were presented in terms of frequency and percentage as shown in Table 1.

Table 1 Distribution of subjects based on demographic variables.

Sl. no	demographic variables	Frequency (F)	Percentage (%)
1.	**AGE IN YEAR**		
	A. 23-28	11	36.6
	B. 29-33	07	23.33
	C. 34-38	05	16.6
	D. 39 and above	07	23.3
2.	**GENDER**		
	A. Male	04	13.3
	B. Female	26	86.6

3.	**RELIGION** A. Hindu B. Muslim C. Christian D. Buddhist E. other	 23 05 00 00 02	 76.6 16.6 00 00 6.6
4.	**EDUCATIONAL QUALIFICATION** A. 12th B. Graduate C. Post graduate D. Doctorate	 01 09 18 02	 3.3 30 60 6.6
5.	**PREVIOUS KNOWLEDGE OF CPR** A. Yes B. No	 14 06	 46.6 53.33
6.	**DESIGNITION** A. Teaching B. Non-teaching	 25 05	 83.33 16.6

In the present study, majority of samples are at the age group of 23-28 years (36.6%), females (86.6%), Hindus (76.6%), post graduate (60%), had no previous knowledge regarding CPR (53.33%) and teaching faculty (83.33%).

Table 2 Distribution of overall practice score

s. no	practice score	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
1	Poor (0-10)	25	83.33	00	00
2	Average (11-20)	05	16.66	08	26.66
3	Good (21-30)	00	00	22	73.33

In the pretest assessment 83.33% (25) sample had poor practice, 05 (16.66%) had average practices, no one had good practice regarding CPR. Whereas, in posttest 22 (73.33%) had good practice, 08 (26.66%) samples had average practice and no one had poor practice regarding CPR as shown in table 2.

Table 3 Testing of hypotheses 1 (Evaluate the effectiveness of demonstration on CPR

Sl. no	Observations	mean	Mean difference	Standard deviation	Calculated "t" value	d.f	"p"
1	Pre test	7.8	15.36	2.58	22.09	29	0.05
2	Post test	23.16		3.22			

The skills gained by respondents in results shows that the mean value of practice in pretest was 7.8 and at post-test was 23.16. Since the "p" value for the test is 0.05. The calculated "t" value was 22.09 which show that there was a significant difference between mean pretest and mean post-test practice score. Since the obtained value is greater than the table value HO_1 was rejected and H_1 was accepted, hence the demonstration was effective to improve the practice of teaching and non-teaching staff regarding CPR.

Table: - 4Testing of hypotheses 2 (Association between pretest practice score of teaching and non-teaching staff with selected demographic variables.

Sl. no	Demographic variables	Mean		Obtained value	Table value	d. f	Inference
		≤	>				
1.	**AGE IN YEAR** A. 23-28 B. 29-33 C. 34-38 D. 39 and above	 07 04 03 06	 04 03 02 01	1.55	7.82	3	NS
2.	**GENDER** A. Male B. Female	 03 17	 01 09	.12	3.84	1	NS
3.	**RELIGION** A. Hindu B. Muslim C. Christian D. Buddhist E. other	 14 04 00 00 02	 09 01 00 00 00	1.7	9.49	4	NS

4.	**EDUCATIONAL QUALIFICATION** A. 12th B. Graduate C. Post graduate D. Doctorate	 01 05 13 01	 00 04 05 01	2.17	7.82	3	NS
5.	**PREVIOUS KNOWLEDGE OF CPR** A. Yes B. No	 16 04	 08 02	00	3.84	1	NS
6.	**DESIGNITION** A. Teaching B. Non-teaching	 18 02	 07 03	1.9	3.84	1	NS

S= significance, NS= not significance, d.f= degree of freedom.

Table value= 1=3.84, 3= 7.82, 4=9.49

Chi-square is used to find out the association between pretest score of practice with demographic variables. On computing it was found that there was no significant association between pretest practices with any demographic variable sat 0.05 levels of significances. So $H0_2$ was accepted and H_2 was rejected.

DISCUSSION:-

In the present study, majority of samples are at the age group of 23-28 years (36.6%), Females (86.6%), Hindus (76.6%), post graduate (60%), had no previous knowledge regarding CPR (53.33%) and teaching faculty (83.33%).

In the pretest assessment majority of sample 83.33% (25) had poor practice whereas, in posttest majority of samples had 22 (73.33%) had good practice regarding CPR The skills gained by respondents in results shows that the mean value of practice in pretest was 7.8 and at post-test was 23.16. since the "p" value for the test is 0.05. the calculated "t" value was 22.09 which shows that there was a significant difference between mean pretest and mean post-test practice score. Since the obtained value is greater than the table value HO_1 was rejected and H_1 was accepted, hence the demonstration was effective to improve the practice of teaching and non-teaching staff regarding CPR.

There was a no significant association between pretest practice and selected demographic variables. Hence $H0_2$ was accepted and H_2 was rejected.

CONCLUSION

Intervention of demonstration regarding practice on CPR was effective in pre-experimental group (teaching and non-teaching staff).

Scope of the study:-

1. This study helps teaching ad non-teaching staff to save the life of people who get cardiac attack.
2. Teaching and non-teaching staff can teach more people the effective technique of CPR which help more victim to survive during the peak time of cardiac arrest.
3. They can able to recognize and able to manage the cardiac arrest in initial stage till the medical team reach towards the victim.

Limitations

The limitations of the study were,

1. The main limitation was researcher only assessed the effectiveness of practice for a short period of time regarding CPR.
2. The duration of the study is limited for four weeks only. This limits the generalization of the study findings.
3. Sample size is limited to 30 only.
4. Sample conducted only in 2 schools.
5. Study material prepared in English.

Recommendation

On the basis of the findings of the study, the following recommendations were made.

1. The study can be done at different schools to provide practice of CPR to teaching and non-teaching staff.
2. A similar study can be done to assess the attitude of teaching and non-teaching staff regarding CPR.

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