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Effectiveness of structured teaching programme on knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

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Abstract: CPR is an essential part of medical care. They are usually the first responders when medical emergencies occur. The nature of the work of caregiver makes it necessary for them to be knowing with the essential early medical care skills. This study will help to improve knowledge and practices skills regarding hands only CPR among caregivers. **Objectives**- To assess effectiveness of structured teaching programme on knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas. To assess the knowledge of hands only CPR among caregivers of cardiac patients at hospitals in selected areas. To assess the practice of hands only CPR among caregivers of cardiac patients at hospitals in selected areas. To assess the effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas. To assess the effectiveness of structured teaching programme on practice of hands only CPR among caregivers of cardiac patients at hospitals in selected areas. To find association of study findings with selected demographic variables. **Material and Methods**-The research methodology adopted for the study was quantitative research approach. The investigator used pre-experimental, one group pretest-post- test group design. The findings of the study revealed that the structured teaching programme was effective on knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas

Effectiveness-In this study, effectiveness refers to improvement in the knowledge and practice scores regarding hands only CPR. **Hands only CPR**-In this study hands only CPR is CPR without giving breaths, only chest compression given on manikin for training and practice of hands only CPR. **Structured Teaching Programme**-In this study it refers to systematically designed instruction and demonstration program to provide information regarding Hands only CPR to caregivers of cardiac patients.

I. INTRODUCTION

„Anyone, at any moment, can now perform cardiac resuscitation. Only two hands are needed". Cardiac arrests will happen anywhere, at any moment, and people will need assistance. People will save a life because they have the opportunity to do so. Cardiopulmonary resuscitation (CPR) keeps the blood pumping and delivers oxygen to the brain and other vital organs, raising the victim's chances of a full recovery. According to the American Heart Association, untrained people may do hands-only CPR before help comes if they feel nervous placing their mouth on a stranger's mouth since the other person might have COVID-19 (AHA).[1]

Nearly 383,000 cardiac arrests occur outside of hospitals, with 88% of those occurring at home. Approximately one-third of cardiac patients die within twenty-eight days of onset of symptoms, and two-thirds die before reaching the hospital. Many cardiac arrest patients tend to be in good health, with no known cardiac disease or other risk factors.[2]

Up to 70% of out-of-hospital cardiac arrests are witnessed by family members, friends, and other bystanders. These bystanders can play a vital role in delivering help before a professional help arrives. Mandatory nationwide training of school children has shown the highest impact in improving the bystander cardiopulmonary resuscitation (CPR) rate.[3]

Eliminating mouth-to-mouth contact during CPR is believed to reduce the chances of any bystander about infection. The capacity of trainees to understand and perform effective chest compressions is also improved by simplifying CPR instruction. Finally, removing ventilation instructions from an area of CPR decreases the time it takes to start compressions, as demonstrated in both simulated and real-life, out-of-hospital resuscitation settings.[4]

The majority of Out of Hospital Cardiac Arrest (OHCAs) have a cardiac cause, and the incidence of cardiac arrest is higher in patients with coronary artery disease, hypertension, diabetes mellitus, and hyperlipidaemia. Bystanders and family caregivers could perform CPR before EMS arrival. Family caregivers could not perform CPR because they are untrained, for this situation hands-only CPR is an opportunity to improve the survival of a cardiac patients.[5]

Hands only CPR is an alternative term like compression only CPR. Hands-only CPR involves pumping the chest and giving chest compressions. It is more effective than the traditional, mouth-to-mouth CPR method. The duration between instant response and arrival of a defibrillator is necessary to save the life. Giving chest compression and pushing hard and fast on the victi m"s chest,

will only aid in circulating the required amount of oxygen in the brain, heart and lungs. According to medical experts, rescue breathing or traditional CPR is not appropriate in most first aid scenarios. The process is performed by an inexperienced person might cost them valuable time. Another point that proves hands-only CPR is more effective than traditional CPR is that mouth-to-mouth breathing instructions in most cases are provided over the phone. This makes the entire process a difficult one to comprehend and perform by a bystander. A medical emergency associated with cardiac arrest does not need breathing in, but the traditional CPR practice makes a situation critical for an untrained person.[6]

OBJECTIVES OF THE STUDY

Primary objective

1.To assess effectiveness of structured teaching programme on knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

OBJECTIVES

1.To assess the knowledge of hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

2.To assess the practice of hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

3.To assess the effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

4.To assess the effectiveness of structured teaching programme on practice of hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

5.To find association of study findings with selected demographic variables.

Research approach

In this study, researcher used Quantitative research approach. The selection

Research design

The current study used a pre-experimental one group pre-test post-test design. Pre-experimental research design involves the manipulation of independent variable to observe the effect of dependent variable. One-group pretest-post-test design: It is the simplest type of pre-experimental design where only the experimental group is selected as the study subject.

Population

Population is an entire group of people or objects or events which all have at least one characteristic in common, and must be define specifically and unambiguously; a sample is any part of population regardless of whether it is any part of a population regardless of whether it is representative or not.[7]

The population is a complete set of individuals or objects that possess some common characteristic of interest to the researchers.[7] Present student population is 60.

SAMPLE & SAMPLING TECHNIQUE

Sample:

In the present study, the sample selected for the study was caregivers of cardiac patients at hospitals of selected area.

Sampling Technique:

The non-probability convenient sampling strategy was utilized in this investigation. Researchers adopted this sampling method because they wanted to collect samples at their leisure, it is more easily accessible, and it is simple to collect data quickly.

DATA ANALYSIS AND INTERPRETATION

Organization of the data

Section I-Description of samples (caregivers of cardiac patients at hospitals) based on their personal characteristics in terms of frequency and percentage.

Section II- Analysis of data related to the knowledge of hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

Section III-Analysis of data related to the practice of hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

Section IV-Analysis of data related to the effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

Section V-Analysis of data related to the effectiveness of structured teaching programme on practices regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

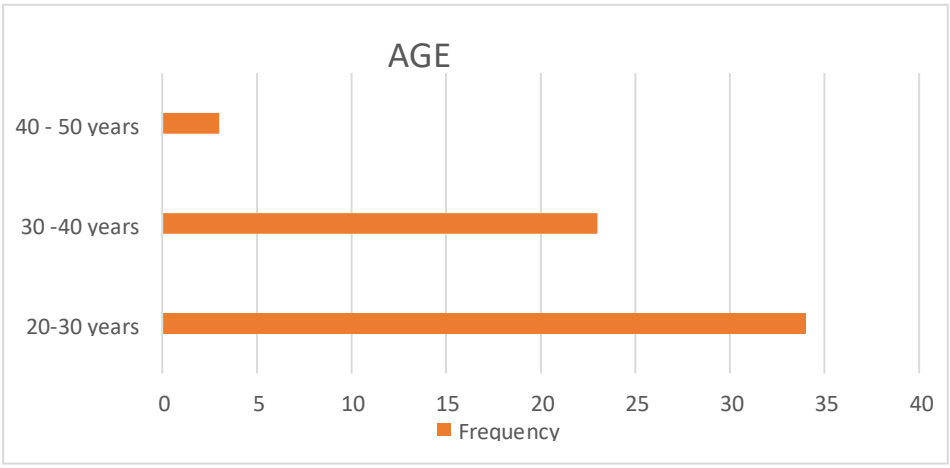
Section VI-Analysis of data related to association of knowledge among caregivers of cardiac patients at hospitals with selected demographic variables.

Section I-Description of samples (caregivers of cardiac patients at hospitals) based on their personal characteristics

Table 1: Description of samples (caregivers of cardiac patients at hospitals) based on their personal characteristics in terms of percentage n=60

Age	Frequency	%
20-30 years	34	56.7%
30 -40 years	23	38.3%
40 - 50 years	3	5.0%

In this study, 56.7% of the cardiac patients belongs to age 20-30 years, 38.3% ofthem belongs to age 31-40 years and 5% of them had age 41-50 years.



Graph no. 1 : Graph showing percentage wise distribution ofcaregivers of cardiac patients according to the Age.

Table 2: Distribution of demographic data of sample in a group according totheir Gender. n=60

Gender	Frequency	%
Male	35	58.3%
Female	25	41.7%

In this study 58.3% of them were males and 41.7% of them were females.

Table 3: Distribution of demographic data of sample in a group according totheir Occupation. n=60

Occupation	**Frequency**	**%**
Government employee	5	8.3%
Private employee	25	41.7%
Business	11	18.3%
Homemaker	19	31.7%

In study 8.3% of them were government employees, 41.7% of them were privateemployees, 18.3% of them had business and 31.7 % of them were homemakers

Table 4: Distribution of demographic data of sample in a group according totheir Education. n=60

Education	**Frequency**	**%**
Primary	9	15.0%
Secondary	34	56.7%
Higher secondary	14	23.3%
Undergraduate	3	5.0%

15% of them had primary education, 56.7% of them had secondary education, 23.3% of them had higher secondary education and 5% of them were under graduates.

Table 5: Distribution of demographic data of sample in a group according to their Previous witness of CPR/hands only CPR in real life situation. (n=60)

Previous witness of CPR/handsonly CPR in real life situation	Frequency	%
Yes	3	5.0%
No	57	95.0%

In this study 5% of them had previous witness of CPR/hands only CPR in real life situation. 95% of them not have a witness of CPR/hands only CPR in real life situation.

Table 6: Distribution of demographic data of sample in a group according to Relation with patient n=60

Relation with patient	Frequency	%
Mother	5	8.3%
Father	2	3.3%
Brother/Sister	15	25.0%
Spouse	13	21.7%
Other specify	25	41.7%

In this study 8.3% of them were mothers of patients, 3.3% of them were father of patients, 25% of them were brother/sister of patients, 21.7% of them were spouse and 41.7% of them had some other relationship with patient.

Section II-Analysis of data related to the knowledge of hands only CPR among caregivers of cardiac patients at hospitals in selected areas

Table 1: Knowledge of hands only CPR among caregivers of cardiac patients athospitals in selected areas n=60

Knowledge	Pretest	
	Freq	%
Poor (score 0-6)	37	61.7%
Average (score 7-13)	23	38.3%
Good (score 14-20)	0	0.0%

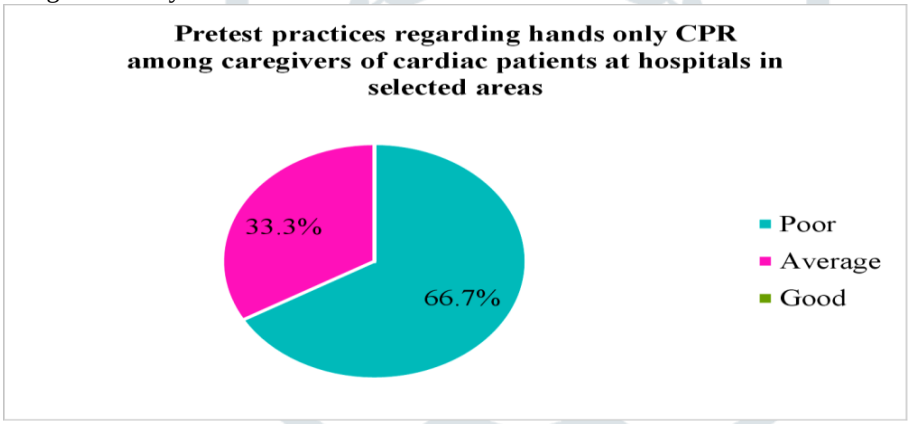
61.7% of the caregivers of cardiac patients at hospitals had poor knowledge (Score 0-6) and 38.3% of them had average knowledge (Score 7-13) regarding hands only CPR.

Section III-Analysis of data related to the practice of hands only CPR among caregivers ofcardiac patients at hospitals in selected areas.

Table 1: Practices of hands only CPR among caregivers of cardiac patients athospitals in selected areas. n=60

Practices	Pretest	
	Freq	%
Poor (score 0-4)	40	66.7%
Average (score 5-9)	20	33.3%
Good (score 10-13)	0	0.0%

66.7% of the caregivers of cardiac patients at hospitals had poor practices (score 0- 4) and 33.3% of them had average knowledge (score 5-9) regarding hands only CPR.



Graph no. 2: Pie diagram showing Percentage wise distribution of pre-testpractices caregivers of cardiac patients at hospitals.

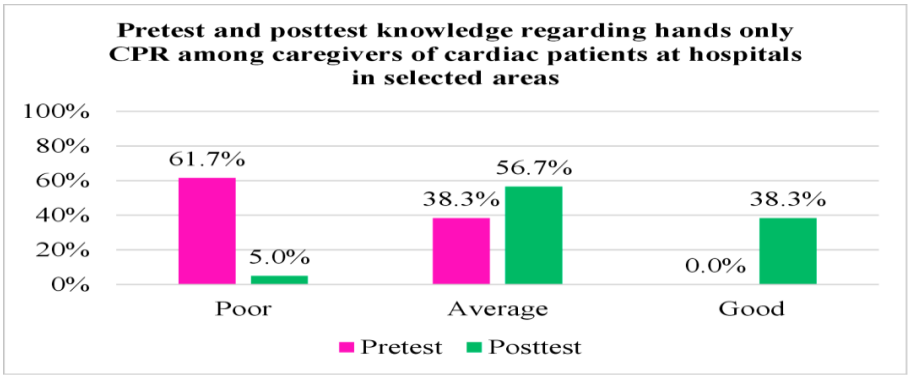
Section IV

Analysis of data related to the effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patientsat hospitals in selected areas.

Table 1: Effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals inselected areas. n=60

Knowledge	Pretest		Posttest	
	Freq	%	Freq	%
Poor (score 0-6)	37	61.7%	3	5.0%
Average (score 7-13)	23	38.3%	34	56.7%
Good (score 14-20)	0	0.0%	23	38.3%

In pretest, 61.7% of the caregivers of cardiac patients at hospitals had poor knowledge (Score 0-6) and 38.3% of them had average knowledge (Score 7-13) regarding hands only CPR. In posttest, 5% of the caregivers of cardiac patients at hospitals had poor knowledge (Score 0-6) and 56.7% of them had average knowledge (Score 7-13) and 38.3 the caregivers of cardiac patients at hospitals had good knowledge (score 14-20) regarding hands only CPR. This indicates that the knowledge among caregivers of cardiac patients at hospitals improved remarkably after structured teaching program.

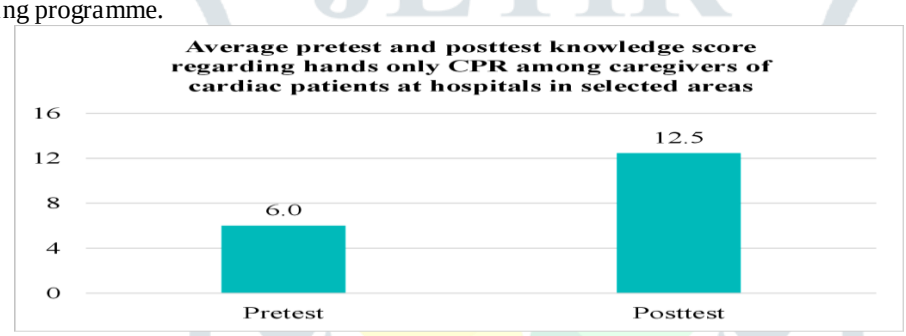


Graph no. 3.Bar diagram showing Percentage wise distribution knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals.

Table 2: Paired t-test for the effectiveness of structured teaching programme on knowledge regarding hands only CPR among caregivers of cardiac patientsat hospitals in selected areas. n=60

	Mean	SD	T	df	p-value
Pretest	6.0	1.9	13.1	59	0.000
Posttest	12.5	3.0			

Researcher applied paired test for the effectiveness of structured teachingprogramme on knowledge regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas. Average knowledge score in pre-test was 6 which increased to 12.5 in post-test. T-value for this test was 13.1 with 59 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. It is evident that the knowledge among caregivers of cardiac patients improved significantly after structured teaching programme.



Graph no. 4: Bar diagram showing Percentage wise distribution knowledge pre-test and post-test mean scores of knowledge regarding hands only CPR before and after structured teaching programme among caregivers of cardiac patients at hospitals

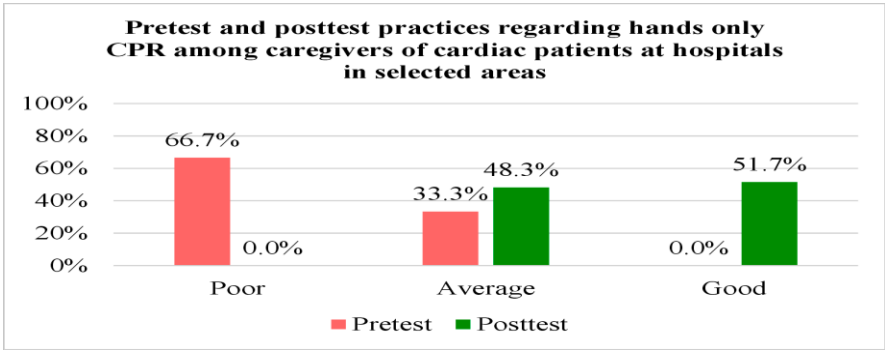
Section V

Analysis of data related to the effectiveness of structured teaching programme on practices regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas.

Table 1: Effectiveness of structured teaching programme on practices regarding hands only CPR among caregivers of cardiac patients at hospitals inselected areas. n=60

Practices	Pre-test		Post-test	
	Freq	%	Freq	%
Poor (score 0-4)	40	66.7%	0	0.0%
Average (score 5-9)	20	33.3%	29	48.3%
Good (score 10-13)	0	0.0%	31	51.7%

In pre-test, 66.7% of the caregivers of cardiac patients at hospitals had poor practices (score 0-4) and 33.3% of them had average knowledge (score 5-9) regarding hands only CPR. In post-test, 48.3% of them had average practices (Score 5-9) and 51.7% of them had very good practices (score 10-13) regarding hands only CPR. This indicates that the practices among caregivers of cardiac patients improved remarkably after structured teaching program.

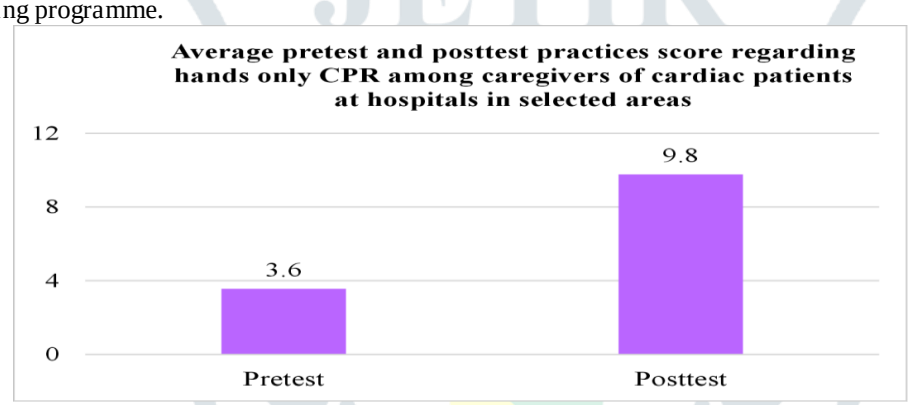


Graph no.5 : Bar diagram showing Percentage wise distribution practice regarding hands only CPR among caregivers of cardiac patients at hospitals.

Table 2: Paired t-test for the effectiveness of structured teaching programme on practices regarding hands only CPR among caregivers of cardiac patientsat hospitals in selected areas. n=60

	Mean	SD	T	df	p-value
Pretest	3.6	1.7	23.3	59	0.000
Posttest	9.8	1.4			

Researcher applied paired test for the effectiveness of structured teaching programme on practices regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas. Average practices score in pretest was 3.6 which increased to 9.8 in posttest. T-value for this test was 23.3 with 59 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. It is evident that the practices among caregivers of cardiac patients improved significantly after structured teaching programme.



Graph no.6 : Bar diagram showing Percentage wise distribution pre-test and post-test mean scores of practice regarding hands only CPR before andafter structured teaching programme among caregivers of cardiac patients athospitals.

Section VI

Analysis of data related to association of knowledge among caregivers ofcardiac patients at hospitals with selected demographic variables.

Table 1: Fisher's exact test for the association of knowledge among caregiversof cardiac patients at hospitals with selected demographic variable n=60

Demographic variable		Practices		p-value
		Poor	Average	
Age	20-30 years	24	10	0.435
	30 -40 years	15	8	
	40 - 50 years	1	2	
Gender	Male	23	12	1.000
	Female	17	8	
Occupation	Government employee	2	3	0.320
	Private employee	15	10	
	Business	9	2	
	Homemaker	14	5	
Education	Primary	7	2	0.807
	Secondary	23	11	
	Higher secondary	8	6	
	Undergraduate	2	1	
Previous witness of CPR/hands only CPR inreal life situation	Yes	1	2	0.255
	No	39	18	

Relation with patient	Mother	3	2	0.150
	Father	0	2	
	Brother/Sister	8	7	
	Spouse	10	3	
	Other specify	19	6	

Since all the p-values are large (greater than 0.05), none of the demographic variable was found to have significant association with the practices among caregivers of cardiac patients at hospitals regarding hands only CPR.

CONCLUSION

The findings of the study revealed that the structured teaching programme was Effectiveness of structured teaching programme on knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals in selected areas. Thus study suggest that structured teaching programme is an teaching technique that‟s help the caregiver in the easy to improvement in knowledge and practice regarding hands only CPR among caregivers of cardiac patients at hospitals , in an easy ,simple ,cost effective way without any complication and it‟s an emergency procedure that will save the life of closed ones

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