

# A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge and Practice Regarding Adult Cardio Pulmonary Resuscitation among Road Traffic Police in Nadiad City

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## Abstract

**Background:** The initial few minutes following an emergency are very crucial care provided during this period has direct bearing on the final outcome in an emergency. Cardiopulmonary resuscitation (CPR) is an emergency clinical procedure for the victim of cardiac arrest or, in a few instances, Respiratory arrest.

**Aim:** This study was conducted to assess the effectiveness of structured teaching program on knowledge and practice regarding adult cardio pulmonary resuscitation among Road traffic police in Nadiad city, India

**Material and Method:** A quasi experimental research study design was used to conduct this study at Nadiad, India from January, 2020 to July, 2020, with pre experimental – one group pre-test and post test design. The knowledge Structure questionnaire and practice checklist was developed to assess the knowledge and practice of adult cardio pulmonary resuscitation among 60 road traffic police.

**Results:** This study revealed that the pre-test knowledge range was 19, mean 14.05, standard deviation was 4.18, mean percentage was 56.2 % while the post test knowledge range was 14-29, mean 21.11, standard deviation was 3.07, and mean percentage was 72.7 %. The outcome of paired t-test knowledge score and statistical significance based on Paired t-test as follows: The maximum score was 26, mean was 9.73, standard deviation was 3.85, mean percentage was 37.4% and paired t-test value was 19.56 that hence there exists a significance effectiveness on level of knowledge before and after administration of adult cardiopulmonary resuscitation among Road traffic police.

**Keywords:** Adult CPR (Cardio Pulmonary Resuscitation), Road Traffic Police, Manikin, Knowledge and Practice

## Introduction

The initial few minutes following an emergency are very crucial, in which it is called the golden hour. As it is truly Golden Hour because of the care provided during this period has direct bearing on the final outcome in an emergency. Cardiopulmonary resuscitation (CPR) is an

emergency clinical procedure for the victim of cardiac arrest or, in a few instances, respiratory arrest.<sup>1</sup> WHO census information mortality because of cardiac reasons has overtaken mortality due to all cancers put together. Dr Balbir Singh, one of the leading intervention cardiologists in India, has exhorted the Indian population to watch out for the risks of Sudden Cardiac Arrests that may lead to death of an character within a few minutes.<sup>2</sup>

CPR increases the opportunity of surviving surprising cardiac arrest. But it's no longer just skilled experts who can take part to perform CPR. There are basic, steps which may save the life and any lay person

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can take.<sup>3</sup>

Indian Medical Association (IMA) past president K. K. Aggarwal said: ““Learning CPR quantities to actual voluntary activity. All medical staff and youngsters people ought to be taught on this method as medical doctors might not be able to attain the victim within the first 10 minutes always.” Doctors said it have to be made the duty and obligation of each bystanders to save lives.<sup>4</sup> Cardiovascular disease (CVDs) is disorders of the cardiac and arteries, veins and addition of coronary heart disease cerebrovascular disorders, rheumatic heart disease and different situations.<sup>5</sup> The Most sudden cardiac deaths are caused by abnormal heart rhythms called arrhythmias. The most common life-threatening arrhythmia is ventricular fibrillation, which is an erratic, disorganized firing of impulses from the ventricles (the heart’s lower chambers). When this occurs, the heart is unable to pump blood and death will occur within minutes, if left untreated.<sup>6</sup>

The American Heart Association calculated that three, 30,000 Americans die every year from coronary heart sicknesses. Among these, about 2,50,000 deaths occur inside the out-of-health facility setting due to the fact their coronary heart stops beating and urges CPR training on a big scale.<sup>7</sup> Hence study was conducted to assess the effectiveness of structured teaching program on knowledge and practice regarding adult cardio pulmonary resuscitation among road traffic police in Nadiad city, India.

### Methodology

The present study used a quantitative approach with quasi experimental – one group pretest post test design conducted on 60 Road Traffic Policemen at Seminar Hall of Dinsha Patel College of Nursing which is located in Nadiad, Gujarat, from January, 2020 to July, 2020. Necessary permission was obtained from ethical committee (DPCN/1<sup>ST</sup> IEC/2018-19/03),

president of the Nadiad traffic police education trust. Informed consent from the Road Traffic police who were agreeable to participate in the current study was obtained. For the selection of the sample size stratified random sampling technique was used and for calculation the SPSS Software has been used. All subjects had the right to withdraw from the study at any time without any reasoning. To assess the knowledge domain following tools were used i.e., demographic data sheet, structured questionnaire, structure teaching program and practice checklist. (A) Study tool of demographic variable was used to assess age, gender, family from health care, source of information, religion, education, monthly income and if they have previously attended training of CPR. The second section of tool was (B) Structure questionnaire developed by researcher to assess about the knowledge the practice and comprised of checklist and structure teaching programme schedule was used in this study. After obtaining the permission from the concerned authorities the investigator introduced it to the study subjects and explains the purpose of study. The data collected by using reliable validated tool. The objectives for the pilot study were the validate consistency of the data collection instrument, adequacy of the content, feasibility, of the study and time duration required for responding the data collection instrument. The researcher clarified the aim of the study to all Road Traffic police in the study sample. The investigator administered pretest on a 1st day than administered Structure Teaching Programme on the same day and two consecutive days. On 7th day post-test was done by researcher along with the practice assessment.

### Results

The knowledge and practice of CPR among road traffic police were assessed by conducting pre test and post-test in n=60 before and after application of structured teaching program.

**Table 1: Demographic characteristics of research sample**

SN	Variables	Categories	(F)	%
1	Age	a) 20 -29	25	41.7
		b) 30 - 39	35	58.3
		c) 40 - 49	-	0
		d) 50 - 60	-	0
2	Gender	Male	60	100
		Female	-	0
3	Religion	Hindu	45	75
		Christian	-	0
		Muslim	15	25
		Other	00	0
4	Family health care	a) Father	07	11.6
		b) Mother	21	35
		c) Brother	6	10
		d) Sister	9	15
		e) Nobody	17	25
5	Sources of Information	a) Mass media	18	30
		b) Teachers	01	1.7
		c) Relatives	35	58.3
		d) Others	6	10
6	Education status	a) Secondary	-	0
		b) Higher Secondary	54	90
		c) Degree	6	10
7	Monthly Income	a. Below-10000	56	99.3
		b) 10001-15000	04	6.7
		c) 15001-20001	-	0
		d) above 20001	-	0
	Previously attended training	a) Yes	-	0
		b) No	60	100

**Table 2: Knowledge Pre-test Score**

Variable	Max score	Knowledge Pre-test score			
		Range	Mean	SD	Mean %
Level of knowledge	30	6-29	14.05	4.18	56.2

**Table 3: Knowledge Post-test Score**

Variable	Max score	Knowledge Pre-test score			
		Range	Mean	SD	Mean %
Level of knowledge	30	15	21.11	3.07	84.44

**Table 4: statistical analysis value of**

Paired-t test knowledge score.

Knowledge	Max. Score	Enhancement		Paired t-test ( p<0.05 )
		Mean	SD	
Overall	30	7.066	5.81	9.41

In reference to the association of knowledge regarding CPR among Road traffic police with demographic variables there was not significant association of knowledge score with their variables like age, family background, source of information, religion, and income, etc.. But, the association of practice regarding CPR on road traffic accident among Road traffic police with demographic variables there was significant association of practice score with income per month and source of information for chi square value of source of information and income was 0.02122 and 0.0226 respectively that suggests chi square value with these two variables were not independent but interlinked and has significant association between variables.

**Discussion**

The current study sought to characterize traffic police knowledge and attitudes towards cardiac arrest,

as well as their perceived willingness to perform CPR in situations. Prior to this work, in-depth research investigating this topic in a Indian context had not been undertaken, but was thought to be important in light of persistently low rates of CPR performers and survival from road traffic cardiac attack events. Moreover in 2016 Haryana, the pre-experimental study the final outcome of the study illustrates that in which mean post test scores were notable higher than mean pre test scores<sup>8</sup>. And also similar to that a quasi experimental study conducted by Priyanka Chaudhary in 2018, with the samples from schools of Guru Hargobind College, where in result, teaching programme had a wonderful influence on of nursing college student’s knowledge regarding basic life support<sup>9</sup>.

## Conclusion

The present study was to design to assess the effectiveness of Structured Teaching Program on knowledge and Practice regarding Adult Cardio Pulmonary Resuscitation among Road Traffic Police in Nadiad city. To conclude, the result reveals that the structured teaching programme on cardio pulmonary resuscitation was effective in improving knowledge and practice regarding adult cardio pulmonary resuscitation among road traffic police.

## Recommendations

Based on the findings uncovered in this study and the above deliberation, proposing recommendations:

1) The development of a standardized educational plan that is tailored to consider the specific findings from my research. This comprises key domains: recognition of cardiac arrest, focusing on the basics with chest-compression-only CPR, re-conceptualizing the public perspective in CPR guidelines.

2) The development of a more effective strategy for translating knowledge regarding cardiac arrest

**Conflict of Interest:** Nil

**Sources of Funding:** Self

**Ethical Clearance:** the study was approved by Institutional ethical committee *IEC – DPCN/1<sup>st</sup> IEC/2018-19/03* and a formal written permission was gathered from the authority of Traffic police.

**Statement of Informed consent:** Informed consent was acquired from the participants.

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