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" A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM IN TERMS OF KNOWLEDGE REGARDING CARDIO PULMONARY RESUSCITATION AMONG THE HOME GUARD IN NADIAD CITY.

Cardiology

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ABSTRACT

Introduction : Cardiopulmonary Resuscitation (CPR) is a critical emergency procedure used when a person's heart stops or they stop breathing. It consists of chest compressions and rescue breaths to keep blood circulating and provide oxygen to the body until medical professionals arrive. **Aims** : This study evaluated the effectiveness of structured teaching program designed to improve knowledge of CPR among home guards in Nadiad city. **Methods** : A pre-experimental one-group pre-test post-test research design was utilized, involving 60 home guards selected through non-probability purposive sampling technique, the participant's CPR knowledge was assessed using a structured knowledge questionnaire before & after the structured teaching program. **Result :** Initial pre test results revealed a general deficiency in comprehensive cpr knowledge among home guards. However, after structured teaching program results showed a significant improvement, with the mean pre test knowledge 2.50 to means post test knowledge 7.42. In pre test they having 51(85%) poor knowledge & 09(15%) average knowledge, and in post test 47(78.33%) having average knowledge & 13(21.67%) having good knowledge by using chi square and paired t test value was 19.1815 that hence confirmed the significance of this improvement. **Conclusion :** The finding indicate that the structured teaching program significantly enhanced CPR knowledge among home guards.

KEYWORDS

Assess, effectiveness, structured teaching program, knowledge, cardio pulmonary resuscitation, home guard.

INTRODUCTION

Cardiopulmonary resuscitation (CPR) is a lifesaving procedure crucial in medical emergencies where the victim is unresponsive, not breathing, and has no heartbeat. According to the American Heart Association (AHA) 2020 guidelines, anyone can begin CPR with chest compressions without formal training.The chain of survival refers to a series of action that, when properly executed, reduce the death rate associated with cardiac arrest. This chain includes Early recognition of cardiac arrest and activation of the emergency response system, Early CPR with an emphasis on chest compressions, Rapid defibrillation to restore heart function, Early advanced cardiac life support, Advanced post-cardiac arrest care and recovery.[1]

Cardiopulmonary Resuscitation (CPR) is a critical emergency procedure designed to revive individual who have stopped breathing and whose hearts have ceased beating. It combines 'cardio' (heart) and 'pulmonary' (lung) functions to sustain life until professional medical help arrives. Cardiac arrest, which disrupts blood flow and can cause multi-organ failure, requires immediate action through CPR, including chest compressions and the use of an Automated External Defibrillator (AED). In community settings, where medical assistance might be delayed, by standers play a crucial role. The must apply CPR promptly and effectively to increase the victim's chances of survival.[2]

Cardio pulmonary resuscitation (CPR) is a vital emergency procedure used to maintain blood flow and oxygenation to the brain and other vital organ when someone's heart and breathing have stopped. Cardio pulmonary resuscitation should be administered immediately when a person is unresponsive and not breathing normally. The procedure helps to maintain circulation and oxygenation until professional medical help arrives.[3] For adults, CPR (cardio pulmonary resuscitation) involves delivering chest compressions at a depth of 5 to 6 cm (2.0 to 2.4 inches) and at a rate of 100 to 120 compressions per minute. This guideline is supported by organizations like the American Heart Association (AHA). The goal is to ensure adequate blood flow to vital organ until professional medical help can take over.[4]

METHODS

The current Study employed a quantitative approach using a quasi-experimental, One-group pre-test post-test design. It was conducted on 60 Homeguards at Smt. Kundanben Dinsha Patel Auditorium in Nadiad, Gujarat. This study was conducted following approval from the institution ethics committee. A pre-validated structured teaching program were provided to the Homeguards of nadiad city, using a non probability purposive sampling technique. Written informed consent was obtain from all participants. For the structured knowledge questionnaire on Cardio Pulmonary Resuscitation, total maximum score is 10. The cut-off scores were determined as follows: a score of less than 5 indicated poor knowledge, a score between 5 and 8 indicated average knowledge, and a score above 8 indicated good knowledge of CPR. The investigators conducted a pre-test, followed by structured teaching program, and then administered a post test, all on the same day. The data were analyzed by examining the frequency and percentage of knowledge before and after structured teaching program. Additionally, the association between pre-test knowledge and socio demographic variables related to CPR was also assessed by paired T – test & Chi-square method.

Ethical Consideration :

Ethical approval for this study was obtained from ethics committee for human research of Maganbhai Adenwala Mahagujarat University, Nadiad. (Approval No : MAM Uni/IECHR/2024/64) (Ref. No : IEC-MAM Uni/2023-24/64)

RESULT

Table 1:Frequency and percentage distribution of Home guard according to pre-test level of knowledge regarding CPR.

Sr. No.	Level of knowledge	No.(60)	Percentage
1.	Poor (< 50 %)	51	85%
2.	Average (50-75 %)	09	15%
3.	Good (>75 %)	00	00%
	Total	60	100%

In the pre-test, as shown in Table 2, 51 home guards (85%) had inadequate knowledge, 9 (15%) had moderate knowledge, and none

had adequate knowledge.

Table :2: Frequency and percentage distribution of Home guards according to post-test level of knowledge regarding CPR.

Sr. No.	Level of knowledge	No.(60)	Percentage
1.	Poor (< 50 %)	00	00%
2.	Average (50-75 %)	47	78.33%
3.	Good (>75 %)	13	21.67%
	Total	60	100%

The data in Table 3 reveals that in the post-test, 47 participants (78.33%) had an adequate level of knowledge. Notably, no participants demonstrated inadequate knowledge.

Table:4: Paired t-test analysis for the significance of pre and post-test knowledge regarding CPR among Home guards.

Knowledge	Number Of Patients	Mean	SD	Paired t-test	DF	Table
Pre-test	60	2.50	1.64	19.1815	59	2.00
Post-test	60	7.42	1.27			

Table 4 presented a comparison between the pre-test and post-test knowledge score on CPR. The mean pre-test score was 2.50, while the mean post-test score increased to 7.42, reflecting a mean difference of 05. The paired t-test was 19.1815 and the tabulated "t" was (2.00).

The analysis revealed that the mean post-test knowledge score was significantly higher than the mean pre-test score. A paired t-test showed a calculated value of 19.1815, which was much greater than the tabulated "t" 2.00,

Table:5: Association between knowledge regarding CPR among Home guards with their selected demographic variable.

Sr No.	Demographic Variable	Categories	Level of knowledge			Total	x^2	Tv
			Inadequate	Moderate	Adequate			
1.	**Age**	18-28	04	02	00	06	7.831 df= 6, **NS**	12.59
		29-38	16	06	00	22		
		39-48	21	01	00	22		
		Above 48	10	00	00	10		
2.	**Gender**	Male	38	09	00	47	2.928 Df = 2 **NS**	5.99
		Female	13	00	00	13		
3.	**Religion**	Hindu	48	08	00	56	0.989 Df = 4, **NS**	9.49
		Muslim	02	01	00	03		
		Christian	01	00	00	01		
4.	**Monthly Income**	Below 25,000	50	07	00	57	11.84 Df = 4, **NS**	9.49
		25,001-30,000	01	00	00	01		
		30,001-35,000	00	02	00	02		
5.	**CPR Training**	Yes	10	04	00	14	2.637 Df=2, **NS**	5.99
		No	41	05	00	46		
6.	**Educational qualification**	Primary	10	00	00	10	10.505 df=6, **NS**	12.59
		Secondary	23	02	00	25		
		High secondary	14	03	00	17		
		Graduation	04	04	00	08		

The table below shows the relationship between home guards' knowledge of CPR and their demographic variables. It indicates that there was no significant association between their knowledge scores and any of these demographic variable.

DISCUSSION

The study aimed to assess the impact of a structured teaching program on CPR knowledge among home guards. It found that overall, participants had average knowledge of CPR, which similar with the finding of Hari kumar etle.al (2023), who reported good knowledge in their study. However, in this study, the traffic police's post test knowledge improved after the structured teaching program, with 65 % had good knowledge & 32% had average knowledge. These results are consistent with the findings of this study[5]. Mr. sapan s macwan et.al(2021) conducted a study to assess the effectiveness of structured teaching program on knowledge and practice regarding adult CPR among road traffic police. The findings were consistent with this study, revealing that around 05 % had poor knowledge, 66.6% average knowledge & 30 % had good knowledge about CPR, aligning with the results of this study. This study indicates that hone guards posses a average level of knowledge about CPR suggesting that the structured teaching program was effective[6].

CONCLUSION

The findings of the study show that home guards have a moderate level of adequate knowledge about CPR. The study have highlighted that the structured teaching program was highly effective in improving the CPR knowledge of home guards. A comparison of pre-test and post test scores revealed significant improvements in the participates understanding, indicating that systematic educational interventions are crucial for equipping home guards with the essential lifesaving skills. It is recommended that such training programs be regularly conducted and updated to ensure that home guards knowledge remains current and their skills proficient.

Limitation

As the study was conducted with only 60 home guards in nadiad city, the findings may not be generalizable to home guards in other regions or the broader population. The limited time frame of the study could have affected the depth of data collection and analysis. Additionally, the study may have focused solely on immediate knowledge gains after the interventions, without including a long term follow up.

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