



“A Study To Assess The Effectiveness Of Planned Teaching Programme On Awareness Regarding Sudden Cardiac Arrest And Its Management Among Adolescents In Selected School Of Indore(M.P.)”

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ABSTRACT: Sudden cardiac death, primarily from coronary disease, constitutes 70% of natural deaths in adults, often with no prior indications of heart disease. Most out-of-hospital cardiac arrest cases occur at home and significantly impact adolescents, with India reporting around 7,00,000 sudden cardiac arrests annually. The study aims to assess the effectiveness of a planned teaching program on awareness regarding sudden cardiac arrest and its management among adolescents in INDEX School of Indore. Using a quantitative approach with a one-group pretest-post-test design and a sample of 40 participants, the study measures awareness before and after the program. Results indicate a significant increase in post-test awareness scores, demonstrating the program's effectiveness. Statistical analysis confirms the hypothesis that the teaching intervention successfully enhances understanding and awareness about sudden cardiac arrest among adolescents.

Keywords: Planned Assisted Teaching Programme; Awareness Sudden cardiac arrest Cardiopulmonary Resuscitation; Adolescents

1.INTRODUCTION AND BACKGROUND OF THE STUDY: A sudden death from natural causes occurs within an hour of symptom onset, often immediately. Sudden cardiac death, primarily due to coronary disease, accounts for about 70% of such fatalities in adults in the western world. Notably, around half of these individuals had no prior indication of heart disease, making it a common cause of cardiovascular-related deaths, contributing to an estimated 100,000 deaths annually.

Cardiac arrest occurs when the heart fails to pump blood, commonly due to dysrhythmias like ventricular fibrillation, bradycardia, or asystole. It can also happen with pulseless electrical activity (PEA), often linked to hypovolemia. Conditions such as myocardial infarction, pulmonary emboli, hyperkalaemia, hypothermia, and severe hypoxia can contribute to this state. Timely diagnosis and intervention are vital for restoring circulation, with hospital survival rates approximately 22% when AHA guidelines are adhered to.

2. NEED OF THE STUDY: Globally, the incidence of out-of-hospital cardiac arrest ranges from 50 to 100 cases per 100,000 populations annually, affecting 0.04% to 0.1% of the population. Approximately 70% to 80% of these incidents occur at home, with adolescent cases ranging from 1 to 7 per 100,000 population per year, contributing to 10% to 20% of sudden deaths in young individuals. In India, nearly 700,000 cases of sudden cardiac arrest are reported annually, accounting for 10%-12% of total deaths, with an incidence of about 20 to 40 cases per 100,000 population per year, or roughly 0.02%-0.04% annually.

India reports approximately 700,000 sudden cardiac arrest cases annually, accounting for 10%-12% of total deaths. The incidence is estimated at 20 to 40 cases per 100,000 people each year, equating to about 0.02%-0.04% of the population annually.

The researcher noted that sudden cardiac arrest is a potentially fatal illness that has to be identified and treated very away. Adolescents may learn about risk factors, emergency protocols, and warning symptoms of sudden cardiac arrest through planned teaching programme .

3. PROBLEM STATEMENT: “A Study To Assess The Effectiveness Of Planned Teaching Programme On Awareness Regarding Sudden Cardiac Arrest And Its Management Among Adolescents In Selected School Of Indore”

4. OBJECTIVE :

1. To assess the pretest awareness score regarding sudden cardiac arrest and its management among adolescents.
2. To evaluate the effectiveness of Panned teaching programme on awareness regarding sudden cardiac arrest and its management among adolescents.
3. To find out association between pretest awareness and their selected demographic variables.

5. RESEARCH HYPOTHESIS :

- **(H₁):** The mean post-test awareness score will be significantly higher than the mean pretest awareness score regarding sudden cardiac arrest and its management among adolescents after the Planned assisted teaching programme.
- **(H₂):** There will be significance association between pretest awareness’ and their selected demographic variables.

6. RESEARCH METHODOLOGY: Research Approach: Quantitative approach. **Research Design:** one group pretest post-test research design. **Dependent Variable:** awareness regarding sudden cardiac arrest and its management among adolescents. **Independent Variable:** Planned Teaching Programme. **Population:** adolescents **Research Setting:** Selected INDEX school INDORE. **Sampling Technique:** Probability random sampling technique. **Sample Size:** 40

Sampling Criteria: Inclusion Criteria:

- who are all willingly to participate in this study.
- who are available at the time of data collection.

Tool for Data Collection:

- Part 1: Demographic data of Adolescents: age sex class source of information.
- Part 2: Assessment of awareness by structured awareness questionnaire.

7. DATA ANALYSIS AND INTERPRETATION : data are based on data collected through structured knowledge questionnaire Analysis and interpretation of data was done by using descriptive and inferential statistics based on the objectives of the study and hypothesis to be tested.

Section- I: Description of sample characteristics according to the demographic variables. This section deals with the data pertaining to the sample characteristics of adolescents.

It is presented and analyzed in terms of frequency and percentage distribution of sample characteristics with respect age, class, type of family, family source of information source of information. ‘

Table NO.1. Frequency and percentage distribution of sample according to their age

(N = 40)

S No.	DEMOGRAPHIC VARIABLE	FREQUENCY	PRCENTAGE
1.	Age in years		
a	18-24	11	28%
b	25-31	10	24%
c	32-38	14	32%
d	above38	6	16%
	Total	40	100%

Interpretation: Data shows that majority of the ANM Students (32%) were in the age group of 32-38 years old, (28%) were age group of 18-24 years, (24%) were the age group of 25-31 years and (16%) of the women were in the age group of above 38 years.

Table NO. 2: Frequency and Percentage Distribution of Participants according to gender
(N=40)

Socio demographic variables	Categories	Frequency	Percentage
SEX	MALE	23	57.5
	FEMALE	17	42.5

With regard to sex, in the 23 (57.5%) were MALE and 17(42.5%) were female .

Table NO.3 : Frequency and Percentage Distribution of Participants according to class in which adolescents study.

(N=40)

Socio demographic variables	Categories	Frequency	Percentage
Class	9 th	15	37.5
	10 th	11	27.5
	11 th	14	35

Data presented in Table 3 depicts that most of the adolescents were studying in class 10th e.g. 15(37.50%). 14 (35.0%) adolescents were studying in class 11th And remaining 11 (27.5%) were studying in class 9th.

Table No. 4 Grading of sample based on pretest Awareness score and post-test awareness score

N= 40)

S.No.	SCORE	GRADING	PRETEST SCORE		POST TEST SCORE	
			Frequency	percentage	Frequency	percentage
1.	0-5	Fair	3	37.50%	0	0%
2.	6-10	Average	22	5.5%	3	7.5%
3.	11-15	Good	03	7.5 %	26	65%
4.	16-20	Excellent	00	0%	11	27.5%
TOTAL			40	100%	40	100%

Interpretation: Data in table no shows that 27.5% of adolescents had scored excellent in post test compared to pretest scored 0% , 65% adolescents had scored good in post test as they scored 7.5 0% in pretest This indicates that PTP was effective in increasing awareness score regarding sudden cardiac arrest and its management among Adolescents.

Table: No. 5 comparison between Mean ,Standard deviation and ‘t’ value of pretest and post-test Awareness score

(N= 40)

AWARENESS SCORE	MEAN	SD	MEAN DIFFERENCE	t – VALUE	Df	Result
PRETEST	6.65	2.42	7.37	19.7	39	S
POST TEST	14.02	1.91				

Paired t value 39=19.7 ,P≤0.05

INTERPRETATION: The data presented in table no. 5 shows that the mean post test awareness score 14.02 is apparently higher than the mean pretest awareness score 6.65, the dispersion of post test score (SD±1.51) is lesser than pretest score (SD±2.36) and the paired t value ($t_{39}=19.7$ $p\leq 0.05$) is greater than tabulated t value ($t_{39}=1.68$ $p\leq 0.05$) shows there is significance difference between pretest and post test awareness score ,thus null hypothesis is rejected and research hypothesis is accepted. This indicated that planned teaching programme is effective in increasing awareness score regarding sudden cardiac arrest and its management among Adolescents.

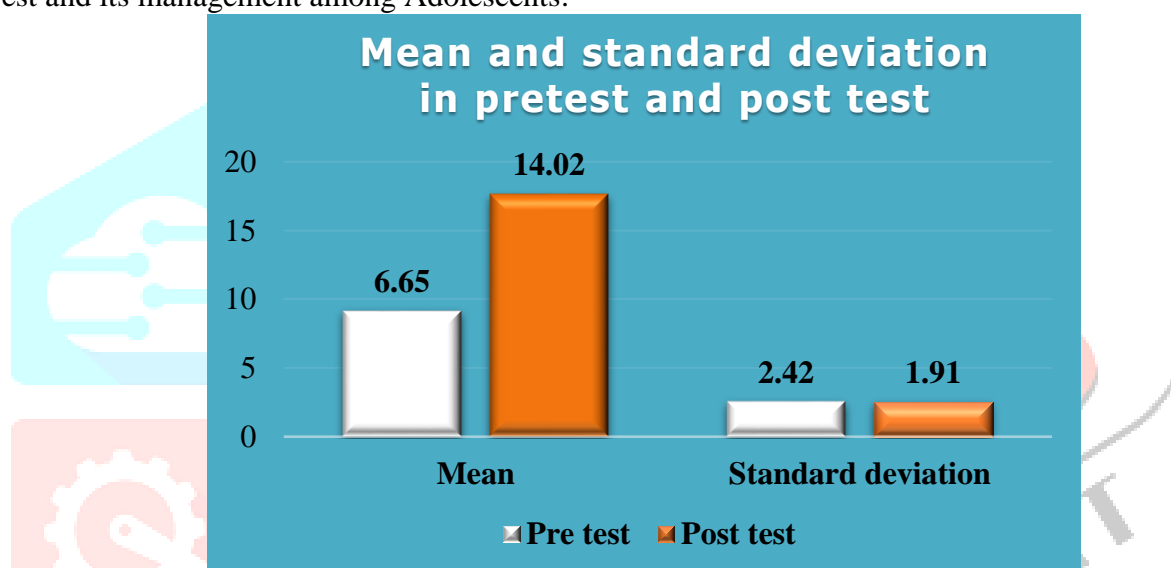


Figure 1.1:Bar-Diagram Representing Mean And Standard Deviation In Pretest And Post Test awareness Score.

8. DISCUSSION & CONCLUSION: The mean post-test awareness score of 14.02 significantly surpassed the pretest knowledge score of 6.65, with lower dispersion in post-test scores (SD±1.51) compared to pretest scores (SD±2.36). The paired t-test results ($t_{39}=19.7$, $p\leq 0.05$) indicate a significant difference, leading to the rejection of the null hypothesis. This confirms that the teaching program effectively enhanced awareness of sudden cardiac arrest and its management among adolescents.

9.RECOMMENDATION :

- The similar study can be conducted with large samples and different demographic variable.
- A similar study can be do at different settings to strengthen findings.
- A study can be conducted by quasi experiment research design.
- The study can be conducted with aim to provide guideline.

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BOOK REFERENCES:

1. Smelter, C.S. and Bare ,B.G.(2004) Brunner and suddarth textbook of medical surgical nursing 10th edition published by Lippincott Williams and Wilkins, page no(725) .
2. Lewis's, S.L, Bucher (2017) medical surgical nursing Assessment and management of clinical problem (10th edition) Elseviers india Pvt. Limited publication. Page no (767- 775)
3. Brunner & suddharth's. (2022) Textbook of medical-Surgical Nursing, 12th edition, page no. 843-845.
4. Basavanthapa BT. (2014). Nursing Research and Statistics 887, India, Jaypee Brother's Medical Publisher, Page no. 1127-1133.
5. Sharma S.K. (2022). Nursing Research and statistics. 4th edition Elsevier. New Delhi India. Page no. 145-155.
6. Basavanthapa BT. (2007). Nursing Theories. 1st edition New Delhi, India Jaypee Brother's Medical Publication.

JOURNAL REFERENCES:

1. Amitha.(2024). Evaluating the impact of a structure educational program on CPR knowledge among nursing students in selected colleges at Manglore. International journal of Cardiovascular Nursing July to Dec.-1-6.
2. American Heart Association, (2010). BLS Healthcare Providers 3-14
3. Lin YY, Chiang WC, Hsieh MJ, Sun JT, Chang YC, et al. (2018) Quality of Audio-Assisted Versus Video-Assisted Dispatcher-Instructed Bystander Cardiopulmonary Resuscitation: A Systematic Review and Meta-Analysis. Resuscitation 123: 77-85.
4. Westch WA, Ecker HM, Scheu A, Roth R, Bottiger BW, et al. (2021) Video-Assisted Cardiopulmonary Resuscitation: Does the Camera Perspective Matter? A Randomized, Controlled Simulation Trial. Randomized Controlled Trial 30(1): 98-106.
5. Lee SGW, Kim TH, Lee HS, Shin SD, Song KJ, et al. (2021) Efficacy of a New Dispatcher Assisted Cardio-Pulmonary Resuscitation Protocol with Audio Call to Video Call Transition. Randomized Controlled Trial 44: 26-32.
6. Singh P (2022) A Study to Assess the Effectiveness of Video Assisted Teaching Regarding the Knowledge of Cardio Pulmonary Resuscitation among B.Sc. 2nd year Students, Ambikapur, Chhattisgarh. International Journal of Advances in Nursing Management 10(4). 6. Known OY (2023) The Changes in Cardiopulmonary Resuscitation Guidelines: from 2000 to the Present. J Exerc Rehabil 15(6): 73
7. Mrs. Vidyashri R 1, Dr Sneha Sahay Youtham (2022) A Cross-sectional Analysis of CPR knowledge, Attitude, and Ability Among Students in selected High Schools in Indore. International Journal of Research Publication and Reviews Journal homepage: www.ijrpr.com ISSN 2582-7421.
8. [https:// WWW.mdpi. Com/ article/10.3390.](https://www.mdpi.com/article/10.3390)
9. [WWW.jacc.org.](http://WWW.jacc.org)
10. [Journals. lww.com.](http://Journals.lww.com)
11. [Pmc.ncbi. nlm. Nih. Gov.](http://Pmc.ncbi.nlm.nih.gov)
12. [Sciencedirect.com.](http://Sciencedirect.com)