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Research Article

Effectiveness of Structured Teaching Program on Knowledge regarding Basic Life Support among G.N.M. Student in Selected College of Indore

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A B S T R A C T

Introduction: According to Times of India report, the death rate due to cardiac disease has declined significantly in the USA and even it continues to rise in India with cardiovascular disease being the leading cause of death. In India, it rose around 34 percent from 155.7 to 209.1 deaths per one lakh population.

Aim: To assess the effectiveness of structured teaching program regarding knowledge on basic life support among the G.N.M students of selected colleges of Indore.

Materials and Methods: An evaluatory approach was used for the study. One group pre-test post-test design was used for the study. Study was conducted in Sri Aurobindo Institute of Medical Sciences G.N.M Students of Indore and duration was 11 February 2019 to 31 march 2019. The sample consisted of 50 G.N.M students selected by Non-Probability convenient sampling technique. Data was collected by administering structured knowledge questionnaire after that structured teaching program on basic life support was administered and post-test was taken after 6 days. Data were analyzed using descriptive and inferential statistics (paired t test and chi-square test).

Results: The pre-test of the samples shows that 32 (64%) out of 50 had poor knowledge, 16 (32%) had average knowledge and 2 (4%) had good knowledge about the Basic Life Support. After providing structured teaching program to the student then again post-test was assessed, it clearly indicates that 34 (68%) had good knowledge, 16 (32%) had average knowledge. This means that the structured teaching program was effective to improve knowledge of the students.

Conclusion: The finding of this study indicates that structured teaching program on Basic Life Support appears to be effective in improving knowledge of G.N.M students.

Keywords: Basic Life Support, Teaching

Introduction

Myocardial ischemia is the leading cause of death worldwide. Whereas Sudden Cardiac Arrest (SCA), arising from coronary artery disease, is responsible for over 60% of deaths. In Europe sudden cardiac arrest is the leading cause of death and is responsible for 700,000 causalities per annum. Early initiation of CPR drastically increase the probability of a victim's survival from a heart attack.[19]

According to Times of India report, the death rate due to cardiac disease has declined significantly in the USA and even it continues to rise in India with cardiovascular diseases being the leading cause of death. In India it rose around 34 percent from 155.7 to 209.1 deaths per one lakh population. Out-of-hospital cardiac arrest is peerless in its unpredictability, logistical obstacles and time-urgency of interventions. Speed is the corner stone of any rescue strategy for OOHCA. Without speed, the best of therapeutic intervention fails. As a consequence, multiple community participation programs have been initiated to decrease response time. However, even in premier program, short-term survival rates however around 10%.[2]

Effective and component crisis intervention is the key to excellence in critical care. Un expected Cardio-pulmonary collapse is a medical emergency that requires immediate action. As health care professionals, knowledge and skill in Cardio-Pulmonary Resuscitation (CPR) is essential as you can save a life in your community, or a patient in the hospital.[6]

The American Heart Association developed the chain of survival. The chain has four components-early access to emergency care, early BLS, early defibrillation and early advanced care. For the chain to be effective, quick execution of each and every link is critical. We as nurses should keep abreast with the latest trends in CPR.[6]

Need for the Study

In 2016, there were an estimated 62.5 million and 12.7 million years of life lost prematurely due to CVD in India and the US, respectively. The world Health Organization has set the goal of reducing the risk of premature mortality (30 to 69 years of age) due to non-communicable diseases, including cardiac disorder, by 25 per cent by 2025). The recent sudden cardiac arrest death of our beloved Former President Dr. APJ Abdul Kalam remind us of this lethal condition.[1]

Sudden Cardiac Death (SCD) is the leading cause of death globally and the incidence of SCD is increasing in India also. The global incidence of out-of-hospital cardiac arrest (OHCA) is 62/10,000. Estimated survival to hospital discharge is 8% and not much has changed for many years. In the USA alone, 275,000 sudden deaths per year occur as OHCA. Unfortunately, often the first sign of Cardiovascular Disease (CVD) is the last sign in SCD. Nearly 50% of all deaths in ST-elevation myocardial infarction and 50% of all CVD deaths are due to SCD. Nearly 80% of all SCDs are due to ventricular arrhythmias.[8]

Objectives

- To assess the pretest knowledge regarding Basic Life Support among the G.N.M students of selected colleges of Indore.
- To assess the effectiveness of structured teaching program regarding Basic Life Support among the G.N.M students of selected colleges of Indore.
- To assess the post-test knowledge regarding Basic Life Support among the G.N.M students of selected colleges of Indore.
- To find out the association between pre-test knowledge with selected demographic variable.

Hypothesis

RHO: There will be no significant difference between pre-test knowledge and post-test knowledge regarding structured teaching program on Basic Life Support among G.N.M students of selected college of Indore ($p<0.05$).

RH1: There will be significant difference between pre-test knowledge and posttest knowledge regarding Basic Life Support among G.N.M students of selected college of Indore ($p<0.05$).

RH2: There will be significant association between pre-test knowledge with selected demographic variables ($p<0.05$).

Material and Method

An evaluatory approach was used for the study. One group pre-test post-test design was used for the study. The sample consisted of 50 G.N.M students selected by non-probability convenient sampling technique. Main study was conducted in Sri Aurobindo Institute of Medical Sciences College of Indore. Informed consent and ethical clearance were taken from student and principal. Data was collected by administering structured knowledge questionnaire then structured teaching program was given and posttest was taken after six days. Data were analyzed using descriptive and inferential statistics (paired t test and chi-square test).

Inclusion criteria

Those who are willing to participate in the study. Those who are admitted in S.A.I.M.S college for G.N.M. course in Indore. Those who are available during the time of data collection.

Exclusion criteria

Those who are not available at the time of data collection. Those who are not willing to participate.

Independent Variable

In the present study the independent variable refers to the structured teaching program to improve the knowledge of student.

Dependent Variable

In this present study the dependent variable refers to the knowledge of nursing students.

Validity of Tool

The tool was submitted to 7 experts from the field of medical surgical nursing. The experts were requested to check for the relevance, sequence and language of the tool. Modifications were done according to expert's opinion and final tool was developed.

Reliability of Tool

Pre-testing and reliability of the tools was carried out among 10 students. The reliability of the test was found out using Karl Pearson's correlation coefficient formula. The reliability of the structured knowledge questionnaire (schedule) was found to be 'r=0.837' which indicates that the tool was reliable.

Result

This section deals with the data pertaining to the sample characteristics of the subjects. It is presented and analyzed in terms of frequency and percentage distribution. Table 1, shows the distribution of sample characteristics with respect to subject's Age, gender, academic performance, previous knowledge.

Table 1.Frequency and percentage distribution of demographic variables

S. No.	Demographic Variables	Frequency (n)	Percentage (%)
1.	**Age in years**		
	19-20	26	50%
	21-22	12	26%
	23-24	11	11%
	Above 24	1	1%
2.	**Gender**		
	Male	12	24%
	Female	38	76%
3.	**Academic Performance**		
	Less than 55%	12	24%
	56-65%	13	26%
	66-75%	15	15%
	Above 75%	10	10%
4.	**Previous Knowledge**		
	Class room	19	38%
	Clinical area	12	24%
	Demonstration	10	20%
	Mass media	9	18%

Table 2.Association between pretest knowledge scores and selected demographic variables

S. No.	Demographic variables	Pretest knowledge score			Df	χ^2 value
		Poor (0-6)	Average (7-13)	Good (14-20)		
1.	**Age in years**					
	19-20	16	10	0	6	26.804 N.S.
	21-22	8	3	1		
	23-24	8	3	0		
	Above 24	0	0	1		
2.	**Gender**					
	Male	10	1	1	2	3.831 N.S.
	Female	22	15	1		

3.	**Academic Performance**					
	Less than 55%	8	4	0	6	4.908 N.S.
	56-65%	10	3	0		
	66-75%	10	4	1		
	Above 75%	4	5	1		
4.	**Previous Knowledge**					
	Class room	16	3	0	6	10.953 N.S.
	Clinical area	8	3	1		
	Demonstration	6	4	0		
	Mass media	2	6	1		

P< 0.05*, P< 0.01**, P< 0.001***

Table 3.Frequency and percentage distribution of pretest knowledge score of G.N.M. students

Pretest Knowledge Score	Frequency	Percentage
(1-10) Poor	32	64%
(11-20) Average	16	32%
(21-30) Good	2	4%

The pre-test score of the samples, shows that 32 (64%) out of 50 had poor knowledge, 16 (32%) had average knowledge and 2 (4%) had good knowledge about the Basic Life Support.

Table 4.Frequency and percentage distribution of posttest knowledge score of G.N.M. students regarding Basic Life Support

Posttest Knowledge Score	Frequency	Percentage
(1-10) Poor	0	0
(11-20) Average	16	68%
(21-30) Good	34	32%

After providing structured teaching program to the student then again post-test was assessed it clearly indicates that 34 (68%) had good knowledge, 16 (32%) had average knowledge.

Table 5.Analysis of significant difference between pretest and post test knowledge regarding Basic Life Support among G.N.M. students

N=50

Test	Mean	Mean difference	t' value
Pre-test	12.04	9.34	28.19***
Post-test	21.38		

It can be clearly seen that the 't' value was 28.19 which clearly show that structured teaching program was very effective in increasing the knowledge of samples.

Discussion

The findings of the present study had been discussed with objectives, conclusion, findings and the results of the other similar studies. The findings were discussed under the following sections:

Section I: Characteristics of the Sample

It is observed that most of the students were in the age group of 19-20 yrs i. e 26 (50%) out of 50 , followed by 12 (26%) students under the age group of 21-22 yrs, the students who were in the age group of 23-24 yrs comprises 11 (22%) and the sample who includes in the age group of above 24 yrs were 1 (2%).

The present study comprises of 50 students, in which 12 (24%) were males and 38 (76%) were females. The academic performance of the student was most of the students have 66-75% that is 15 (30%), 56-65% were 13 (26%), less than 55% were 12 (24%) and above 75% were 10 (20%).

The investigator also describe that out of 50 students many of the student had a previous knowledge regarding the basic life support through classroom teaching that is 19 (38%), followed by 12 (24%) had attained knowledge through clinical hours, 10 (20) had exposure to demo classes and only 9 (18%) had knowledge through mass media .

Section II: Comparison of the pre-test score and post test score among samples

The self structured questionnaire was developed by the investigator to assess the effectiveness of structured teaching program among students regarding the Basic Life Support.

The pre interventional score of the samples, shows that 32 (64%) out of 50 had poor knowledge, 16 (32%) had average knowledge and 2 (2%) had good knowledge about the Basic Life Support.

After the providing structured teaching program to the student then again post interventional score was assessed

it clearly that 34 (68%) had good knowledge, 16 (32%) had average knowledge. This means that the structured teaching program was effective to improve knowledge of the students.

Section III: Effectiveness of structured teaching program to improve the knowledge

It can be clearly seen that the 't' value was 28.19 which clearly show that structured teaching program was very effective in increasing the knowledge of samples.

Conclusion

The present study attempted to find out the effectiveness of structured teaching program regarding Basic Life Support among the students of selected colleges of Indore. On the basis of the findings the following conclusion was drawn, it was found out that, 34 (68%) had good knowledge and 16 (32%) have average knowledge. This means that the structured teaching program regarding Basic Life Support among the students were effective.

Conflict of Interest: None

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