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A Study to Assess the Effectiveness of Video Assisted Programme on Cardio Pulmonary Resuscitation among Nursing Students of Selected Nursing Schools

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ABSTRACT

Cardiac arrest is the leading cause of mortality in India, and the overall survival rate for out-of-hospital cardiac arrest rarely exceeds 5%. [1] Bystander cardiopulmonary resuscitation (CPR) has been shown to increase survival for cardiac arrest victims. Nursing students are expected to have an understanding of CPR and the ability to perform the basic skills, completing a course prior to entering the nursing program or beginning their clinical practice. However, studies suggest that skills developed from a CPR course are lost quickly when they are not practiced. So, study was carried out with objectives to assess the knowledge of nursing student on CPR, to assess the effectiveness of video assisted teaching program on CPR among nursing student and to associate the pre-test score with selected demographical variables.

KEY WORDS- Cardio pulmonary resuscitation, cardiac arrest, video assisted teaching, knowledge.

BACKGROUND

Cardiac pulmonary resuscitation is a critical component of basic life support. Cardiac pulmonary resuscitation is a potential life saver because it is associated with survival and has the potential to prevent sudden death. All health care providers who are in contact with the patient should have regular resuscitation training as recommended by the American heart association resuscitation guideline.

Cardiac pulmonary resuscitation is the final hope for survival when sudden death impends as well as early defibrillation, resuscitation, pharmacology and effective ventilation which maintain circulation until normal circulation and ventilation has been restored through definitive therapy, all the health care professionals should be taught necessary knowledge and skill for performing cardiac pulmonary resuscitation. [2]

Cardiac arrest is the leading cause of mortality in India, and the overall survival rate for out-of-hospital cardiac arrest rarely exceeds 5%. [1] Bystander cardiopulmonary resuscitation (Cardio Pulmonary Resuscitation) has been shown to increase survival for cardiac arrest victims. Older adults were the most likely to witness a cardiac arrest and most of the people who took Cardio Pulmonary Resuscitation training at the time were in their twenties and thirties and did so as an extra-curricular activity.

Resuscitation training should be based on in-hospital scenarios and current evidence-based guidelines, including recognition of sick patients, and should be taught using simulations of a variety of cardiac arrest scenarios. This will ensure that the training reflects the potential situations that nurses may face in practice. Poor knowledge and skill retention following cardiopulmonary resuscitation training for nursing and medical staff has

been documented over the past 20 years. [3] Cardiopulmonary resuscitation training is mandatory for nursing staff and is important as nurses often discover the victims of in-hospital cardiac arrest. Many different methods of improving this retention have been devised and evaluated. However, the content and style of this training lack standardization. Staff should be formally assessed using a manikin with a feedback mechanism or an expert instructor to ensure that chest compressions and ventilations are adequate at the time of training. Remedial training must be provided as often as required. Video self-instruction has been shown to improve competence in resuscitation. An in-hospital scenario-based video should be devised and tested to assess the efficacy of this medium in resuscitation training for nurses.

VIDEO ASSISTED PROGRAM

The video provides a unique resource, which relates to an area of nursing curriculum in which all nursing students must demonstrate competency. Cardio Pulmonary Resuscitation procedure is an essential skill for nurses, as they are often first responders to the collapsed person. Nurses require skills of assessment for cardiac arrest and need to initiate BLS, involving maintaining respiration and circulation for the casualty until emergency services, or advanced life support services, arrive. Basic life support is also an important skill for many health-care professionals and the particular video on Cardio Pulmonary Resuscitation can facilitate inter-professional teaching and learning in a variety of settings, such as skill laboratories, clinical practice settings and the users' own home. Thus with increasing demand of this rising concept in the area of nursing curriculum, researchers felt needs to assess the effectiveness of video assisted teaching program on Cardio Pulmonary Resuscitation among nursing students in selected nursing institute

OBJECTIVES OF THE STUDY

To assess the knowledge of nursing student on Cardio Pulmonary Resuscitation, to assess the effectiveness of video assisted teaching program on Cardio Pulmonary Resuscitation among nursing students and to associate the pre-test score with selected demographical variables.

Hypothesis

H_{01}- there is no significant difference between the mean pretest knowledge score and mean post-test knowledge score after video assisted teaching program on Cardio Pulmonary Resuscitation among the nursing students.

H02- there is no significant between pretest knowledge score and the selected demographic variables.

Research Methodology

Research approach- Quantitative approach
Research design – Quasi experimental pretest post test
Independent variable – video assisted teaching programme
Dependant variable – Knowledge of nursing students
Setting for the study – Indira Gandhi School and college of Nursing, Munshiganj, Amethi.
Sample-students studying in Indira Gandhi School and college of Nursing, Munshiganj, Amethi , who fulfill the inclusive criteria
Sample size- 20, Sample technique- stratified sampling

TOOL

The tools used for the data collection in this study were: Questionnaire on Demographic data. And Structured knowledge questionnaire on Cardio Pulmonary Resuscitation.

DATA COLLECTION PROCEDURE:

Formal permission was obtained from the concerned authority of selected nursing colleges, to conduct the study. Informed consent was taken from the samples.

Phase 1- Select the samples subjects for the study using stratified sampling technique.
Phase 2- Pretest was conducted to assess the knowledge of the samples regarding Cardio Pulmonary Resuscitation.
Phase 3- Intervention done (played the video assisted teaching programme on Cardio Pulmonary Resuscitation) to the Samples.
Phase 4- Post test was conducted to assess the knowledge of the samples after intervention.
Phase 5- Obtained results were statistically analysed.

RESULTS

Table 1: Demographic data n=20

S.No	Demographic Variables	No. of Pupils	Percentage
1	**Age**		
	a. 17 - 20	17	85 %
	b. 20 – 23	3	15%
	c. 23 - 26	0	0%
2	**Sex**		
	a. Male	0	0%
	b. Female	20	100%
3	**Nursing course**		
	a. GNM	10	50%
	b. ANM	0	0%
	c. B.Sc. Nursing	10	50%
4	**Marital status**		
	a. Married	0	0%
	b. Unmarried	20	100%
5	**Qualification**		
	a. XIIth	17	85%
	b. Graduation	01	5%
	c. Post graduation	02	10%

Table number 1 explicates the demographic variables of nursing students participated in the study. majority of them 17(85%) belong to 17-20 years and 3(15%) belongs to 20 - 23 years, All the participants of the study were females, there were an equal proportion of the subjects from both GNM and B.Sc. nursing with 10(50%) of each respectively, All of the participants in the study are unmarried, Majority of the sample 17(85%) qualified XIIth, 1(5%) completed graduation and remaining 2(10%) attained post graduation degree.

Table 2: Pre- Test knowledge scores regarding Cardio Pulmonary Resuscitation.

S.No	Level of knowledge	Score	Number of people	percentage
1	Inadequate	< 50	7	35%
2	Moderate	50-75	13	65%
3	Adequate	>75	0	0

Table 2 denotes the pre test knowledge score on Cardio Pulmonary Resuscitation, Where the majority of the sample 13(65%) fall under moderate knowledge and 7 (35%) hold inadequate knowledge.

Table 3: Post test Knowledge scores

S.No.	Level of knowledge	Score	Number	Percentage
1	Inadequate	<50	0	0
2	Moderate	50-75	3	15%
3	Adequate	75	17	85%

Table no. 3 furnishes the information regarding post test knowledge score on Cardio Pulmonary Resuscitation, Where the majority of the participants 17 (85%) possess adequate knowledge & only 3(15%) hold moderate knowledge after introducing the video assisted teaching programme.

Table 4: To assess the knowledge regarding difference between pre and post test of Cardio Pulmonary Resuscitation among nursing students.

S.No	Domains	mean	Mean percentage	Standard deviation	T value	df
	Pretest	10.7	53.5%	2.10	14.78	19
	Post test	17.35	86.75%	1.725		
	Difference	6.65	33.25%	2.05		

This table no.4 denotes that mean, mean percentage, standard deviation,& t-test of knowledge after the comparison regarding the cardiopulmonary resuscitation among the nursing students.

In the pretest knowledge mean 10.7 & standard deviation 2.10 & post knowledge mean 17.35 & standard deviation 1.725.

After the comparison regarding pre & post test knowledge the t-test is 14.78 & degree of freedom is 19 which shows significant.

Table 5: Association between Demographic variables & Pretest Knowledge scores

S.NO.	DEMOGRAPHIC VARIABLE	NO.	%	INADEQUATE		MODERATE		ADEQUATE		CHI SQUARE TEST
				NO.	%	NO.	%	NO.	%	
1.	AGE									
	17-20	17	85	06	30	11	55	00	00	CV=0.0269 TV=7.879 DF=1 NS
	21-23	03	15	01	5	02	10	00	00	
	24-26	00	00	00	00	00	00	00	00	
2.	SEX									
	Male	00	00	00	00	00	00	00	00	–
	Female	20	100	07	35	13	65	00	00	
3.	NURSING COURSE									
	GNM	10	50	03	15	07	35	00	00	CV=1.930 TV=7.879 DF=1 NS
	ANM	00	00	00	00	00	00	00	00	
	BSC nursing	10	50	04	20	06	30	00	00	
4.	MARITAL STATUS									
	Married	00	00	00	00	00	00	00	00	–
	Unmarried	20	100	07	35	13	65	00	00	
5.	QUALIFICATION									
	Intermediate	17	85	06	30	11	55	00	00	CV=1.277 TV=7.879 DF=1 NS
	Graduate	01	05	00	00	1	5	00	00	
	Post graduation	02	10	01	05	1	5	00	00	

The majority of the sample 13(65%) fall under moderate knowledge and 7 (35%) hold inadequate knowledge. In the pretest knowledge mean 10.7 & standard deviation 2.10 & post knowledge mean 17.35 & standard deviation 1.725, which denotes the increased knowledge after introducing the video assisted teaching programme on Cardio Pulmonary Resuscitation. The demographic variables tested for significance have revealed that the age, nursing course and qualification were found non significant and the rest variables were invalid when checked their association with pre-test knowledge scores.

CONCLUSION

The conclusion drawn is 13 (65%) of the respondents fall under moderate knowledge & 7 (35%) hold inadequate knowledge during pretest. After the intervention the post test assessment resultantly proved the video assisted teaching on Cardio Pulmonary resuscitation was effective in increasing the knowledge of the respondents with 17 (85%) of the subjects fell under category of Adequate knowledge & only 3 (15%) were under moderate knowledge group.

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