



Original Research Article

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**A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED
TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARDIO-
PULMONARY RESUSCITATION AMONG UNDERGRADUATE
COLLEGE STUDENTS IN SELECTED COLLEGES AT INDORE CITY**

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Abstract:

A quasi experimental one group pre-test post-test study to assess the effectiveness of video assisted teaching programme on knowledge regarding cardio-pulmonary resuscitation among undergraduate college students in selected colleges at Indore city.

By using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire .The pretest was conducted and the video assisting teaching programme was administered. The post test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. Pre-test mean knowledge score was 16.35 is lower than post-test mean knowledge score i.e. 22.68, $t=33.15$ ($p=0.05$, significant). This indicated that there was a significant association between pre and post-test knowledge of students regarding cardiopulmonary resuscitation.

Key words – One group pre –test post –test quasi experimental study, simple random sampling.

Knowledge, Video assisted teaching, students, cardiopulmonary resuscitation

INTRODUCTION:

According to AHA, Heart disease and Stroke statistics 2017 are the number 1 cause of death globally: more people die annually from sudden cardiac arrest than from any other cause. Nearly 17.7 million people died from sudden cardiac arrest in 2015, representing 31% of all worldwide deaths. The aim of cardiopulmonary resuscitation is performed to restore and maintain breathing and circulation and to provide oxygen and blood flow to the heart, brain, and other vital organs. CPR can be performed by trained laypeople or healthcare professionals on infants, children, adolescents, and adults. In India one person dies in every 33 seconds from heart attack. The cardiopulmonary resuscitation is procedure with appropriate skills, knowledge and time to education to the victim. A study was conducted by Tom Sirmons, at Florida in year 2015 aim to Who Know CPR Save Lives; those who suffer cardiac arrest are far more likely to survive long-term if a bystander immediately begins proper cardio pulmonary resuscitation. That's especially true when emergency medical personnel are unable reach the scene within eight minutes. BUT –considering that brain damage from lack of blood flow begins as soon as four minutes after heart failure, the need for Cardiac pulmonary resuscitation administration is vital, in the truest sense of that word, Survival rates are higher even among those who receive outdated Cardiac pulmonary resuscitation, but the American Heart Association now stresses that maintaining blood flow to the organs is more important than trying to restore breathing via mouth-to-mouth resuscitation. In fact, a study published in The Lancet several months ago found survival rates among heart attack victims are substantially higher when only proper chest-compression. Proper chest compressions must be performed with the right combination of repetition and depth to achieve optimal results. Thus the study showed improved Cardiac pulmonary resuscitation knowledge. Present study is aimed to assess the effectiveness of video assisted teaching programme on knowledge regarding cardio-pulmonary resuscitation among undergraduate college students in selected colleges at Indore city, Madhya Pradesh”

RESEARCH ELABORATIONS

Statement of problem –

“A study to assess the effectiveness of video assisted teaching programme on knowledge regarding cardio-pulmonary resuscitation among undergraduate college students in selected colleges at Indore city”.

OBJECTIVES

1. To assess the pre -test knowledge score of the students on cardio –pulmonary resuscitation.
2. To administer video assisted teaching for students on cardio –pulmonary resuscitation.
3. To assess the post -test knowledge score of the students on cardio –pulmonary resuscitation.
4. To determine the effectiveness of video assisted teaching programme on cardio –pulmonary resuscitation.
5. To find out the association between pre –test knowledge with selected socio demographic variable.

HYPOTHESIS

H1: There will be a significant difference between the pre-test and post-test knowledge score with students regarding cardiopulmonary resuscitation.

H2: There will be a significant association between pre-test knowledge score with selected socio-demographic variables

MATERIALS AND METHODS

Population – under graduate students

Sample- undergraduate students studying in various colleges of Indore City

Sample Size – 140 undergraduate students

Sampling Technique-Simple random sampling

Setting –fortune private institute, Indore, and swami Vivekananda college
Madhya Pradesh, India

The conceptual framework for the present study is based on WHO's system
Model

RESEARCH DESIGN

The research design selected for the present study was a one group pre-test
post-test research design

PRE-TEST	TREATMENT	POST –TEST
R01	X	R02
Knowledge of undergraduate students.	Video assisting Teaching Programme	Knowledge of under graduate students.

Table 1 :pre experimental one group pre and post-test research design

The interpretations of the symbol are as below:

R01 = Assessment of knowledge **of** undergraduate students.

X = video assisting teaching programme on cardio pulmonary resuscitation in
terms of knowledge among under graduate students

R02 = Assessment of knowledge by post-test.

Ethical Consideration

After obtaining permission from research committee of college. Prior permission
was obtained from management and principal of fortune private institute and
swami Vivekanand College, Indore (India). Consent was taken from each
participant who had participated in the study.

Description of the Tool

Tool -1 The structured knowledge questionnaire consisted of two parts i.e .Part –
I & II .

Part I: Consist of selected socio-demographic variables like age, sex, religion, marital status, area of residence, educational qualification, source of knowledge

Part II: Consist of structured knowledge questionnaire on knowledge of cardiopulmonary resuscitation. It consists of 30 items. Each correct answer was given a score of one and the wrong answer, zero. The maximum score for the structured questionnaire was 30. The content was organized under the following headings

1.Introduction of Cardiac arrest (7),2.Introduction of CPR (3),3.Indication of CPR (3),4.Procedure & Step of CPR (6),5.CPR Technique (8),6.Complication and after care of CPR (3)

Data Collection and Data Analysis

The data was presented under the following sections

Section I: Description of demographic variables of respondents

Section II: Findings related to knowledge scores of cardio –pulmonary resuscitation programme in college students.

Part I: Findings related to area wise pre test knowledge score of respondent's cardio –pulmonary resuscitation programme in college students.

Part –II: Findings related to area wise post test knowledge score of respondents on cardio –pulmonary resuscitation programme in college students

Part –III: Findings related to effectiveness of video assisted teaching by comparing pre-test and post-test knowledge score on cardio –pulmonary resuscitation programme in college students

Part-IV: Effectiveness of video assisted teaching on cardio –pulmonary resuscitation programme by comparing pre-test and post-test knowledge score of respondents

Section III: Findings related to association between pre-test knowledge score with selected demographic variables of college students

S.NO	KNOWLEDGE ASPECTS	pre test			Post test			Mean Difference	T value	P value
		mean	median	SD	mean	median	SD			
1	Introduction of cardiac arrest	4.39	62.75	1.40	5.9	85.30	0.92	22.55	15.53	\$ 0.05
2	Introduction of CPR	1.42	47.38	0.87	2.18	72.85	0.77	25.47	12.66	\$ 0.05
3	Indication of CPR	1.66	55.47	0.89	2.41	80.47	0.65	25.00	12.50	\$ 0.05
4	Procedure & Steps Of CPR	3.20	53.45	1.29	4.62	77.14	0.98	23.69	15.26	\$ 0.05
5	CPR technique	4.18	52.32	1.48	5.81	72.67	1.37	20.35	17.41	\$ 0.05
6	Complication and after care of CPR	1.47	49.28	0.77	2.04	68.09	0.69	18.81	8.88	\$ 0.05

Showned that area wise effectiveness of Video assisted teaching on pre and post-test knowledge score of college students. In introduction of cardiac arrest in pre-test mean % =62.75, in post-test mean % =85.30, $t=15.53$ ($p=0.05$, significant), in introduction of CPR pre-test mean % =47.38, in post-test mean % =72.85, $t=12.66$ ($p=0.05$, significant), in indication of CPR pre-test mean % =55.47, in post-test mean % =80.47, $t=12.50$ ($p=0.05$, significant), in procedure & step of CPR pre-test mean % =52.32, in post-test mean % =72.67, $t=15.26$ ($p=0.05$, significant), In CPR technique pre-test mean % =52.32, in post-test mean % =72.67, $t=17.41$ ($p=0.05$, significant), and in Complication and after care of CPR pre-test mean % =49.28, in post-test mean % =68.09, $t=8.88$ ($p=0.05$, sign

KNOWLEDGE SCORE	MEAN	MEAN %	SD	ENHANCEMENT	ENHANCEMENT %	DF	T	P VALUE
PRE TEST	16.35	54.50	4.05	6.33	22.12	139	33.15	0.05
POST TEST	22.68	76.62	2.91					

S = Significant P=0.05

showed that the mean post-test knowledge score i.e.22.68and mean% was76.62%thatwasgreater than the mean pre-test knowledge score i.e.16.35and mean% was 54.50% $t=33.15$ ($p=0.05$, significant). This indicates that there was difference in pre-test and post-test knowledge score of respondents and Cardio-pulmonary resuscitation programme was effective in improving the knowledge score of students regarding knowledgeon Cardio-pulmonary resuscitation programme.Thisindicates that there was significant difference between thepre-test and post-test knowledge score hence theresearch hypothesisH1is accepted

INTERPRETATION

Major findings of the study the socio-demographic characteristics of the samples revealed that;

Age in years: The majority of the respondents i.e. 77.87% belonged to the age group of 17-20years.

Gender: The most of the respondents i.e. 60%were male.

Religion: The majority of the respondents i.e. 69.28%wereHindu.

Marital status: The majority of the respondents i.e. 82.14% were married.

Area of residence: The most of the respondents i.e. 65.00% belonged from rural.

Educational Qualification: The majority of the respondents i.e. 35.72% were B.Sc.

Source of information: The majority of the respondentsi.e.65.72 % were receive information from Mass media

Objective 1: To assess the knowledge score regarding cardiopulmonary resuscitation among students. The overall pre-test mean knowledge score was 16.35 with standard deviation of 6.7 which showed that the respondents have inadequate knowledge about cardiopulmonary resuscitation among students. The overall mean percentage of post-test knowledge score was 22.96 i.e. 76.08% with standard deviation of 5.38 which shows gain in knowledge level of the respondents.

Objective 2: To assess the effectiveness of Video assisted teaching on knowledge regarding cardiopulmonary resuscitation among students. The overall pre-test mean knowledge score was 16.35 with standard deviation of 6.7 which showed that the respondents have inadequate knowledge about cardiopulmonary resuscitation among students and overall post-test mean knowledge score was 22.96 with standard deviation of 5.38 which shows gain in knowledge level of the respondents. The enhancement in the knowledge of the respondents is 6.33 with the 't' value of 33.15 showed gain in knowledge of students regarding cardiopulmonary resuscitation. Hence research hypothesis H1 is accepted

Objective 3: To find out association between the pre-test knowledge score with selected socio demographic variables of college students. There was significant association between knowledge of college students and demographic variables such as age in years $\chi^2=212$, gender $\chi^2=5.6$, religion $\chi^2=82.74$, marital status $\chi^2=57.85$, Area of residence $\chi^2=12.6$, and source of knowledge regarding cardiopulmonary resuscitation $\chi^2=167.6$ were significant at 0.05 level of significant. Hence research hypothesis H2 is accepted

The finding suggests that when there is increase in knowledge, there will be an improvement in skill.

CONCLUSION

The overall comparison of pre and post-test knowledge staff nurses on MRSA Infection and found that maximum number of staff nurses 25 (62.5%) had inadequate knowledge and 10 (25%) had average knowledge and only remaining 5 (12.5%) had adequate knowledge. After the structured teaching programme the post-test showed that the maximum number of samples 25

(62.5%) had adequate knowledge, 15 (37.5%) had average knowledge and none of the sample had inadequate knowledge.

The comparison of pre-test knowledge scores and post-test knowledge scores of the subjects shows that the overall mean in the pre-test was 17.18 with SD 6.29 and in the post-test 27.98 with SD 4. The overall improvement mean was 1.8 with 't'- value 7.35 which was highly significant at $P > 0.001$ level. This showed that there was a significant improvement in knowledge of staff nurses after the structured teaching programme.

The study also assessed the skill of staff nurses on MRSA and found that maximum number of staff nurses 24 (60%) had poor skill, and 15 (37.5%) had Fair skill and only 1 (2. %) had Good skill. After the structured teaching programme, the post-test showed that the maximum number of samples 30 (75%) had Fair skill, 5 (12.5%) had Good skill and the remaining 5 (12.5%) had Poor skill.

The comparison of pre-test skill scores and post-test skill scores of the subjects shows that the overall mean in the pre-test was 8.68 with SD 3.49 and in the post-test mean 13 with SD 2.91. The overall improvement mean was 4.33 with 't' - value 5.76 which was highly significant at $P > 0.001$ level. This showed that there was a significant improvement in skills of staff nurses after the structured teaching programme.

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