

A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Prevention of Coronary Artery Disease among Students In A Selected Arts College of Durg, Chhattisgarh (State)

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Abstract: *Coronary artery disease is an obstructed blood flow through the coronary arteries to the heart muscles. The primary cause of coronary artery disease is atherosclerosis. The term acute coronary syndrome is used to encompass the continuum of coronary artery disease. Coronary artery disease is most prevalent type of cardiovascular disease in adults, more death occurs in middle aged adults. In India, even younger age group are prone to get heart disease due to their health damaging life style.*

This study was conducted to assess the effectiveness of video assisted teaching programme on knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg, Chhattisgarh (State)

The conceptual framework used in this study was based on J.W.Kenney's open system model. A quantitative approach was used for the present study. Using purposive sampling technique, 60 arts students were selected and video assisted teaching given after pre-test. Followed by that post test was conducted on day 7, the collected data was analyzed using descriptive and inferential statistics.

The overall analysis of prevention of coronary artery disease the mean post-test knowledge score of the subjects 28.07 is higher than the mean pre-test knowledge score 18.17. The calculated 't' value 19.769 is greater than of table value (1.984) at 0.001 level of significance. This indicates that video assisted teaching programme was effective in gaining knowledge regarding the prevention of coronary artery disease. The association between socio demographic variables with pre-test knowledge score significance ($p < 0.001$) was tested. Based on the findings indicate that there is a significant difference between pre-test and post-test knowledge score on prevention of coronary artery disease in a selected arts college students at Durg.

Keywords: Assess, effectiveness, knowledge, video assisted teaching program, coronary artery disease

I. INTRODUCTION

Coronary artery disease is a narrowing or blockage of coronary artery, which supply oxygen-rich blood to the heart. Coronary artery disease should now be considered an important public health problem due to epidemiological transition characterized by changing lifestyles and a problem related to interplay of factors with regards to their existence, casualty and attributes. The epidemiological factors like aging and changing lifestyles, which culminate in an epidemic of non-communicable disease, is rapidly occurring in the developing countries. Coronary artery disease is also called coronary atherosclerosis, and it is the most common type of heart disease. It is the leading cause of death in the United States in both men and women.

Coronary artery disease happens when the arteries that supply blood to heart muscle become hardened and narrowed. This is due to the build-up of cholesterol and other material, called plaque, on their inner walls. This build up is called atherosclerosis. Coronary artery disease grows less blood can flow through the arteries. As a result, the heart muscle

can't get the blood and oxygen it needs. This can lead to chest pain (angina) or a heart attack. Most heart attacks happen when a blood clot suddenly cuts off the hearts blood supply, causing permanent heart damage over time, coronary artery disease can also weaken the heart muscle and contribute to heart failure and arrhythmias. Heart failure means the heart can't pump blood well to the rest of the body. Arrhythmia is the change in the normal beating rhythm of the heart. Recently a lot of coronary artery disease has been observed in India and Chhattisgarh. Coronary artery disease is a dangerous disease so prevention is very important.

AIMS AND OBJECTIVES

The present study aims to assess the effectiveness of video assisted teaching program on knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg. The objective of the study were to assess the pre-test and post-test knowledge regarding prevention of coronary artery disease among students in a selected arts college Durg. To assess the effectiveness of video assisted teaching program on knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg, and to find out the association between level of pre-test knowledge score with their selected socio demographic variables.

ASSUMPTION:

Video assisted teaching will enhance the knowledge on prevention of coronary artery disease among students in a selected college of Durg, Chhattisgarh (State).

HYPOTHESIS

In the present study the hypothesis was:-

H1: There will be significant difference in the pre-test and post-test on level of knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg, Chhattisgarh (State).

H2: There will be significant association between the pre-test level of knowledge regarding prevention of coronary artery disease with selected demographic variable.

CONCEPTUAL FRAMEWORK

This study was based on J.W.Kenny's open system model. All living systems are open. In this system, there is a continue exchange of matter, energy and environment. Open system have varying degrees of interaction with the environment from which the system receives input in the form of matter, energy and information. The main concept of the open system model is input, throughput, output and feedback.

Input: In open system theory, input refers to matter, energy and intimation that enter in the system through its boundary. The investigator assess the demographic variables prior to pre-test knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg, Chhattisgarh (State). In this study the input indicates that video assisted teaching program on regarding prevention of coronary artery disease among students in a selected arts college of Durg, Chhattisgarh (State).

Throughput: Throughput refers to processing where the system transforms energy, matter and information. In this study, throughput refers to process of gaining knowledge regarding prevention of coronary artery disease among students in a selected arts college of Durg, Chhattisgarh (State).

Output: After processing input, the system returns output to the environment in an altered state. Here, the output denotes the post-test which was conducted and the result was categorized in three degrees such as, Poor knowledge, average adequate knowledge and good knowledge.

Feedback: The feedback refers to the environment responses to the system's output used by the system in adjustment, correction and accommodation to the interaction with the environment. In this study, feedback refers to the arts students those who had inadequate and moderate level of knowledge, was given video assisted teaching regarding prevention of coronary artery disease and the output was evaluated again.

II. METHEDODOLOGY

Evaluative research is an applied form of research that involves finding out how well a program, practice, procedure or policy is working. In the present study, aims to assess the effectiveness of a video assisted teaching program on knowledge regarding prevention of coronary artery disease using an evaluative approach. The research design was pre-experimental quantitative research approaches. Dependent variables are knowledge regarding prevention of coronary artery disease among art students. Video assisted teaching program on prevention of coronary artery disease was considered as an independent variable. The present study was conducted at arts college students of Swami Shri Swaroopanand Saraswati Mahavidyalaya, Hudco, Bhilai, (C.G State). The population for this study was arts college students; the sample comprised 60 arts students who met the inclusion criteria. Non-probability purposive sampling technique was used for selecting the samples for the study. The inclusion criteria for the study was boys and girls art students who are willing to participate in the study, those who are present at the time of data collection, and those who can read & write English & Hindi. The exclusion criteria for the study were boys and girls art students who are not willing to participate in the study, and students who are not available during the period of data collection. The demographic characteristics for the presentstudy are age in years, gender, religion, dietary habit, and previous knowledge regarding coronary artery disease, sources of knowledge regarding prevention of coronary artery disease, occupation and type of family.

CONTENT VALIDITY

Validity refers to the degree to which an instrument measures what it is intended to measure. The constructed tool used in this study was validated by 10 nursing experts and 2 cardiologists. The tool was evaluated for the appropriateness, adequacy, relevant completeness and comprehensiveness. Comments and suggestions were invited and appropriate modifications were made accordingly. The tool was refined and finalized after establishing the validity. A total of 38 items which consists of 8 items were demographic variables and 30 multiple choice items to assess knowledge regarding coronary artery disease among the arts students at a selected college, Durg. Tools were prepared in English and Hindi.

RELIABILITY OF TOOL

Reliability is defined as the ability of the instrument to create reproducible results. The tools were administered to 6 arts students in a selected college at Durg on 25 th Jan 2023.. on the first day the pre-test was conducted and after which the structured teaching was administered. The tool and the video assisted teaching program were found to be feasible, practicable and acceptable. Post-test was conducted after 7 days using the same questionnaire on 31st Jan 2023 to assess the knowledge of the students regarding prevention coronary artery disease. The reliability of the tool was tested by karl person (post-test) method. The computed coefficient $r = 0.9$ the tool was found to be highly reliable.

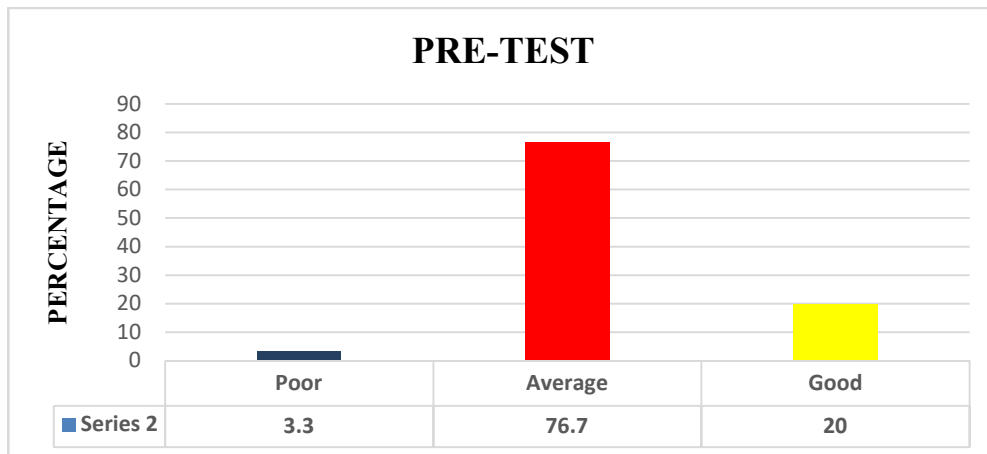
CRITERIA FOR GRADING KNOWLEDGE SCORE

SN _o	LEVEL OF KNOWLEDGE	SCORE	PERCENTAGE
1	Poor Knowledge	0 - 20	0 - 33%
2	Average Knowledge	21 - 30	34 - 50%
3	Good Knowledge	31 - 60	51 - 100%

III. FINDINGS

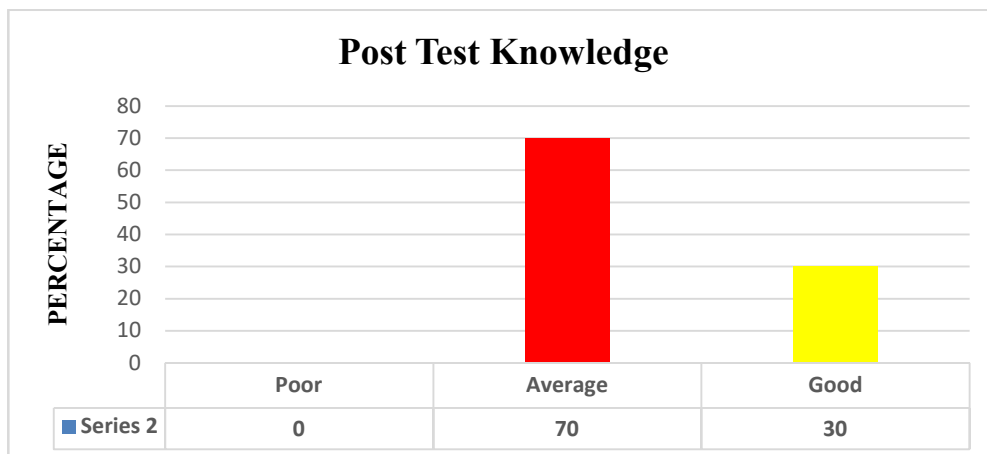
The pre-test knowledge of arts students regarding prevention of coronary artery disease were as follows: - N=60

Pre-test	Frequency	Percentage	Minimum	Maximum	Mean	SD
Poor	2	3.3	9	23	18.17	2.763
Average	46	76.7				
Good	12	20.0				



The post-test knowledge of arts students regarding prevention of coronary artery disease were as follows: - N=60

Post-test	Frequency	Percentage	Minimum	Maximum	Mean	SD
Poor	0	0	18	30	28.07	2.162
Average	42	70.0				
Good	18	30.0				



The pre-test knowledge score regarding prevention of coronary artery disease among arts students in a selected college Durg, 2 (3.3%) were poor, 46 (76.7%) were average and 12(20%) were good knowledge. The post-test knowledge score regarding prevention of coronary artery disease 0 (0%) were poor, 42(70%) were average and 18(30%) were good knowledge.

Comparison and Effectiveness

	Mean	Mean%	N	SD	t-value	df	Level of Significant
Pre-test	18.17	30.28%	60	2.763	19.769	59	P<0.001 Highly significant
Post-test	28.07	46.78%		2.162			

Shows the comparison of pre-test and post-test knowledge score; pre-test knowledge score was 18.17 mean percentage was 30.28% and SD was 2.763 and post-test mean score was 28.07 mean percentage was 46.78% and SD was 2.162 , and degree of freedom was 59 paired 't' test value is 19.769 at p<0.0001 shows highly significant deference between pre-test and post-test scores.

IV. RESULT

The analysis of the data was based on the objectives and hypothesis. Both descriptive and inferential statistics were used for the data analysis. Descriptive statistics used were mean, standard deviation with the presentation of data. A paired 't' test was computed to test the significant difference in the mean pre-test and post-test of knowledge scores. The study findings reveal that the majority of arts students (50%) were within the age group of 23-24 years. The pre-test knowledge score regarding prevention of coronary artery disease was 12(20%) good, 46(76.7%) were average and 2(3.3%) were poor. The post-test knowledge score regarding prevention of coronary disease 18(30%) were good, 42(70%) were average and 0(0%) were poor. The mean pre-test knowledge score was 18.17 and mean percentage 30.28% and mean post-test knowledge score was 28.07 and mean percentage was 46.78%. This means arts students gained knowledge after video assisted teaching program. Paired 't'-test value was 19.76 is greater than of table value (2.02) at $p < 0.0001$ shows a highly significant difference between pre-test and post-test score. There was a significant association in the pre-test knowledge score regarding prevention of coronary artery disease with their demographic variables.

V. CONCLUSION

The difference between pre-test and post-test knowledge scores indicated a significant high post-test score. The test computed between mean post-test knowledge score and mean pre-test knowledge score indicate a significant gain in knowledge. It was concluded that there was a true gain in knowledge and video assisted teaching program was effective as a method to improve knowledge. From the findings of the study, it can be concluded that the statistical evidence which clearly indicates that video assisted teaching program has significant effect on level of knowledge in arts students.

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