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Effectiveness of video assisted teaching on knowledge about risk factors of coronary heart disease among the clients admitted in de-addiction ward

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Abstract
Introduction: Coronary artery disease is also called CAD. It is the most common form of heart disease and it is the leading cause of death, too. It occurs when the coronary arteries that carry blood to your heart get blocked with plaque.
Objectives: The present study aims is to assess the effectiveness of video assisted teaching about risk factors of Coronary heart disease (CHD).
Methodology: The research design for the study is pre-experimental with one group pre-test post-test research design. Purposive sampling technique was used to select samples. Structured questionnaire was used to collect demographic data and multiple choice questions was used to assess post-test knowledge.
Results: The study resultsshows that statistically significant association with post-test level of knowledge about risk factors of coronary artery disease among the clients admitted in De-addiction ward at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with posttest level of knowledge about risk factors of coronary artery disease among the clients admitted in De-addiction ward.
Conclusion: This indicates that video assisted teaching is the effective and easy method to improve knowledge regarding CAD. It also helps in maintaining good lifestyle by creating awareness regarding the healthy lifestyle.

Keywords: Coronary artery disease, de-addiction, knowledge, video assisted teaching

Introduction

"Coronary artery disease begins in childhood, so that by the teenage years, there is evidence that plaques that will stay with us for life are formed in most people," said Fisher, who is former editor of the American Heart Association journal, ATVB [1]. "Preventive measures instituted early are thought to have greater lifetime benefits. Healthy lifestyles will delay the progression of CAD, and there is hope that CAD can be regressed before it causes CHD [2]."

The traditional risk factors for coronary artery disease are high LDL cholesterol, low HDL cholesterol, high blood pressure, family history, diabetes, smoking, being post-menopausal for women and being older than 45 for men, according to Fisher. Obesity may also be a risk factor. Typical warning signs are chest pain, shortness of breath, palpitations and even fatigue [3].

Coronary artery disease (CAD) is the most common type of heart disease. It is the leading cause of death in the United States in both men and women. CAD happens when the arteries that supply blood to heart muscle become hardened and narrowed [4].

This is due to the buildup of cholesterol and other material, called plaque, on their inner walls. This buildup is called atherosclerosis. As it grows, less blood can flow through the arteries. As a result, the heart muscle can't get the blood or 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 [5].

Coronary Heart Disease (CHD) is the leading cause of mortality and morbidity in many countries worldwide. Coronary heart disease (CHD) have assumed epidemic proportions worldwide. Globally CVD led to 17.5 million deaths in 2012. More than 75% of these deaths occurred in developing countries. This increase is driven by industrialization, urbanization, and related lifestyle changes and is called epidemiological transition [6].

According to a report of World Health Organization (WHO) in 2015, cardiovascular disease (CVD) caused 17.5 million (30%) of the 58 million deaths that occurred worldwide.

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While the prevalence of CHD is declining in the developing nations, the same cannot be held true for developing countries [7].

Coronary artery disease means narrowing of the coronary arteries (arteries that supply blood to the heart). This narrowing is due to a buildup in the walls of the arteries of plaque (deposits made up of cholesterol, other fats, and calcium)—a process called atherosclerosis (hardening of the arteries) [8].

The burden of CHD in India can be explained by the alarming rise in the prevalence of coronary heart disease risk factors like diabetes, hypertension, atherogenic dyslipidemia, smoking, central obesity and physical inactivity [9]. Rapid urbanization and change in lifestyle that occurred during the past two decades have led to the growing burden of coronary heart disease risk factors in India. Previous studies conducted in migrant India were misinterpreted to indicate that conventional risk factors do not account for the high prevalence and premature occurrence of CHD among Indians [10].

Cardiovascular diseases (CVDs) are the number 1 cause of death globally, taking an estimated 17.9 million lives each year. CVDs are a group of disorders of the heart and blood vessels and include coronary heart disease, cerebrovascular disease, rheumatic heart disease and other conditions. Four out of 5CVD deaths are due to heart attacks and strokes, and one third of these deaths occur prematurely in people under 70 years of age [11].

Cardiovascular diseases, especially coronary heart disease (CHD), are epidemic in India. The Registrar General of India reported that CHD led to 17% of total deaths and 26% of adult deaths in 2006-2009, which increased to 23% of total and 32% of adult deaths in 2016-2019 [12].

Methods and Materials
A quantitative approach with pre- experimental research design was used to conduct the study in SMCH. 60 samples were selected by using a convenience sampling technique. The criteria for sample selection was Clients who can understand and read Tamil or English and who are willing to participate & among the age group of 30-60 years. The exclusion criteria for the samples was clients who are not willing to participate & who have seizures, severe psychotic syndrome. The demographic data were collected was assessed using structured questionnaire. The data were analyzed using descriptive and inferential statistics. The sample characteristics were described using frequency and percentage. Mean and standard deviation was used to assess

the level of knowledge among the patients who are in De-addiction ward. Paired 't' test value were assessed to know the level of knowledge among the patients who are in De-addiction ward. Chi-Square test were used to associate the post level of knowledge among the patients in the De-addiction ward.

Results and Discussion
Section A: Sample characteristics
The most of the client's 35(58.4%) were aged <40 years, all 60(100%) were male, 22(36.7%) were graduates, 27(45%) were working in private sector, 48(80%) belonged to nuclear family, 24(40%) had an income of 10000-15000, 26(43.3%) had moderate level of stress with occupation, 44(73.3%) were non-vegetarian, 48(78.3%) had no family history of CAD, 31(51.7%) had moderately type of life style, 25(41.6%) had no history of smoking, 25(41.6%) were not smoking, 27(45%) were consuming alcohol for <1 year and 21(35%) used to have a drink containing alcohol 2 to 4 times a week.

Section B: Assessment of level of knowledge about risk factors of coronary artery disease among the clients admitted in de- addiction ward
The pretest, 36(60%) had inadequate knowledge, 20(33.33%) had moderately adequate knowledge and 4(6.67%) had adequate knowledge.

Whereas in the post test, 38(63.33%) had adequate knowledge, 21(35%) had moderately adequate knowledge and 1(1.67%) had inadequate about risk factors of coronary artery disease among the client admitted in De-Addiction ward.

This study is supported by T. Sekhri et al., (2019) [13] conducted a study to identify the prevalence of risk factor for coronary artery disease in Government Employees across India. The study revealed that 4.6% of the study population had a family history of premature CAD. The overall prevalence of diabetes was 16% (5.6% diagnosed during the study and the remaining 10.4% already on medication). Hypertension was present in 21% of subjects. The prevalence of dyslipidemia was significantly high, with 45.6% of study subjects having a high total cholesterol/high density lipoprotein ratio. Overall, 78.6% subjects had two or more risk factors for CAD. The present study demonstrates a high prevalence of CAD risk factors in the Indian urban population. Therefore, there is an immediate need to initiate measures to raise awareness of these risk factors so that individuals at high risk for future CAD can be managed.
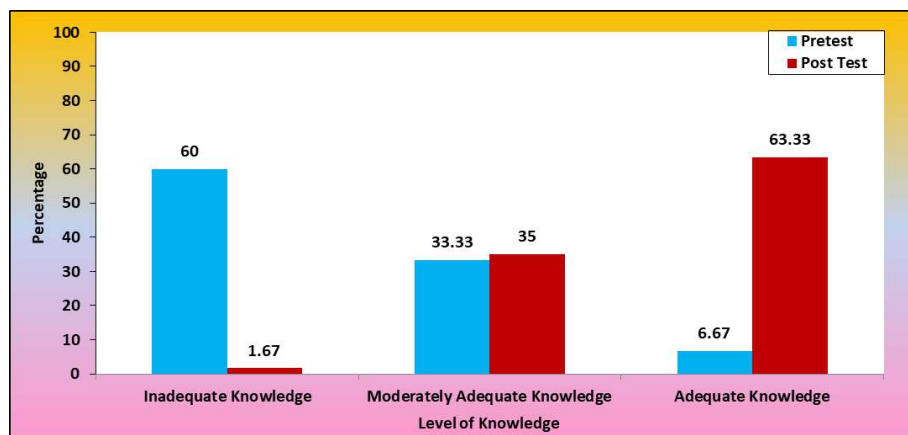

Fig 1: Percentage distribution of level of knowledge about risk factors of coronary artery disease among the clients admitted in de-addiction ward

Section C: Effectiveness of video assisted teaching on knowledge about risk factors of coronary artery disease among the in de- addiction ward

Table 1: Effectiveness of pretest and post-test knowledge scores about risk factors of coronary artery disease among the clients admitted in de-addiction ward, n = 60

Knowledge	Mean	S.D.	Paired 't' test value
Pre-test	26.43	15.58	t = 17.590
Post-test	59.63	17.59	p = 0.0001 S***

***$p<0.001$, S – Significant

The table 1 depicts that the pretest mean score of knowledge score was 26.43 with standard deviation 15.58 and the post-test mean score of knowledge was 59.63 with standard deviation 17.59. The calculated paired 't' test value of t = 17.590 was found to be statistically highly significant at $p<0.001$ level. This clearly infers that video assisted teaching on knowledge about risk factors of CAD administered to clients admitted in De-Addiction ward resulted in a significant improvement in the post test level of knowledge among the clients.

Section D: Association of level of knowledge with selected demographic variables

The demographic variable education had shown statistically significant association with post-test level of knowledge about risk factors of coronary artery disease among the clients admitted in De-addiction ward at $p<0.05$ level and the other demographic variables had not shown statistically significant association with post-test level of knowledge about risk factors of coronary artery disease among the clients admitted in De-addiction ward.

This study is supported by Rachel Hajar M.D. (2017) [14] conducted the Framingham study which was responsible for pointing out fallacies in our understanding of CVDs and identification of its major risk factors: high blood pressure, high blood cholesterol, smoking, obesity, diabetes, and physical inactivity as well as other valuable information on the effects of related factors such as blood triglyceride and high density lipoprotein (HDL) cholesterol levels, age, gender, and psychosocial issues. To date, no single risk factor has been identified to be responsible for causing CVD; rather, multiple interrelated factors seem responsible for its development. Although the Framingham cohort is Caucasian, other studies have shown that the major risk factors identified in this group apply universally to other racial and ethnic groups. The notion of CVD risk factors is an integral part of modern medicine which has led to the development of effective treatment and preventive strategies in clinical practice.

Conclusion

This indicates that video assisted teaching is the effective and easy method to improve knowledge regarding CAD. It also helps in maintaining good lifestyle by creating awareness regarding the healthy lifestyle.

Reference

1. Black Joyce M. Luckmann and Sorenson's "Medical Surgical Nursing– Psycho physiologic Approach". Philadelphia: WB Saunders Company 2009, 1627-1645.
2. Lois White, Gena Duncan. Medical Surgical Nursing an Integrated Approach. Texas: Delmar Cengage Learning 2012, 438-456.
3. Janice Hinkle L, Kerry Cheever H. Text Book of Medical- Surgical Nursing. New delhi wolters Kluwer (India) Publications 2013;1;756-770.
4. Basavanthappa. Medical Surgical Nursing. New Delhi: Jaypee Brothers Medical publishers 2003, P344-347.
5. Lewis Sharon L *et al*. Medical Surgical Nursing– Assessment and Management of Clinical Problems. St. Louis: Mosby Company 2007, 786-810.
6. Davidson Stanley. Principles and practice of medicine. New York: Churchill living stone publishers 2006, 581-590.
7. Prabhakaran GN. Introduction to Biostatistics. New Delhi: Jaypee brothers and medical publishers 2006, 39-53.
8. Barbara Hazad. Statistical methods for health care research. Philadelphia. Lippincott Williams & Wilkins Publications 2005.
9. Basavanthappa. Nursing Research. New Delhi: Jaypee Brothers Medical publishers 2007.
10. Chinn Peggy L. Nursing Research Methodology: Issues and Implementation. USA: Aspen publishers 2004.
11. Fain James A. Reading, Understanding and Applying Nursing Research. New Delhi: Jaypee publishers 2009.
12. Fawcett Jacqueline. Analysis and Evaluation of Nursing Theories. Philadelphia: FA Davis Company publishers. Gurumani. Introduction to Biostatistics. Bangalore: Jaypee publishers 2005.
13. Sekhri T *et al.* A study to identify the prevalence of risk factor for coronary artery disease in Government Employees across India 2019.
14. Rachel Hajar MD. Framingham study which was responsible for pointing out fallacies in our understanding of CVDs and identification of its major risk factors 2017.