



A STUDY TO ASSESS THE LEVEL OF KNOWLEDGE REGARDING RISK FACTORS AND ITS PREVENTION OF CORONARY ARTERY DISEASE AMONG PATIENTS WITH CHRONIC ILLNESS

Aby Thankachan

Asst. Professor, Hindusthan College of Nursing, Coimbatore -28. Dr. MGR Medical University, Tamilnadu,
India

Contact details of corresponding author:

Postal Address: Mr.Aby Thankachan, Asst. Professor, Hindusthan College of Nursing, Coimbatore -28.

ABSTRACT:

Coronary Artery Disease (CAD), also known as ischemic heart disease, is a condition caused by the narrowing or blockage of the coronary arteries—the blood vessels that supply oxygen-rich blood to the heart muscle. This occurs due to the buildup of atherosclerotic plaques, which are composed of cholesterol, fat, calcium, and other substances found in the blood. This study aims to assess the level of knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness and to find out the association between the knowledge scores of risk factors and its prevention of coronary artery disease among patients. A descriptive research design selected for the research study using non purposive sampling technique. The study was conducted in outpatient department in Hindusthan Hospital, Coimbatore. Data was collected through the structured interview schedule by using structured knowledge questionnaire. Discussion was based on statistical analysis. Majority of the patients have average level of knowledge. The result reveals that there is no significant association between the knowledge and selected Socio-demographic variables.

KEYWORDS: *coronary artery disease, knowledge, risk factors and its prevention of coronary artery disease.*

INTRODUCTION:

Coronary artery disease (CAD), also known as ischemic heart disease, is a leading cause of morbidity and mortality worldwide. It occurs when the coronary arteries become narrowed or blocked due to the buildup of atherosclerotic plaques, resulting in reduced blood flow to the heart muscle. This condition can lead to angina, myocardial infarction (heart attack), heart failure, and even sudden cardiac death.

Coronary artery disease is the single largest cause of death globally, responsible for approximately 9 million deaths annually, according to the World Health Organization. Low- and middle-income countries bear a disproportionately high burden, accounting for over 75% of cardiovascular deaths.

The increasing prevalence of risk factors such as hypertension, diabetes, obesity, sedentary lifestyle, smoking, and unhealthy diets has

contributed significantly to the rising incidence of Coronary artery disease.

Understanding the risk factors associated with chronic illnesses is essential for effective prevention, early detection, and self-management. Many research studies have shown that patients with chronic conditions such as diabetes, hypertension, cardiovascular disease, and chronic kidney disease have limited awareness of the modifiable and non-modifiable risk factors contributing to their condition.

Coronary Artery Disease (CAD) remains a leading cause of morbidity and mortality among individuals with pre-existing chronic illnesses such as hypertension, diabetes mellitus, and chronic kidney disease. Despite being at higher risk, many patients with chronic conditions lack adequate knowledge of the risk factors associated with CAD.

Common modifiable risk factors, including high blood pressure, high cholesterol, smoking, obesity, sedentary lifestyle, poor dietary habits, and stress, are often poorly understood or underestimated. Conversely, non-modifiable risk factors such as age, gender, and family history are more likely to be acknowledged. Limited awareness can contribute to poor disease management, delayed treatment-seeking behavior, and increased complications. Therefore, enhancing patient education and awareness regarding CAD risk factors is essential, particularly for those already living with chronic illnesses. This can empower patients to make informed lifestyle changes and adhere to preventive health measures.

In light of these challenges, the investigator recognized the need to assess and enhance patient awareness. Therefore, the present study aims to evaluate the knowledge of risk factors and its prevention of coronary artery disease among patients with chronic illness at selected hospital in Coimbatore.

STATEMENT OF THE PROBLEM

“A Descriptive study to assess the knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness”

OBJECTIVES OF THE STUDY:

- To assess the level of knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness.
- To associate the knowledge regarding risk factors and its prevention of coronary artery disease with their selected demographic variables.

HYPOTHESES:

- H₁: There will be a significant association between knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness and their demographic variables.

METHODS AND MATERIALS:

Quantitative evaluative research approach was adopted for this study. The research design chosen for this study was descriptive research design. 30 Patients with chronic illness attending various out patient Departments who were fulfilling the sampling criteria are included for the study. The sampling technique adopted for this study was Non-probability convenient sampling technique.

Research variable of the study is level of knowledge regarding risk factors and its prevention of coronary artery disease and the Demographic variables are age, gender, marital status, type of family, religion, education, occupation, monthly income, Habit of Smoking, Habit of Alcoholism, Dietary Inclusion of Junk Foods, Hereditary presence of Cardio vascular diseases.

Data collection was conducted with the formal permission from hospital management and nursing in-charge. An interview schedule in Tamil was used by the investigator to assess the knowledge and self-care practices of patients with chronic illness.

The data collection were planned with a target of 5 to 6 patients per day. To assess the knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness, the investigator utilized a structured questionnaire.

Data was collected using a well-structured multiple-choice questionnaire consisting of 20 questions, with a maximum possible score of 20. Each correct answer was awarded one point, while

incorrect responses received a score of zero. The questionnaire was designed to assess the knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness at a selected hospital.

The tool was developed by the investigator based on an extensive review of relevant literature and aligned with the objectives of the study. It was created under the guidance of subject matter experts and subsequently reviewed and approved by the research committee. The content validity of the tool was established through evaluation by experts in medical-surgical nursing.

RESULTS:

Section A: Distribution of patients with chronic illness according to their demographic variables

The demographic data revealed that the majority of patients 15 (50%) were between 40–49

years of age, and most of the participants 20 (67%) were male. All most 29 (97%) were married and a significant portion of the sample 25 (83%) belonged to nuclear families. Eighteen participants (60%) were Hindu, and 17 (57%) had middle school education.

Regarding occupation, 18 patients (60%) were self-employed, and 17 (57%) had a monthly income ranging from ₹5,001 to ₹10,000. In terms of Habit of smoking, 18 patients (60%) often smokes, 15 participants (50%) had the habit of alcoholism, received hemodialysis twice a week. Regarding Dietary Inclusion of Junk Foods, 18(60%) had the junk foods very often and 19 participants (63%) doesn't have any Family Hereditary history of Cardio vascular diseases.

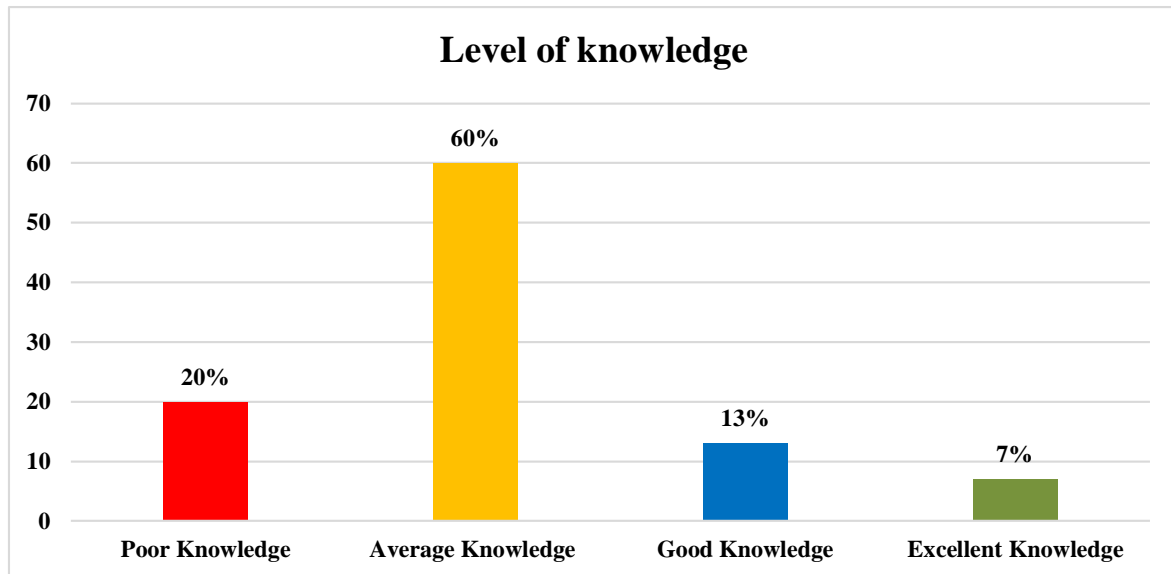
Section-B: Distribution of level of knowledge on risk factors and its prevention on coronary artery disease among patients with chronic illness.

Table 1: Frequency, percentage, mean and standard deviation of patients with chronic illness according to their level of knowledge n=30

Level of knowledge	Frequency (f)	Percentage (%)	Mean	SD
Poor Knowledge	6	20	12.3	2.9
Average Knowledge	18	60		
Good Knowledge	4	13		
Excellent Knowledge	2	7		

Table 1 shows that 18(60%) patients were had average level of knowledge regarding prevention and risk factors of coronary artery disease whereas 04 (13%) had good level of knowledge, followed

by 06(20%) patients were had poor level of knowledge and only 02(7%) were had excellent level of knowledge.



Section – C: Association of knowledge regarding risk factors and its prevention of coronary artery disease with their selected demographic variables.

There was significant association between level of knowledge regarding risk factors and its prevention of coronary artery disease with their selected demographic variables like age, gender education, Habit of Smoking, Habit of Alcoholism, Dietary Inclusion of Junk Foods, Hereditary presence of Cardio vascular diseases etc

DISCUSSION:

- The first objective of the study was to assess the level of knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness.

It reveals that the 18(60%) patients were had average level of knowledge regarding prevention and risk factors of coronary artery disease whereas 04 (13%) had good level of knowledge, followed by 06(20%) patients were had poor level of knowledge and only 02(7%) were had excellent level of knowledge.

- The second objective of the study was to associate the knowledge regarding risk factors and its prevention of coronary artery disease with their selected demographic variables

The study findings revealed that there was significant association between level of knowledge regarding risk factors and its prevention of coronary artery disease with their selected demographic variables like age, gender education, Habit of Smoking, Habit of Alcoholism, Dietary Inclusion of Junk Foods, Hereditary presence of Cardio vascular diseases etc

IMPLICATIONS OF THE STUDY IN NURSING PRACTICE:

Nursing professionals play a vital role in educating patients with chronic illnesses about the risk factors and preventive measures related to coronary artery disease (CAD). This knowledge is essential for effectively managing early symptoms and minimizing potential complications. As nurse counselors, they can provide both individual and group counseling sessions to raise awareness about CAD, its prevention, and the role of complementary and alternative therapies. It is crucial for nurses to be well-informed about CAD risk factors and health-promoting practices, enabling them to deliver comprehensive care. This, in turn, empowers clinical nurses to recommend and implement holistic approaches for patients with chronic conditions, helping them navigate future health challenges more effectively.

RECOMMENDATIONS:

Recommendations Based on the Study Findings:

1. A similar study may be conducted with a larger population to allow for broader generalization of the findings.
2. Research can be undertaken to compare the effectiveness of structured teaching programs with other instructional methods in enhancing knowledge related to coronary artery disease.
3. A study may be designed to assess the current level of knowledge and attitudes concerning coronary artery disease among patients or specific groups.
4. A descriptive study can be conducted to evaluate the existing knowledge and practices regarding the prevention and management of coronary artery disease.
5. A comparative study may be carried out to assess the knowledge, attitudes, and practices related to coronary artery disease among populations in rural versus urban settings.

CONCLUSION:

Coronary Artery Disease (CAD) is a condition in which the coronary arteries (the blood vessels supplying the heart muscle) become narrowed or blocked due to the buildup of plaque (a combination of fat, cholesterol, and other substances). This reduces blood flow to the heart, potentially leading to angina (chest pain), shortness of breath, heart attack, or even sudden cardiac death.

This descriptive survey was conducted to assess the level of knowledge regarding risk factors and its prevention of coronary artery disease among patients with chronic illness at selected hospitals in Coimbatore. The interview method was used for data collection. The findings revealed that the majority of patients with chronic illness possessed inadequate to moderately adequate knowledge about risk factors and its prevention of coronary artery disease.

REFERENCES:

- Mohammad, N. B. (2018). Knowledge, attitude, and practice regarding the risk of cardiovascular diseases in patients attending outpatient clinic in Kuantan, Malaysia. *Journal*

of Pharmacy and Bioallied Sciences, 10(1), 7–14. https://doi.org/10.4103/jpbs.JPBS_227_17

- George, B. (2021). Descriptive study to assess the knowledge on risk factors of coronary artery disease. *Clinical Journal of Nursing Care and Practice*, 5, 51–54. <https://doi.org/10.29328/journal.cjnnp.1001037>
- Mandlein, J. M., & Freedman, D. S. (1997). Risk factors for CAD among Navajo Indians. *The Journal of Nutrition*, 127(10), 2095–2110.
- Murray, C. J., & Lopez, A. D. (2000). *The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 2000 and projected to 2020. Journal of Health Risk Management*.
- Reddy, K. S., & Yusuf, S. (1998). Emerging epidemic of cardiovascular disease in developing countries. *Circulation*, 97(6), 596–601. <https://doi.org/10.1161/01.CIR.97.6.596>
- Abraham, N. (2017). Effectiveness of structured teaching programme (STP) on knowledge regarding management of modifiable risk factors of coronary artery disease in patients with diabetes mellitus in selected rural areas of Mehsana District. *International Journal of Nursing Education and Research*, 5(3), 310–314.
- Parvin, S. K., Devakirubai, D., Santha, N. J., & Selvarani, G. (2020). Assessment of risk status for coronary artery disease in terms of selected risk factors among bus drivers. *Asian Journal of Nursing Education and Research*, 10(3), 291–297.
- Kaur, S. (2016). A descriptive study to assess the prevalence of cardiovascular risk factors among adolescents in selected schools of Banga, District Shaheed Bhagat Singh Nagar, Punjab. *Asian Journal of Nursing Education and Research*, 6(3), 361–370.
- Ramya, K. R., & Batra, K. (2015). Perception and knowledge of coronary heart disease among adolescents of Kerala. *Asian Journal of Nursing Education and Research*, 5(3), 327–330.
-