

A Study to Assess the Knowledge regarding Prevention of Coronary Artery Disease among the Students of Selected Colleges of Guwahati, Assam and with a View to Develop an Information Booklet on Prevention of CAD

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Abstract: Coronary artery disease (CAD) is a major cause of mortality and morbidity all over the world. CAD happens when the blood flow through the coronary arteries to the heart muscle is obstructed. The primary cause of CAD is atherosclerosis. If blood flow reduction resulting from CAD is severe and prolonged, a myocardial infarction can occur, causing irreversible damage. CAD begins in childhood, so that by the teenage years, there is evident that the plaques stays which are formed in most people. Aim: The aim of the study was to assess the knowledge regarding prevention of coronary artery disease among the students of selected colleges of Guwahati, Assam and with a view to develop an information booklet on prevention of CAD. **Method:** Quantitative research approach was used, and descriptive design was adopted in the study. The samples were collected using non probability purposive sampling technique from 152 students, who were in the age group of 17 - 30 years, studying in selected college of Guwahati, Assam and who fulfills the inclusion criteria. Structured questionnaire was used to assess the knowledge regarding prevention of coronary artery disease among the students. **Result:** Out of 152 respondents it was found that majority i. e 114 (75%) respondents had moderately adequate knowledge, 28 (18.42%) respondents had inadequate knowledge and 10 (6.57%) had adequate knowledge. It was found that majority i. e 79 (51.97%) were in the age group of 17 - 19 years, 80 (52, 63%) were female, 57 (37.5%) were 3rd year bachelor of arts students, 69 (45.39%) of respondents had monthly family income of greater than Rs 20, 000, 96 (63.15%) of the respondents were Hindu, 124 (81.57%) of the respondents were non vegetarian, 107 (70.39%) didn't have the family history of CAD, diabetes mellitus and hypertension. Knowledge of the students regarding the prevention of CAD had no significant association with their age group, gender, educational qualification, religion and dietary pattern. So it was concluded that majority of the students had moderately adequate knowledge regarding the prevention of CAD and awareness campaign can be given.

Keywords: CAD, coronary artery disease, knowledge, students, college

1. Introduction

Coronary artery disease (CAD) also known as coronary heart disease (CHD) is the foremost cause of death globally and is one of the top five causes of death in Indian population. An estimated 3.8 million men and 3.4 million women die each year from CAD [1]. The age - standardized death rates from CAD are declining in many developed countries, but are increasing in developing and transitional countries, partly as a result of demographic changes, urbanization and lifestyle changes [2]. The Global Burden of Disease study estimate of age - standardized CVD death rate of 272 per 100 000 population in India is higher than the global average of 235 per 100 000 population. Premature mortality in terms of years of life lost because of CAD has increased from 23.2 millions (1990) to 37 million (2010) [3]. According to Global and Regional Projections of mortality and burden of disease, CAD will remain the leading cause of death for the next 20 years. A study conducted by Abhisekh Goyal concluded that the increased in CAD prevalence in India is attributed to social and economic change and its consequences including change in dietary habits, physical inactivity and increased incidence of diabetes and hypertension [4].

The investigator encountered many of the patients in hospital suffering from coronary heart diseases, where most

of the patients had a sedentary lifestyle and asked various questions about their problems and preventive measures, which shows that there is lack of knowledge among them. Therefore, the need had been felt by the investigator to carry out such a study to know their level of knowledge and which will help to prevent the disease occurrence and take proper preventive measures.

2. Literature Survey

In 2016, a study was conducted on the prevalence of CAD and its risk factors in Kerala among 5167 adults using a multistage cluster sampling method. Information on socio - demographic, smoking, alcohol use, physical activity, dietary habits and history of diabetes, hypertension was collected using structural interview scheduled. Anthropometric, blood pressure, electrocardiogram and biochemical investigation were done using standard protocol. Prevalence of CAD in men was 12% and 14.3% in female. Physical activity was reported by 17.5% and 18% reported family history of CAD, overweight or obese 59%, abdominal obesity 57%, hypertension 28%, diabetes 15%, high total cholesterol 52%, low level of high-density lipoprotein cholesterol 39% with current smoking reported of men (28%). Thus, the prevalence is increased nearly three

times since 1993 without any difference in urban and rural areas [5].

In 2014, a descriptive study was conducted attempted to quantify knowledge regarding preventive measures of Coronary Artery disease in selected hospital of Ludhiana city from 150 patients attending medical and surgical OPD's who were not diagnosed with any of heart disease. The study revealed that only 15.33% of subjects had good level of knowledge, 84.67% subject had poor level of knowledge regarding prevention of CAD. The highest mean knowledge score of 14.55 + 0.65 was in the age group of 41 - 50 years [6].

Objectives

- a) To assess knowledge of the students regarding the prevention of coronary artery disease.
- b) To determine the association between the knowledge on coronary artery disease prevention with the selected demographic variables (age, gender, educational qualification, family income, diet, family history of coronary artery disease, diabetes mellitus, high blood pressure).
- c) To develop and validate information booklet regarding prevention of coronary artery disease.

3. Methods/Approach

In this study considering the objectives, approach adopted for the study was quantitative approach.

Setting of the study

The study was conducted at

- a) DR BR Ambedkar College, Ganeshguri
- b) Dispur Academy, Kahilipara
- c) RJ Degree College, Beltola
- d) City Public College, Kahilipara

Target population

Target populations were the college students

Sample and Sample size

152 students, who were in the age group of 17 - 30 years, studying in selected college of Guwahati, Assam and who fulfills the inclusion criteria

Description of the tools

The tools used for the study consisted of two sections

Section I: Demographic variables: Age, Gender, Educational qualification, Monthly family income, Religion, diet, Family history of CAD, diabetes mellitus, hypertension.

Section II: Structured questionnaire: The 26 questions assess the level of knowledge the knowledge regarding prevention of coronary artery disease among the students on knowledge, risk factor and causes, clinical manifestation, investigation, management and prevention.

4. Results

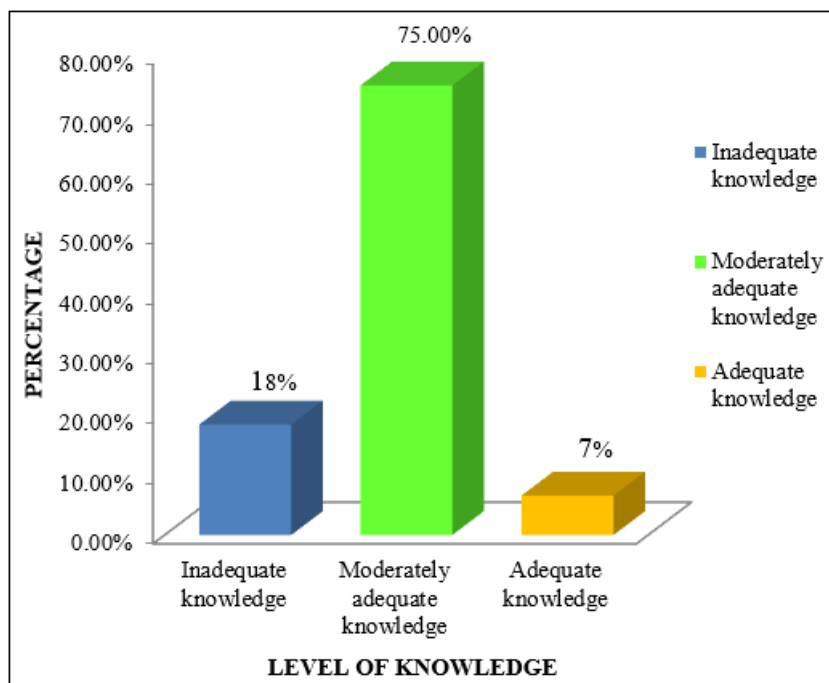


Figure 1: Percentage distribution of the respondents according to their level of knowledge, n=152

Table 1: Frequency and percentage distribution of students according to their level of knowledge, n=152

Knowledge	Frequency	Percentage	Mean	SD	Range of scores	Total score
Inadequate (<33%) (Marks <9)	28	(18%)	12.04	3.68	4 - 21	26
Moderately Adequate (33 - 66%) (Marks 9 - 17)	114	(75%)				
Adequate (>66%) (Marks >17)	10	(7%)				

Table 1 depicts that out of 152 respondents, majority i. e.114 (75%) respondents had moderately adequate knowledge, 28 (18%) respondents had inadequate knowledge, and 10 (7%) respondents had adequate knowledge regarding prevention of coronary artery disease. The overall mean and standard deviation of knowledge level was 12.04 and 3.68 respectively.

Table 2: Association between the knowledge of the students with their demographic variables, n=152

Variables	Moderately Adequate	Inadequate	Total	df	Chi Square		Remark
					Cal value	Table value	
Age							
17 - 19 years	64	15	79	1	0.035	3.84	NS
20 years and above	60	13	73				
Gender							
Male	56	16	72	1	1.29	3.84	NS
Female	68	13	80				
Educational qualifications							
B. A 1 st year	37	10	47	2	5.63	5.99	NS
B. A 2 nd year	44	4	48				
B. A 3 rd year	42	15	57				
Monthly family income							
<Rs 10, 000 - Rs 15, 000	39	7	46	1	0.45	3.84	NS
Rs 15, 001 - >Rs20, 000	85	21	106				
Diet							
Vegetarian	31	6	37	1	0.38	3.84	NS
Non vegetarian	91	24	106				
Family history							
Yes	38	7	45	1	0.21	3.84	NS
No	87	20	107				

**NS = Non-significant, df = degree of freedom, Cal value= calculated value. NB: For calculation, data were clubbed together. Chi Square formula is applied although Level of Significance is 0.50.

5. Discussion as per the objectives of the study

Objective 1: To assess knowledge of the students regarding the prevention of coronary artery disease.

Out of 152 respondents, majority i. e.114 (75%) respondents had moderately adequate knowledge, 28 (18%) respondents had inadequate knowledge, and 10 (7%) respondents had adequate knowledge regarding prevention of coronary artery disease. The overall mean and standard deviation of knowledge level was 12.04 and 3.68 respectively.

Objective 2: To determine the association between the knowledge on coronary artery disease prevention with the selected demographic variables (age, gender, educational qualification, family income, diet, family history of coronary artery disease, diabetes mellitus, high blood pressure).

The analysis depicted that there were no association between the knowledge and the selected demographic variables

Objective 3: To develop and validate information booklet regarding prevention of coronary artery disease.

According to their level of knowledge, an information booklet was developed on the contents on incidence, risk factors, clinical features, test to confirm CAD, treatment, prevention and control of coronary artery disease were provided to each respondent.

6. Conclusion

Based on the analysis of the findings of the study, the majority of the respondents have moderately adequate

knowledge on the regarding prevention of coronary artery disease.

7. Future Scope

- The study can be done among the adults in rural areas to evaluate their level of knowledge regarding of coronary artery disease.
- A similar study can be conducted on preventive measures and risk factors among young adults.
- A similar study can be done to assess the knowledge and attitude regarding the prevention of CAD

Delimitation

Students of bachelor of arts students

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