

Original Research Article

Knowledge on Risk Factors for Coronary Artery Disease among OPD Patients at Selected Hospital, Bangalore

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ABSTRACT

Coronary artery disease (CAD) is one of the main reasons for deaths in the developed as well as developing countries. Due to industrialization and changing feature of socio-economic scenario, the incidences of Coronary Artery Disease are rising in the developing countries as well prevalence of CAD in India is 3 to 4 fold higher than in America and Europe. A descriptive study was to assess the knowledge on risk factors for Coronary Artery Disease among OPD patients. The sample were selected through purposive sampling technique and pre validated semi structured questionnaire related to various aspects of coronary artery disease risk factors was used. The data was analyzed using SPSS 16.0 version. A total of 30 OPD patients were included, majority of the patients belongs to moderate level of knowledge (68%), and only 6 % patients have inadequate level of knowledge. There is a statistically significant association of knowledge score with their selected demographic characteristics i.e. education (chi square = 0.013, $p < 0.05$), income per month (chi square = 0.025, $p < 0.05$) and cholesterol (chi square = 0.05, $p < 0.05$). The study reveals that majority of the participants (68%) had moderate and (26 %) had adequate level of knowledge regarding coronary artery disease risk factors. Hence, it is necessary to educate people regarding coronary artery disease risk factors through health education.

Keywords: Knowledge, OPD patients, coronary artery disease risk factors.

INTRODUCTION

Coronary artery disease (CAD), also called heart disease or ischemic heart disease, results from a complex process known as atherosclerosis, fatty deposits (plaques) of cholesterol and other cellular waste products build up in the inner linings of heart's arteries. It is the failure of coronary circulation to supply adequate blood to cardiac muscles and surrounding tissues. The American Heart Association has identified several risk factors. Some of them can be modified, treated, or controlled, but some cannot. The modifiable risk factors are tobacco smoke, high blood cholesterol, high blood pressure, physical inactivity, obesity and overweight, diabetes

mellitus, and stress. The non-modifiable risk factors are increasing age, sex, and heredity. ^[1] The incidence of CAD in young adults is increasingly mainly due to tobacco consumption, lack of physical activity, sedentary lifestyle, and obesity. This includes history of one or more risk factors, mainly smoking (76.8%), obesity (20%), hypertension (19%), hypercholesterolemia (18.5%), diabetes mellitus (17%), and family history of previous myocardial infarction. ^[2]

The World Health Organization predicts that by 2020 CAD will become the world's most important cause of death and disability. In today's world, most deaths are attributable to non-communicable diseases;

32 million and just over half of these; 16.7 million are as a result of CAD. More than one-third of these deaths occur in middle aged adults. In developed countries heart disease is the first cause of death for adult men and women. [3,4]

According to existing knowledge, CAD epidemics are essentially preventable. For example, CAD mortality has fallen one-third to one-half in the last three decades in majority of developed countries. The reasons for the accelerated decline in CAD mortality from 1980-1990 were analyzed. They found that 25% of the decline was due to primary prevention, 29% due to secondary prevention and 43% was due to improvements in treatments of patients. This demonstrates that modification of risk factors related to lifestyle in the entire nation, rather than advances in management of few with overt CAD is largely responsible for dramatic decline of CAD mortality in the developed countries. [5]

Objectives:

1. To determine the level of knowledge on risk factors on coronary artery disease among OPD patients as measured by structured knowledge questionnaire.
2. To find the association between knowledge scores on risk factors for CAD among OPD patients and selected demographic variables.

HYPOTHESIS

H₁: There is significant association between knowledge score on risk factors for CAD and selected demographic variables.

MATERIALS AND METHODS

Research approach

A quantitative approach was used to assess the knowledge on risk factors for coronary artery disease.

Research design

A descriptive exploratory design was adopted for the present study to assess the knowledge scores on risk factors for coronary artery disease among OPD patients.

Variables

Research variable

Variable in this study is knowledge on risk factors on coronary artery disease.

Attribute variable

The variables included are age, sex, and educational status, family history of CAD, occupation, marital status, monthly income, and source of information regarding coronary artery disease.

Settings

The study was conducted in the cardiology OPD of selected hospital in Bangalore.

Sample/ Sample size

The sample selected in this study was adults including men and women coming for check up in cardiology OPD who were fulfilling the inclusion criteria. Total sample size in this study was 50.

Sampling Technique

In order to select the sample from the population, purposive sampling technique will be used.

Description of the Tool

Section A

Consisted of baseline variables including age, gender, education, occupation, family history of CAD, occupation, marital status, monthly income, type of family and smoking habit

Section B

Structured knowledge questionnaire will be administered to assess knowledge on risk factor for coronary artery disease.

Data Collection Procedure

Permission was obtained from the concerned authority. Using purposive sampling technique 50 samples were selected from OPD patients coming for check up. The purpose of the study was explained and informed consent was taken from the subjects. A structured knowledge questionnaire on CAD to determine the knowledge on risk factors was administered to the subjects.

RESULTS

Section A: Analysis of Demographic Characteristics of the OPD Patients

Table 1: Frequency and Percentage Distribution of OPD Patients According to Their Demographic Characteristics. N = 50

S. No	Demographic Characteristics	Frequency (N)	Percentage (%)
1.	Age (In Years)		
	a. < 40	3	6
	b. 41- 60	25	50
2.	Gender		
	a. Male	44	88
3.	Marital Status		
	a. Married	49	98
4.	Education		
	a. Up to high school	13	26
	b. Pre degree	16	32
	c. Degree	17	34
5.	Occupation		
	a. Unemployed	16	32
	b. Employed	19	38
	c. Retired	8	16
6.	Income Per Month (In Rupees)		
	a. < 15000	18	36
	b. 15000 - 25000	12	24
	c. 25000 - 35000	13	26
7.	Type Of Family		
	a. Nuclear	35	70
8.	Smoking Habit		
	a. Yes	17	34
9.	Family History of Cad		
	a. Yes	2	4
10.	Body Mass Index (BMI)		
	a. Below Normal (< 18.5)	4	8
	b. Normal (18.5 -25)	31	62
11.	Low Density Lipoprotein (In Mg/Dl)		
	a. < 100	32	64
	b. 100 - 129	7	14
12.	Cholesterol (In Mg/Dl)		
	a. Mild (< 200)	40	80
	b. Moderate (200 - 239)	8	16
13.	Blood Pressure (In Mm Of Hg)		
	a. < 120/80	37	74
	b. 120/80 - 139/89	11	22
	c. 140/90 - 159/99	2	4

Table 2: Percentage on knowledge of OPD patients regarding risk factors for Coronary Artery Disease among OPD Patients

SL NO	Score Interpretation Of Knowledge	Frequency (N)	Percentage (%)
1.	Inadequate knowledge (0-8)	3	6
2.	Moderate Knowledge (9-16)	34	68
3.	Adequate Knowledge (17-25)	13	26

The data presented in table 2 shows that majority of the patients belongs to moderate level of knowledge (68%), and 26 % patients have adequate level of knowledge.

Section B: Knowledge of OPD patients regarding on risk factors for Coronary Artery Disease.

Table 3: Knowledge score among the subjects.

S.NO.	Subject knowledge	
	Mean	Standard deviation
1	13.94	3.365

The mean score was 13.94 and its standard deviation of 3.365.

Section C: Association of Knowledge Levels with Selected Demographic Characteristics

Table 4: Association of knowledge score with their selected demographic characteristics n = 50

Sl. No	Demographic Characteristics	Knowledge levels			df	Chi-Square Value	Inference
		0 - 8 Inadequate	9 - 16 Moderate	17 - 25 Adequate			
1.	Age (In Years)				4	0.756	> 0.05NS
	a. < 40	0	3	0			
	b. 41- 60	2	23	10			
	c. 61 - 80	1	7	4			
2.	Gender				2	0.597	> 0.05NS
	a. Male	3	28	13			
	b. Female	0	5	1			
3.	Marital Status				2	0.769	> 0.05NS
	a. Married	3	32	14			
	b. Unmarried	0	1	0			
4.	Education				6	0.013	< 0.05 S
	a. Up to high school	2	7	4			
	b. Pre degree	0	14	2			
	c. Degree	1	12	4			
	d. Post Graduate and above	0	0	4			
5.	Occupation				6	0.226	> 0.05NS
	a. Unemployed	1	11	4			
	b. Employed	1	13	5			
	c. Retired	0	3	5			
	d. Business	1	6	0			
6.	Income Per Month (In Rupees)				6	0.025	< 0.05 S
	a. < 15000	0	12	6			
	b. 15000 - 25000	3	7	2			
	c. 25000 - 35000	0	11	2			
	d. > 35000	0	3	4			
7.	Type Of Family				2	0.839	> 0.05NS
	a. Nuclear	2	24	9			
	b. Joint	1	9	5			
8.	Smoking Habit				2	0.176	> 0.05NS
	a. Yes	1	14	2			
	b. No	2	19	12			
9.	Family History Of Cad				2	0.585	> 0.05 NS
	a. Yes	0	2	0			
	b. No	3	31	14			
10.	Body Mass Index (BMI)				4	0.880	> 0.05NS
	a. Below Normal (< 18.5)	0	2	2			
	b. Normal (18.5 -25)	2	21	8			
	c. Over weight (> 25)	1	10	4			
11.	Low Density Lipoprotein (In Mg/Dl)				4	0.867	> 0.05 NS
	a. < 100	2	20	10			
	b. 100 - 129	0	5	2			
	c. 130 -150	1	8	2			
12.	Cholesterol (In Mg/Dl)				4	0.05	< 0.05 S
	a. Mild (< 200)	2	25	13			
	b. Moderate (200 - 239)	0	7	1			
	c. Severe (> 240)	1	1	0			
13.	Blood Pressure (In Mm Of Hg)				4	0.064	> 0.05NS
	a. < 120/80	2	25	10			
	b. 120/80- 139/89	0	8	3			
	c. 140/90- 159/99	1	0	1			

*S = Significant, NS = Non Significant

The data presented in the above table depicts that there is a statistically significant association of knowledge score with their selected demographic characteristics i.e. education (chi square = 0.013, $p < 0.05$), income per month (chi square = 0.025, $p < 0.05$) and cholesterol (chi square = 0.05, $p < 0.05$). Hence, H_1 was accepted at 0.05 level of significance. There is no association with other demographic characteristics such as age, gender, marital status, and occupation,

type of family, smoking habit, family history, Body Mass Index, Low Density Lipoprotein and Blood pressure.

DISCUSSION

In this study, findings showed that 68% of the samples had moderate knowledge and only 26% had adequate knowledge regarding coronary artery disease risk factors. A statistically significant association of knowledge score

with their selected demographic characteristics i.e. education (chi square = 0.013, $p < 0.05$), income per month (chi square = 0.025, $p < 0.05$) and cholesterol (chi square = 0.05, $p < 0.05$) was found in this study.

A community based descriptive study was conducted to assess the knowledge regarding cardiovascular risk factors among community people. The result revealed that majority of the participants (98%) had average level of knowledge regarding cardiovascular risk factors. [6] The above study result is similar with the current study result that 68% of the sample had moderate level of knowledge.

A study was conducted among 1619 participants at Greece in 2002. The result revealed that coronary risk increases by 82% ($p < 0.05$) for individuals with a lower level of education and by 65% for individuals with an average education, compared to those with an academic education. [7] The above study is consistent with the findings of current study.

A cross sectional study was conducted in Universities and Colleges of Karachi East, among 200 adult students of different non-medical universities and colleges to assessment of knowledge of risk factors on CAD. The result showed that there was a significant towards knowledge level was associated with higher level of education. [8]

A descriptive cross sectional pilot study was carried out among a convenience sample of 130 adults attending a health awareness fair held in a local shopping mall in Muscat, Oman to assess the knowledge of Omani adults regarding CAD risk factors. The result shows that there is no significant association of knowledge score with their selected demographic characteristics i.e. income per month (chi square = 0.259). [9] The above study is inconsistent with the current study which results that there is a statistically significant association of knowledge score with their selected demographic characteristics i.e. income per month (chi square = 0.025, $p < 0.05$).

CONCLUSION

The following conclusions were drawn on the basis of the findings of the study:

- Majority of the patients belongs to moderate level of knowledge (68%), and only 26 % patients have adequate level of knowledge.
- There is a statistically significant association of knowledge score with their selected demographic characteristics i.e. education (chi square = 0.013, $p < 0.05$), income per month (chi square = 0.025, $p < 0.05$) and cholesterol (chi square = 0.05, $p < 0.05$).

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