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A STUDY TO ASSESS THE KNOWLEDGE REGARDING PREVENTION OF CORONARY ARTERY DISEASE AMONG HYPERTENSIVE PATIENTS IN KOLLAM WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET

Aleena Bernard[1], Beetta B.[1], Jerome Aeidrin Almeida[1], Meha Susan Manoj[1]*, Vineetha V.[1], and Anulekshmi B. S.[2]

[1]BSc. Nursing Students, Bishop Benziger College of Nursing, Kollam, Kerala, India.
[2]Nursing tutor, Bishop Benziger College of Nursing, Kollam, Kerala, India.

***Corresponding Author: Meha Susan Manoj**
BSc. Nursing Students, Bishop Benziger College of Nursing, Kollam, Kerala, India.

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ABSTRACT
The research undertaken was "A study to assess the knowledge regarding prevention of coronary artery disease among hypertensive patients in Kollam with a view to develop information booklet ". The objective of the study was to assess the knowledge regarding prevention of coronary artery disease among hypertensive patients, to find out the association of knowledge regarding prevention of coronary artery disease among hypertensive patients with selected demographic variables (age, sex, education, occupation, economic status, family history of illness, duration of illness). Non experimental survey design was adopted for this study. The study was conducted among 60 hypertensive patients from Kollam district. In order to assess the knowledge of hypertensive patients regarding prevention of coronary artery disease the study sample was selected by convenient sampling technique. The tool used for the data collection consisted of demographic performa and structured questionnaire. The analysis of the data was based on the objectives of the study using descriptive and inferential statistics. The findings of the present study revealed that there is no association between knowledge and demographic variables. Based on the findings the investigator has drawn implications which were of vital concerns in the field of nursing practice, nursing administration, nursing pattern, nursing education for future development.

KEYWORDS: Assess, structured questionnaire, information booklet.

INTRODUCTION
Good health is the fundamental right of every human being and it lead to a successful life. The permeable to the WHO constitution also affirms that it is one of the fundamental right of every human being to enjoy "The highest attainable standard of health'. Health is seen as resulting from a life style that is oriented towards wellness. Dissemination of health information is one of the ways of increasing knowledge of health, and modification of behaviour which is directed towards promotion of health and prevention of disease.[2]

Coronary artery disease (CAD), also called heart disease or ischemic heart disease, results from a complex process known as atherosclerosis, fatty deposits of cholesterol and other cellular waste products build up in the inner linings of heart's arteries.[3] It is the failure of coronary circulation to supply adequate blood to cardiac muscles and surrounding tissues. The American Heart Association has identified several other risk factors. Some of them can be modified, treated, or control, but some cannot. The modifiable risk factors are high blood pressure, tobacco smoke, high blood cholesterol, physical inactivity, obesity and overweight, diabetes mellitus and stress. The non-modifiable risk factors are increasing age, sex and heredity.[4] The incidence of CAD in young adults is increasing mainly due to lack of physical activity, tobacco consumption, sedentary Lifestyle and obesity. In today's world most deaths are attributable to non-communicable diseases; 32million and just over half of these; 16.7million are as a result of CAD. Deaths occur in one third of middle aged adults. In developed countries heart disease is the first cause of death for adult men and women.[2]

Hypertension is a chronic disease and an important risk factor for cardiovascular complications. The increase in prevalence of hypertension is attributed to age of population, urbanization, sedentary habits, lack of physical activity, obesity, alcohol consumption and exposure to continuous stress. Regular anti-hypertensive medications can reduce the long-term risk of

cardiovascular morbidity and mortality.[7] Hypertension is a major public health burden and is part of an epidemiological transition from communicable to non communicable diseases globally. It is an important risk factor for stroke, coronary heart diseases, peripheral vascular disease, heart failure, and chronic kidney disease. A cost-effective use of health services such as increasing the knowledge and awareness, detection, treatment, and control of hypertension (HT) is needed among public in developing countries, particularly about the risks associated with uncontrolled blood pressure. Screening for elevated systolic blood pressure (SBP) has been identified as an important medical challenge in the prevention and treatment of hypertension. This study was aimed at assessing the patient's knowledge and awareness about hypertension and adherence to antihypertensive medication among hypertensive patients.[3]

STATEMENT OF THE PROBLEM

A study to assess the knowledge regarding coronary artery disease among hypertensive patients in Kollam with a view to develop information booklet.

OBJECTIVES

The objectives of the study were

- To assess the knowledge regarding prevention of coronary artery disease among hypertensive patients.
- To find out the association of knowledge regarding prevention of coronary artery disease among hypertensive patients with selected demographic variables.

Assess

In the study it refers to determine the knowledge regarding prevention of coronary artery disease among hypertensive patients in Kollam district.

Knowledge

In the study it refers to the information about prevention of coronary artery disease among hypertensive patients in Kollam through their own experience, skill or education.

Prevention

In this study it refers to the measures to control coronary artery disease among hypertensive patients.

Coronary artery disease

Narrowing or blockage of the coronary artery or the blood vessels which couldn't carry blood and oxygen to the heart.

Hypertensive patients

Hypertensive patients are those patients who have persistent systolic blood pressure of 140mm of hg or more and diastolic blood pressure of 90mm of hg or more.

Information booklet

In this study it refers to the information regarding prevention of coronary artery disease among hypertensive patients in the form of booklet.

OPERATIONAL DEFINITIONS

SEARCH METHODOLOGY

Research approach	: Quantitative research
Research design	**:** Non-Experimental research design
Variables	**Dependent variable:** knowledge regarding prevention of coronary artery disease among hypertensive patients **Demographic variables:** age, gender , education, occupation, socio economic status, diet, unhealthy habits regarding prevention of coronary artery disease among hypertensive patients in Kollam
Setting of the study	: Virtual setting through Google form.
Population	: Hypertensive patients who are between 40 to 70 years of age, in Kollam District who has email id and internet accessibility.
Sample	: Hypertensive patients who are between 40 to 70 years of age, Kollam.
Sample Size	: 60 hypertensive patients who are between 40 to 70 years of age in Kollam district.
Sampling Technique	: Convenience sampling technique

RESULTS AND DISCUSSION

1. **Section A: Knowledge of regarding prevention of coronary artery disease among hypertensive patients.**
2. **Table 1: Age.**

SL NO	VARIABLES (AGE)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	40-50	47	10	23	14
2.	51-60	5	1	3	1
3.	61-70	8	1	4	3
	TOTAL	60	12	30	18

Table 1 shows that among the 47 hypertensive patients who were in the age group 40-50 years, 10 hypertensive patients had good knowledge, 23 had moderate knowledge and 14 had poor knowledge. Among the 5 hypertensive patients who were in the age group of 51-60 years 1 had good knowledge, 3 had moderate knowledge and 1 had poor knowledge. Among the 8 hypertensive patients who were in the age group of 61-70 years 1had good knowledge, 4 had moderate knowledge and 3 had poor knowledge.

Table 2: Gender.

SL NO	VARIABLES (GENDER)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	Male	20	4	9	7
2.	Female	40	8	21	11
	TOTAL	60	12	30	18

Table 2 shows that among 20 male hypertensive patients, 4 had good knowledge, 9 had moderate knowledge and 7 had poor knowledge. Among the 40 female hypertensive patients 8 had good knowledge, 21 had moderate knowledge and 11 had poor knowledge.

Table 3: Education

SL NO	VARIABLES (EDUCATION)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	SSLC	19	5	8	6
2.	Plus Two	17	3	10	4
3.	Degree	22	4	12	6
4.	PG or other	2	0	0	2
	TOTAL	60	12	30	18

Table 3 shows that among the 19 hypertensive patients who had education upto SSLC level, 5 had good knowledge, 8 had average knowledge and 6 had poor knowledge. Among 17 Hypertensive patients who had education up to plus two level, 3 had good knowledge, 10 had average knowledge and 4 had poor knowledge. Among 22 hypertensive patients who had education up to degree level, 4 had good knowledge, 12 had average knowledge and 6 of them had poor knowledge. The two hypertensive patients who had education up to PG or other level, had only poor knowledge regarding prevention of coronary artery disease.

Table 4: Occupation.

SL NO	VARIABLES (OCCUPATION)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	Government	5	0	3	2
2.	Private employee	17	2	8	7
3.	Self employee	16	4	7	5
4.	Unemployee	22	6	12	4
	TOTAL	60	12	30	18

Table 4 shows that among the 5 Hypertensive patients who were government employees, 3 had average knowledge and 2 had poor knowledge. Among the 17 Hypertensive patients who were private employees, 2 had good knowledge, 8 had average knowledge and 7 had poor knowledge. Among the 16 Hypertensive patients who were self employees, 4 had good knowledge, 7 had average knowledge and 5 had poor knowledge. Among the 22 hypertensive patients who were unemployed, 6 had good knowledge, 12 had average knowledge and 4 had poor knowledge regarding prevention of coronary artery disease.

Table 5: Socioeconomic status.

SL NO	VARIABLES (INCOME)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	Below 5000 per month	14	4	8	2
2.	5000-10000	29	7	14	8
3.	10000-20000	9	1	4	4
4.	Above 20000	8	0	4	4
	TOTAL	60	12	30	18

Table 5 show that among the 14 Hypertensive patients who had income below Rs 5000 per month, 4 had good knowledge, 8 had average knowledge and 2 had poor knowledge. Among the 29 Hypertensive patients who had income between Rs 5000-10000, 7 had good knowledge, 14 had average knowledge and 8 had poor knowledge. Among 9 Hypertensive patients who had income between Rs 10000-20000, one had good knowledge, 4 had average knowledge and 4 had poor knowledge. Among the 8 Hypertensive patients who had income above Rs 20000, 4 had average knowledge and 4 had poor knowledge.

Table 6: Diet

SL NO	VARIABLES (DIET)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
1.	Vegetarian	4	1	3	0
2.	Non-Vegetarian	56	11	27	18
	TOTAL	60	12	30	18

Table 6 show that among the 4 Hypertensive patients, who were vegetarians, one had good knowledge and 3 had average knowledge. Among the 56 Hypertensive patients who were non vegetarians, 11 had good knowledge, 27 had average knowledge and 18 had poor knowledge.

Table 7: Unhealthy Habits.

SL NO	VARIABLES (UNHEALTHY HABIT)	NUMBER OF PATIENTS	KNOWLEDGE		
			GOOD	MODERATE	POOR
.	Smoking	5	1	2	2
2.	Alcoholism	8	2	3	3
3.	Lack of exercise	40	7	21	12
4.	Consumption of junk food	7	2	4	1
	TOTAL	60	12	30	18

Table 7 show that among 5 the Hypertensive patients who had the habit of smoking, one had good knowledge, 2 had average knowledge and 2 had poor knowledge. Among the 8 Hypertensive patients who had habit of alcoholism, 2 had good knowledge, 3 had average knowledge and 3 had poor knowledge. Among 40 Hypertensive patients who had lack of exercises, 7 had good knowledge, 21 had average knowledge and 12 had poor knowledge. Among the 7 Hypertensive patients who had habit of consumption of junk food, 2 had good knowledge, 4 had average knowledge and 1 had poor knowledge.

Table 8.

Sl.No	Variables	Level of knowledge			Df	Chi-square value	Table value	Significance
		Good	Average	Poor				
1	**Age** 40 -50years	**10**	**23**	**14**				
	51 – 60years	**1**	**3**	**1**	4	0.68	9.49	NS**
	61 – 70years	**1**	**4**	**6**				
2.	**Gender**							
	Male	4	9	7	2	0.39	5.99	NS**
	Female	8	21	11				
3	**Education** SSLC	5	8	6				
	Plus Two	3	10	4	6	1.31	12.592	NS**
	Degree	4	12	6				
	PG or Others	0	0	2				
4	**Occupation** Govt employee	0	3	2				
	Private employee	2	8	7		4.56	12.592	NS**
	Self employee	4	7	5	6			
	Unemployee	6	12	4				
5	**Socio economic status** Below 5000 5000-10,000	4 7	8 14	2 8		5.78		NS**

	10,000-20,000 Above 20,000	1 0	4 4	4 4	6		12.592	
6	**Diet** Veg Non veg	 1 11	 3 27	 0 1	 2	1.86	 5.99	NS**
7	**Unhealthy habits** Smoking Alcoholism Lack of Exercise Consumption of Junk foods	 1 2 7 2	 2 3 21 4	 2 3 12 1	 6	1.92	 12.599	NS**

NS** – Not significant at 0.05 level of significance.
S* – Significant

DISCUSSION

The present study was conducted to assess the knowledge regarding coronary artery disease among hypertensive patients in Kollam district. In order to achieve the objectives of the study, descriptive method was adopted. The subjects were selected by purposive sampling. The sample consisted of 60 patients, who belonged to the age group of 40-70 years. The findings of the study have been discussed in relation to objectives and similar studies.

Objectives of the study

- To assess the knowledge of hypertensive patients regarding prevention of coronary artery disease in Kollam district
- To find out the association of level of knowledge of hypertensive patients with the selected demographic variables.

Discussion of findings with other studies based on objectives

- **To assess the knowledge regarding coronary artery disease among hypertensive patients in Kollam district.**

In the present study 30% had poor knowledge, 50% had average knowledge and 20% had good knowledge regarding coronary artery disease.

The above findings are supported by descriptive study conducted to assess the knowledge on risk factors of Coronary artery disease among OPD patients at selected hospitals in Banglore. A sample of about 30 OPD patients were selected. The finding of the study indicated that the majority of patients belonged to moderate level of knowledge (68%) and only 26% patients had adequate level of knowledge regarding coronary artery disease risk factors.

- **To find out the association of level of knowledge of hypertensive patients with the selected demographic variables**

In the case of age, chi square value was 0.68 which is less than table value at 0.05 level of significance. So there was no association between age and knowledge. In the case of gender, chi square value was 0.39 which is lesser than the table value at 0.05 level of significance. So there was no association between gender and knowledge. In the case of education, chi square was1.31 which is lesser than the table value at 0.05 level of significance. So there was no association between education and knowledge. In the case of occupation, chi square was4.568 which is lesser than the table value at 0.05 level of significance. So there was no association between occupation and knowledge. In the case of socio economic status, chi square was5.78 which is lesser than the table value at 0.05 level of significance. So there was no association between socio economic status and knowledge. In the case of diet, chi square was 1.863 which is lesser than the table value at 0.05 level of significance. So there was no association between diet and knowledge. In the case of unhealthy habits, chi square was 1.92 which is lesser than the table value at 0.05 level of significance. So there was no association between unhealthy habits and knowledge.

The above findings are supported by cross-sectional study conducted in Jeddah during the period January 2017 to December 2017. This study was aimed to assess the population awareness of CAD risk factors in Saudi Arabia. A sample of about 500 patients were selected. An online survey questionnaire were used to assess participant's awareness of 14 risk factors for CAD, namely: smoking, lack of physical activity, fast food and soft drink intake, television and computer use, myocardial infarction and stroke; as well as a family history of diabetes mellitus, hypertension, hyperlipidemia, CAD and myocardial infarction. The findings of the study indicated that fast food, soft drinks, and family history of diabetes were the most commonly identified risk factors, reported by 74.8%, 64.3%, and 47.2% of participants, respectively. This study concluded that there is an evident limited knowledge among the population in Jeddah, Saudi Arabia regarding the risk factors for CAD, and it is recommended that the healthcare sector in the country focus on public health education programs about the disease.

CONCLUSION

The present study was aimed to assess the knowledge regarding coronary artery disease among hypertensive patients in Kollam district. The study was conducted on a

relatively small sample of 60 hypertensive patients. An information booklet regarding coronary artery disease was given to hypertensive patients.

Association between knowledge regarding prevention of coronary artery disease among hypertensive patients and demographic variables analyzed using chi- square test. There was no association between knowledge regarding prevention of coronary artery disease among hypertensive patients and demographic variables such as age, gender, education, occupation, socio economic status, diet, unhealthy habits.

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