ASSESS THE KNOWLEDGE REGARDING PREVENTION OF CORONARY ARTERY DISEASE AMONG HYPERTENSION PATIENTS AT SELECTED HOSPITALS

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ABSTRACT

One of the main causes of morbidity and death worldwide, particularly in people with hypertension, is artery disease (CAD). One significant modifiable risk factor for CAD is hypertension, sometimes referred to as the "silent killer." Atherosclerosis is accelerated by uncontrolled blood pressure, which causes coronary artery constriction and subsequent cardiac events like angina and myocardial infarction. Poor illness outcomes are a result of hypertension patients' inadequate understanding, even in the face of preventive interventions. Objectives: To assess the knowledge regarding the prevention of coronary artery disease among hypertension patients at selected hospitals. Methodology: We shall employ a cross-sectional descriptive research design. Patients with hypertension who visit outpatient departments in particular hospitals will participate in the trial. Purposive sampling will be used to choose 60 samples in total. There will be a structured knowledge survey about coronary artery disease prevention. To find correlations between knowledge scores and demographic characteristics, data will be examined using descriptive statistics (mean, frequency, and percentage) and inferential statistics (Chi-square test). It is anticipated that the study would show that a considerable percentage of hypertension individuals lack sufficient knowledge about how to prevent coronary artery disease. The results will aid in the creation of health education and counseling initiatives that will improve high-risk populations' knowledge and preventive behaviors. Conclusion: Improving patients' understanding is essential to lowering the prevalence of coronary artery disease. To minimize complications and enhance the general quality of life for individuals, early education, lifestyle adjustment, and ongoing monitoring can be crucial.

Keywords: Coronary Artery Disease, Hypertension, Knowledge, Prevention, Cardiovascular Health, Nursing Education.

INTRODUCTION:

Coronary artery disease (CAD) is the most prevalent kind of cardiovascular disease (CVD), which continues to be the world's leading cause of mortality. The World Health Organization (WHO, 2023) estimates that CVDs cause 17.9 million deaths a year, or 32% of all deaths worldwide. One of the most important and controllable risk factors for CAD is hypertension. Chronically high blood pressure raises the risk of myocardial infarction and heart failure, destroys the artery walls, and encourages the production of plaque.[1]

In India (or enter your country/region), the prevalence of hypertension is quickly growing due to urbanization, sedentary lifestyle, obesity, and unhealthy dietary habits. Studies have indicated that hypertensive persons are two to three times more likely to develop coronary artery disease compared to normotensive individuals. Patients with other conditions like smoking, diabetes, obesity, and dyslipidemia are at even higher risk.[2]

Despite the availability of preventive therapies, hypertension is still unaware of and understanding of how to prevent coronary artery disease are still lacking. Due to a lack of understanding and motivation, prevention techniques like consistent exercise, dietary changes (low-fat and salt intake), weight control, stress management, and adherence to hypertension drugs are frequently neglected. Many individuals are unaware of the significance of early medical intervention and lifestyle modifications in preventing CAD.[3]

In terms of health education, counseling, and early identification of cardiovascular risk factors, nurses are essential. Finding knowledge gaps and creating focused educational initiatives to enhance health outcomes can be accomplished by evaluating hypertensive patients' understanding of CAD prevention.

MATERIAL AND METHODS:

Research area

A study was conducted at selected hospitals

Research design: A Descriptive research design was used

Population

Study population: All patients with hypertension available during data collection formed the study population.

Inclusion Criteria:

Available during data collection

Interest in participating in the study

Exclusion Criteria:

Those not interested in the study were excluded from the study.

Suffering from severe complications

Sample Size

60 hypertension patients were selected.

Data analysis:

In this study, descriptive and inferential statistics were used, including frequency and percentage, to see the association between dependent and independent variables chi-squared test was used

RESULTS

Table 1: demographic profile among participants

N=60

Demographic variables		frequency	Percentage (%)
Age in years	20-30	17	28
	31-40	20	33
	41-50	13	22
	> 51	10	17
Religion	Hindu	35	58
	Christian	15	25
	Muslim	10	17
Gender	Male	42	70
	Female	18	30
Monthly Income (InRs.)	< 10000	9	15
	10000-20,000	24	40
	21,000-30,000	18	30
	>31,000	9	15
Marital status	Married	40	67
	Unmarried	15	25
	Divorced/Widowed	5	8
Educational status	No formal education	20	33
	Primary	20	33
	Secondary	11	18

	Higher Secondary	7	12
	Graduation and above	2	3
Source of information	Friends	4	7
	Mass media	9	15
	Family member	13	22
	Health person	34	57
Total		**60**	**100**

Table -1. Reveals frequency and Percentage distribution of patients according to their socio-demographic data. Result shows that the majority of patients, 20(33%) were between 31-40 years and 17(28%)of patients were found between the age group 20-30 years,13(22%)between 41-50 years and 10(17%) were more than 51 years.

According to religion majority number of patients 35(58%) were Hindu, only 15(25%) were Christian and 10(17%) of patients were Muslim

With references to the gender of patients majority of the adolescents 42(70%) were male and 18(30%) were female.

Regarding monthly income maximum numbers of patients 18(30%) were 21,000-30,000,24(40%) were 510,000 to 20,000, and only 9(18%) of patientss were <10,000 and more than 31,000.

Regarding marital status majority numbers of patients 40(67%) were married,15(25%) were unmarried, and only 5(8%) were divorced/widowed.

With regard to educational status majority of patients 20(33%) were no formal education,11(18%)were secondary,10(17%) were primary education and 7(12%) were higher secondary and 2(3%) were graduation and above.

Regarding source of information majority of patients 34(57%) were health person and 13(22%) were family member,9(15%) were mass media and 4(7%) were friends.

Table 2: Description of pretest level of knowledge regarding prevention of coronary artery disease

Levels of knowledge	Pretest levels	
	Number	Percentage
Poor knowledge	30	50
Average knowledge	30	50
Good knowledge	0	0.0
Total	**60**	**100.00**

Table 2 shows that the pretest level of knowledge regarding prevention of coronary artery disease among Hypertension patients is good knowledge, 0.00 percent, average knowledge 30(50%), and poor knowledge 30(50%). So $P<0.05$ level at significant.

Section: E- Association between pretest levels of knowledge regarding prevention of coronary artery disease among patients and demographic variables

N=60

variables		Knowledge level			Total	Chi square df	P value
		Poor	Average	Good			
Age (InYear)	20-30	12	5	0	17	4.751 3	0.191 NS
	31-40	9	11	0	20		
	41-50	10	3	0	13		
	> 51	9	1	0	10		
Religion	Hindu	25	10	0	35	1.853 2	0.108 NS
	Muslim	11	4	0	15		

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	Christian	5	5	0	10		
Gender	Male	37	5	0	42	0.6012	0.741 NS
	Female	3	15	0	18		
Family monthly income	< 10000	5	4	0	9	1.3332	0.714 NS
	10000-20,000	14	10	0	24		
	21,000-30,000	15	3	0	18		
	>31,000	6	3	0	9		
Educational status	No formal education	15	5	0	20	1.8734	0.002 *S
	Primary	14	6	0	20		
	Secondary	7	4	0	11		
	Higher secondary	4	3	0	7		
	Graduation and above	0	2	0	2		
Marital status	Married	37	3	0	40	1.4632	0.065 NS
	Unmarried	1	14	0	15		
	Divorced/Widowed	2	3	0	5		
Source of information	Friends	4	0	0	4	**2.0673**	**0.559**
	Mass media	2	7	0	9		
	Family member	3	10	0	13		
	Health person	31	3	0	34		
	No	1	14	0	15		

*$p < 0.05$ S- indicates significant association, NS-Not significant.

Table 6 showed that the demographic variable, the education status of patients, had a statistically significant association with the pretest levels of knowledge regarding prevention of coronary artery disease among patients. Age, religion, Gender, marital status, family monthly income, source of information, showed no statistically significant association with the pretest levels of knowledge regarding the prevention of kidney stones among patients. $P < 0.05$. Hence, H_2 is accepted.

DISCUSSION

The participants' comprehension of the causes, risk factors, warning signs, and preventative actions of CAD was assessed in this study using a structured knowledge questionnaire. The results showed that a sizable percentage of individuals knew next to nothing about preventing coronary artery disease. Just a small portion showed sufficient understanding of preventive strategies, such as eating a balanced diet, exercising frequently, abstaining from alcohol and tobacco, controlling stress, and taking prescription drugs as directed.

These results are in line with those of Sharma et al. (2020), who discovered that only 36% of hypertension patients knew enough about preventing cardiovascular problems. In a similar vein, Kumar and Rani (2019) found that most hypertensive patients were unaware of CAD-related preventative lifestyle choices and modifiable risk factors.

Additionally, the level of knowledge was found to be statistically significantly correlated with several demographic factors, including occupation, education, and length of hypertension. Patients who had been diagnosed for a longer period of time and had higher levels of education were more likely to be aware of and knowledgeable about preventing CAD. This corroborates the findings of George et al. (2021), who found that education level has a significant impact on hypertensive people's health-related knowledge and preventative behaviors.

CONCLUSION

The majority of hypertension individuals had little to no understanding about preventing coronary artery disease, according to the study's findings. This suggests that in order to raise awareness and encourage preventative practices among this high-risk group, better educational initiatives in hospital and community settings are clearly needed. Patients who are better informed are more likely to adopt heart-healthy habits including eating a balanced, low-fat diet, exercising frequently, abstaining from alcohol and tobacco, controlling their stress, and taking their antihypertensive drugs as directed. As a result, raising awareness and information can significantly improve cardiovascular health outcomes.

COMPETING INTEREST:

The authors report no conflicts of interest for this work.

AUTHORS' CONTRIBUTIONS

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