Assessment of knowledge on risk factors and the risk status of coronary artery disease (CAD) among premenopausal women in a selected rural community at Mangalore

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Abstract

Coronary artery disease is progressively becoming a major cause of morbidity and mortality in women generally after menopause. CAD is the leading cause of death and disability in women after menopause. The aim of the study was to determine the level of knowledge on risk factors of coronary artery disease and to identify the risk status of coronary artery disease among premenopausal women. A descriptive research design was used for this study. The sample comprised of 100 women of the selected community in Mangalore. The sample was selected by purposive sampling technique. Data was collected using a structured knowledge questionnaire and Sr. Nancy Risk Status Assessment Tool. The data was analysed using descriptive and inferential statistics. The overall knowledge about CAD was poor (38.12%), and had poor knowledge in the areas of anatomy and physiology (37.67%), risk factors of CAD (37.08%) and prevention (29.78%). Most of the subjects (85%) had moderate risk status score for CAD and the risk factors like physical activity, dietary habits, and personality contributed to be at high risk for CAD. There was no correlation between knowledge score and their risk status score for CAD among premenopausal women ($r=0.015$, $p=0.05$). There was significant association between knowledge score and demographic variables like age ($\chi 2 =7.174$, $P=0.007$) and educational qualification ($\chi 2=13.247$, $P=0.001$) of premenopausal women at .05 level of significance. The premenopausal women in the community had poor knowledge and they had moderate risk status for CAD. There was no correlation between knowledge score and their risk status score for CAD among premenopausal women. Demographic variables like age and educational qualification had significant influence on the knowledge regarding CAD among premenopausal women. Creating awareness among premenopausal women on risk factors and prevention on CAD would reduce the risk of CAD.

Keywords: Risk factor, Risk status, Premenopausal women, Coronary artery disease.

Introduction

Cardiovascular disease is one of the main reasons for deaths in the developed as well as developing countries. The World Health Organisation predicts that by 2020 CAD will become the world's most important cause of death, disability, and premature deaths.[1] CVD is also the largest single cause of death among women worldwide, accounting for one-third of all deaths. The incidence of CAD increases sharply after menopause in women. Worldwide, more than 4,50,000 women succumb to heart disease annually and 2,50,000 die of CAD.[2] In India the incidence of this disease ranges from 14.8 to 65.4 per 1000 population.[3] By 2040, women in India will represent a higher proportion of cardiovascular disorder deaths than men.[4] Patient education on risk factors of CAD and its prevention can help to change the beliefs, attitudes, and lifestyle practices There is so much one can do to avoid coronary heart disease from occurring. The best, and the most ideal, is having a healthy, active lifestyle. Proper and balanced diet combined with regular physical activity will reduce the risks for disease. Starting at an early age makes for a good investment so that at the age of 40, which is the age susceptible to the disease, can reduce the risk of coronary artery disease.

Materials and Methods

A descriptive correlative design was adopted for the present study to find out the relationship of knowledge scores on risk factors with their risk status for coronary artery disease among premenopausal women. In order to select the sample from the population, investigator adopted purposive random sampling**.** Sample comprisesed of 100 premenopausal women in the age group of 35-45 years residing in the rural areas of Mangalore. The data for the risk factors on CAD was collected from sample by a structured knowledge questionnaire and Self-administered questionnaire was used to assess the risk status of Coronary Artery Disease (Nancy 1988). A formal written permission for the main study was obtained by the investigator from the concerned authorities before the data collection. The investigator selected the sample who met the inclusion criteria purposively and the nature of the study and cooperation required were explained to the premenopausal women and informed consent was taken. The structured knowledge questionnaire was administered to assess the knowledge and self -administered Sr. Nancy risk assessment tool was used to identify the risk status of CAD among premenopausal women.

Results

Section I: Sample characteristics

Most of the subjects were in the age group of 36-40 years (61%). Majority had PUC education (24%). Majority of the subjects were house wives (52%). Thirty-four percent each of subjects had the monthly income or < Rs. 4,000 and > Rs. 10,001. Most of the subjects were Christians (38%). Most of the subjects were married (88%). Majority of the subjects had not received information regarding CAD (70%)

Table 1: Area-wise assessment of knowledge scores of the subjects

Level of Knowledge	Score	Percentage	Frequency	Percentage
Poor knowledge	0-14	0- 40%	55	55
Average knowledge	14-20	41 – 60%	42	42
Good knowledge	21-27	61 – 80%	3	3
Very good knowledge	28-34	81 –100%	0	0
n=100, Maximum score = 34				

Table 2: Area-wise mean, standard deviation and mean percentage of knowledge score of subjects in CAD

Area	Max score	Mean	SD	Mean % score	Level of knowledge
Anatomy and physiology	2	1.13	0.691	37.67	Poor
Knowledge of CAD	3	1.64	0.772	41.00	Moderate
Risk factors of CAD	11	4.82	1.737	37.08	Poor
Signs and symptoms	2	1.10	0.689	55.00	Moderate
Diagnosis	1	0.59	0.494	59.00	Moderate
Management	2	1.00	0.651	50.00	Moderate
Prevention	6	2.68	0.898	29.78	poor
Total	34	12.96	4.390	38.12	Poor
n=100, CAD-Coronary Artery disease					

Table 3: The scores on rating scale of risk status influencing CAD obtained by the remenopausal women

Score	Percentage	Risk-status	Recommendations
07-25	7-27	Low Risk for CAD	You are fine; but preventive measures are to be begun
26-45	28-50	Moderate risk for CAD	You need to change your lifestyles
46-90	51-100	High risk for CAD	You need to go for a medical checkup as well as change your life style.
n=100, CAD-Coronary Artery disease			

Table 4: Distribution of subjects according to the level of risk status scores

Categories	Score	Frequency	Percentage
Low Risk for CAD	7-25	2	2.0
Moderate risk for CAD	26-45	85	85.0
High risk for CAD	46-90	13	13.0
n=100, Maximum score = 90			

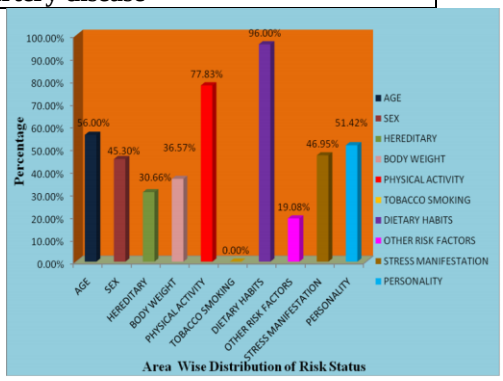

Fig. 1: Bar diagram showing the area-wise distribution of risk status scores of CAD and mean percentage scores of the subjects

Table 5: Correlation of mean and standard deviation of knowledge and risk status influencing scores of premenopausal women

Area	Max. Score	Min. Score	Mean	SD	p Value	r Value	df	Inference
Knowledge	**24**	**5**	**12.96**	**4.390**	**0.05**	**0.015**	**98**	**Not**

Risk status scores	**56**	**23**	**38.57**	**6.605**				**Significant**
n=100, Table value =0.209								

Table 6: Chi-square test showing the association of knowledge scores with selected demographic variables

S.No	Variables	<Median	≥Median	df	x^2	Significance
1	**Age(**in years) a. 35-40 b. 41-45	18 22	43 17	1 7	.174	Significant
2	Educational status a. Lower primary b. Upper primary c. Other	 11 14 15	 11 6 43	2	13.247	Significant
3.	Occupation a. House maker b. Other	 24 16	 28 32	1	1.709	Not Significant
4.	Monthly income a. Up to Rs. 6,000 b. > 6,000	 17 23	 22 38	1	0.343	Not Significant
5.	Religion a. Hindu b. Muslim c. Christian	 13 10 17	 16 23 21	2	1.930	Not Significant
6.	Marital status a. Married b. Divorced/widow	 39 1	 49 11	1	3.297	Not Significant
7.	Previous information a. No b. Yes	 25 15	 45 15	1	3.84	Not Significant
n=100, Table value: χ_1^2 =3.84, χ_2^2 =5.97, P<0.05						

Discussion

The knowledge score of the subjects ranged from 5 to 24 with mean percentage of 38.12%. Majority of the subjects had poor knowledge scores (55%), whereas 42% and 3% of the subjects had average knowledge scores respectively. The risk status score of the subjects ranged from 23 to 56 with mean percentage of 42.86%. Among the subjects, majority had moderate risk (85%) and 13% of the subjects had high risk for CAD. There was no correlation between knowledge scores and risk status scores (r=0.015, P=0.05). It reveals that the level of knowledge of premenopausal women on CAD had no correlation with their risk status. Chi square test was used to find out the association of knowledge scores of the subjects with selected demographic variables. Knowledge score had association with demographic variables like age

(χ2=7.174, P=0.007) and educational qualification (χ2=13.247, P=0.001), but not with the rest.

Conclusion

CAD continues to be a major health problem in the developing countries. Lack of awareness of the risk posed by CAD leads to major health problems and difficulty in controlling the disease, more so in the rural communities. Delay in the diagnosis of CAD may worsen the disease and increase the risk of death.

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