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Knowledge of women regarding coronary artery disease

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Abstract
Coronary Artery Disease is one of the major causes of morbidity and mortality all over the world. Here is a need to identify the gap in knowledge among public which is assumed as a reason for the high prevalence of the disease. The study helps the people to get sensitised and also help the policy makers to revise strategies on Information education Communication (IEC) activities. The aim of present study was to find out the knowledge of women (35-55 years) regarding Coronary Artery Disease (CAD). A descriptive survey was conducted among 200 women residing in a selected rural community in Kerala using a structured knowledge questionnaire. The study found that 6.0% of women had excellent knowledge regarding coronary artery disease, 53.5% of women had good knowledge, 33.0% had average knowledge and 7.5% had poor knowledge. Area wise analysis of knowledge showed comparatively poor knowledge regarding risk factors (62.0%) diagnostic measures (64.0%) and treatment of CAD (60.5%). The low level of knowledge regarding disease may affect the preventive practices of people. There is an urgent need to educate public regarding coronary artery disease in order to practice healthy lifestyle.

Keywords: knowledge, coronary artery disease, women

Introduction

Coronary artery disease (CAD) is a leading cause of death worldwide. The WHO reported that in 2010, non communicable diseases led to 5.87 million deaths globally and 1.2 million deaths in men and 0.9 million deaths in women in India [1]. An increasing trend in proportionate CVD mortality was reported with 20.6% deaths in 1990, and 29.0% in 2013 [2]. Cardio vascular diseases (CVD) emerged as the most important cause of death in men and women, in urban and rural populations, and in developed and developing states of the country [3]. In India, more than 10.5 million deaths occur annually, and it was reported that CVD led to 20.3% of these deaths in men and 16.9% of all deaths in women [3]. The prevalence of CAD of 2% in urban India in 1960 increased to 14% by 2013 [4]. Similarly, it quadrupled in rural areas, from 1.7% in 1970 to 7.4% in 2013 [4]. Global Burden of Disease Study also have highlighted increasing trends in years of life lost (YLLs) and disability-adjusted life years (DALYs) from CAD in India [5]. Heart disease was the major reason behind death of keralites during the period of 2005-2015 [6].

For too long, many believed that coronary artery disease was primarily a "man's disease, but it is common in women too. The consequences of CAD are worse in women compared to men. Among persons who had myocardial infarction (MI) before age of 50 (premature MI), women experience a 2-fold higher mortality rate [7]. Although the deaths on account of heart disease might have come down a bit, Kerala's share of death percentage in the country because of this is alarming [6]. The national death percentage for cardiovascular disease was 22.2% whereas Kerala showed a much higher figure-35.2% [2]. High prevalence of risk factors of CAD was identified in a recent study in India [8]. The study showed alarmingly low level of awareness, treatment and control of hypertension and diabetes among the subjects. The progression of the epidemic is characterized by the improvement in socio-economic status, tobacco use and low fruit and vegetable intake. In addition, individuals from lower socio-economic backgrounds frequently do not receive optimal therapy, leading to poorer outcomes.

In Kerala, females pay more attention to other family members and don't give much concern to their own health issues. The diseases like hypertension and diabetes are silent killers and the mortality of women due to diabetes and hypertension exceeded that of men [6]. Once diagnosed, it needs regular monitoring and treatment. Most often women are reluctant for regular treatment and once hypertension and diabetes becomes chronic, it could easily result in heart disease and is too often a silent killer. Nearly two thirds of women who died suddenly had no previous symptoms.

A study conducted in a community sample in Oman [9] reported that 60% of sample had inadequate knowledge. Another study to assess knowledge about coronary artery disease in south India showed that 20% of subjects had good knowledge, 66.67% of the subjects had average knowledge, and 13.33% of the subjects had poor knowledge [10]. A study conducted in Mangalore, India [11] showed majority of the people had average level of knowledge (98%), and 1% of the participants had poor and 1% had good level of knowledge. A study [12] reported that women who led healthy lifestyles in their young adult years were 92% less chance to have heart attack. Generally if the population is well aware about the pattern of disease occurrence, it could be prevented because the risk factors are modifiable. Simple lifestyle changes are enough to prevent the problem.

Adequate knowledge is needed for this and should be supplemented if it is lacking. Lack of public and professional awareness of women's coronary risk increases adverse coronary outcomes for women. So this needs to be addressed by health policy makers.

Statement of the problem

A cross-sectional study to assess the knowledge of women regarding coronary artery disease in a selected rural community in Kerala.

Objective

1. To assess the knowledge of middle aged women regarding coronary artery disease.

Methodology

Descriptive survey was used to collect data from 200 middle aged women (35-55 years) residing in the community by door to door survey after getting formal written permission from respective gramapanchayath and ethical clearance from institutional review board. Data was collected after getting informed consent. Women who are challenged mentally or found difficulty to complete questionnaire were excluded. Self-administered knowledge questionnaire prepared by investigator with 30 items related to coronary artery disease was used and data was analysed by descriptive statistics.

Results and discussion

The results of the present study are presented as follows.

Section I-Socio-demographic variables

Among the total subjects, 21.5% of the women were in the age group of 35-40, 32.5% between 41-45, 26% between 46 and 50 s and 20% between 51-55 years. Seventy four (74 %) had an education of 10th standard and above and remaining 26% had education below 10th standard. Majority were housewives (75%) and the rest were employed (25%).

Section II: Knowledge of women regarding coronary artery disease

Knowledge was assessed by self- administered structured questionnaire with 30 items. Maximum score was 30. The knowledge was graded as Excellent (≥90%), Good (70-89%), Average (50-69%) and Poor (<50%). Distribution of subjects based on the knowledge of coronary artery disease is given in Table 1.

Table 1: Frequency distribution and percentage of women based on the level of knowledge regarding coronary artery disease N=200

Category	f	%
Excellent (≥90% of marks)	12	6.0
Good (70-89% of marks)	107	53.5
Average (50-69% of marks)	66	33.0
Poor (<50%)	15	7.5

Table I depicts that majority of women (53.5%) had good knowledge and only 6.0% had excellent knowledge. Poor knowledge was observed among 7.5% of samples.

Table 2: Mean and mean percentage of area wise knowledge of women regarding CAD in the experimental and control group. N=200

Areas of knowledge (Maximum score)	Mean	Mean %
Location and function of heart and CAD (3)	2.39	79.0
Risk factors(9)	5.58	62.0
Signs &symptoms(3)	2.55	85.0
Diagnostic measures (2)	1.28	64.0
Treatment(2)	1.21	60.5
Lifestyle modification (11)	7.92	72.0

The data in table 2 shows that comparatively poor knowledge was observed regarding the risk factors (62.0%) diagnostic measures (64.0%) and methods of treatment of CAD (60.5%).

Discussion

Results of the present study showed that 6% of women who were surveyed had excellent knowledge and 7.5% had poor knowledge. Different investigators used different categorisation and grading for knowledge scores. A study conducted in Mangalore shows that majority of the people (98%) scored average (Nearly 40-60% marks) and only 1% of the participants had poor and 1% had good level of knowledge[9]. A study conducted in Kuwait[13] to assess public knowledge of cardiovascular disease risk factors reported same findings, while another conducted in Jordan [14] reported higher levels of knowledge among their cohort.

In the present study, mean knowledge about location and function of heart and meaning of CAD is 79%. It is clear that still people are there who don't even know where the heart is located, what is its function and what is CAD. The health care policy makers should look into this.

Also women had comparatively poor mean knowledge regarding risk factors of CAD (62%) and it is very similar to studies conducted in Kuwait [12] and Oman [9]. The study conducted in oman [9] shows that the participants had adequate knowledge of certain CAD risk factors, such as smoking (87.7%) and high cholesterol levels (85.1%) Fewer subjects (34.2%) were aware of high-density lipoproteins and low-density lipoproteins. There is a lack of knowledge among women regarding risk factors and this might be a reason for occurrence of the disease. The women of Kerala are at high risk of getting CAD due to their stress at home and workplace and they are more likely to be exposed to passive smoke either at residence or workplace. So this should be addressed.

In the present study comparatively good mean knowledge (85%) regarding signs and symptoms is noted. This might be due to the influence of media/community. But mean knowledge regarding diagnostic measures (64%) and treatment (60.5%) was found to be inadequate.

In the present study, mean knowledge of subjects regarding life style modification is only 72%. In a study conducted in Oman [9]majority of the subjects had knowledge regarding several CAD prevention measures, such as regular physical activity (91.2%), blood pressure control (88.6%) and smoking cessation (87.7%). The awareness regarding liberal consumption of fruits and vegetables, physical activity and also the overall lifestyle modification are found inadequate

among the subjects of the present study and probably this attributes to the development of risk factors like diabetes, hypertension and obesity among Indian women. This light the need for further improvement of the public knowledge regarding CAD and risk factors which are highly prevalent among the population of India and also the lifestyle modification to prevent the occurrence of CAD. Although knowledge of diseases alone is inadequate for better healthcare outcomes, it is a vital pre-requisite to change the individual's health attitudes, behaviours and lifestyle practices.

Conclusion

Coronary artery disease can be prevented with better lifestyle choices, such as not smoking, doing exercises, and eating a healthy diet. For practicing healthy lifestyle they should have sufficient knowledge on all these areas. Formulation of policies regarding prevention, early detection and treatment is necessary to counter the epidemic.

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