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Research Article

Knowledge and Lifestyle Practices Regarding Coronary Artery Disease among Women

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Abstract

Introduction: Coronary artery disease (CAD) is one of the leading causes of death all over the world. Good knowledge and lifestyle practices reduce the incidence of CAD.

Objectives: The objectives of this study was to determine the knowledge and lifestyle practices regarding CAD among women and also to identify the association of knowledge and lifestyle practices with selected socio-personal variables.

Methodology: A descriptive survey design was employed to collect self-reported data from 102 women (35–55 years) residing in two communities in Kerala, India.

Results: Major part of the study participants (35.3%) was between 35 and 39 years, 63.7% educated up to 10th standard, and 55.9% were household workers. Majority of the women had good knowledge, 8.8% had excellent, 28.4% had average, and 17.6% had poor knowledge. The area-wise analysis showed comparatively poor mean percentage of knowledge about risk factors (52.8%) diagnosis and treatment (53.5%). Better mean percentage was observed for meaning of CAD (77.35%), signs and symptoms (83%), and lifestyle modifications (75.5%). The study showed 69.6% of women had good lifestyle practices, 19.6% had very good, and 10.8% had average lifestyle practices. None of them had either excellent or poor lifestyle practices. Area-wise analysis of lifestyle practices showed that a lower mean percentage was noted with dietary practices (62.9%) and physical activity (57.3%) compared to habits (86.7%) sleep, and rest and stress reduction measures (77.2%). The level of education and knowledge is associated significantly ($P < 0.001$).

Conclusion: Proper awareness about the disease helps to prevent CAD.

Keywords: Coronary artery disease, knowledge, lifestyle practices, women

Introduction

Coronary artery disease (CAD) also called coronary heart disease (CHD) is one among the main causes of death in all gender types.[1] With the turn of the century, cardiovascular diseases (CVDs) have become the leading cause of death in India.[2] In comparison with the people in European countries, CVD affects Indians at least a decade earlier and in their most productive middle age.[3] The deaths due to heart attack are reported to be 26.69% as per the annual statistics of Kerala. Among this, 16.03% of deaths among males and 10.66% of deaths among females were due to heart attack.[4]

The worldwide INTERHEART has reported that the first presentation of CHD among women is approximately 10 years later than men especially after menopause. Mortality from CHD is more rapidly growing among women than men in spite of this delay in onset.[5,6]

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Lack of proper awareness about the disease and not following good lifestyle practices lead to high prevalence of risk factors. Poor knowledge regarding this disease and the preventive strategies are found to be factors as reported in the studies conducted in India[7-12] and some other countries[13-18]

Consumption of refined carbohydrates, sugars, oils, fats, meat products, and salt is increasing and the intake of coarse cereals, pulses, fruits, and vegetables is inadequate and decreasing.[19] In India, it is very common the physical inactivity and sedentariness among both genders. Apart from that only physical activity is related to occupation with not much spare-time activity.[20] Sedentary behavior was reported among older or urban individuals, and women.[21] Main spare-time activity is watching television other than sleeping.[21,22]

Physical inactivity and inadequate consumption of fruits and vegetables more prevalent among women compared to men as reported in non-communicable diseases (NCD) survey.[23,24] Women are also found to have more psychosocial risk factors such as anxiety and depression.[25] The core component is knowledge and if they are properly made sufficiently aware, automatically their attitude may change to follow good lifestyle practices. The women and family members should be made aware and motivated to practice the lifestyle modification.

Statement of the problem

A study was to assess the knowledge and lifestyle practices regarding CAD among women in Kerala.

Objectives

1. The objectives of this study were as follows: To determine the knowledge and lifestyle practices of CAD among women
2. To identify the association of knowledge and lifestyle practices with selected socio-personal variables.

Methodology

The study was conducted among women residing in two selected gramapanchayaths of Kerala state, India. A quantitative approach and survey design was employed. Data were collected from women (35–55 years of age) who were willing to participate. Women who were diagnosed with CAD, diabetes, hypertension, and dyslipidemia were excluded from the study. The final size sample was 102. The tools used include.

Questionnaire to assess knowledge regarding CAD

It is a structured self-report tool prepared by the researcher to assess knowledge of women. It consisted of 30 items and each item carries a score of one. The maximum score is 30 and total scores were graded as excellent 90% and above (scores = 27–30), good 70–89% (scores = 21–26), average 50–69% (scores = 15–20), and poor <50% (scores ≤15 marks). The areas and numbers of items included were knowledge regarding CAD (3) risk factors (9) signs and symptoms (3), diagnosis, treatment (4), and lifestyle modification (11).

Rating scale to assess lifestyle practices – It is a seven-point scale (Daily [7], 5–6 days per week [6], 2–4 days per week [5], 1 day week [4], 2–3 days per month [3] once in month [2], and not at all [1]) which contains 30 items from different areas such as diet practices (20 items) physical activity (four items), habits (two items) sleep, and rest and stress reduction measures (four items). Each item is rated by the subject according to its frequency. Maximum score is 210 and lifestyle practices were categorized into excellent >80% (scores ≥168), very good 71–80% (scores = 149–168), good 61–70% (scores = 127–148), average 50–60% (scores = 105–126), and poor <50% (scores ≤126). Higher scores indicate healthy lifestyle practices.

Content validity, reliability, and pretesting done. Ethical clearance and administrative permission obtained. The data were collected and analyzed.

Results and Discussion

Socio-personal data

Major part of the study participants (35.3%) was between 35 and 39 years, 63.7% educated up to 10th standard, and 55.9% are household workers. Most of the findings in the present study were in accordance with the findings of the NCD survey conducted in Kerala in 2009.[23]

Knowledge of women regarding CAD

In the present study, majority of the women (45.1%) had good (70–89%) knowledge, 8.8% had excellent (≥90%) knowledge, 28.4% had average (50–69%) knowledge, and 17.6% had poor (<50%) knowledge. Table 1 shows area-wise analysis of knowledge and it explains that comparatively poor mean percentage of knowledge was noted against risk factors (52.8%) and diagnosis and treatment (53.5%). Better mean percentage was observed for meaning of CAD (77.3%), signs and symptoms (83%), and lifestyle modifications (75.5%). The present study observed some lack of knowledge in specific areas such as risk factors (52.8%) and diagnosis and treatment (57.0%).

The women should have adequate knowledge about the disease especially the risk factors, then only they can take some precautions either to prevent or halt the progress of illness. Many studies reported same findings.[7,9-11,14,17,18,26-29] All the above studies were conducted among population consisting of both genders but with a good percentage of female participation. This may be an area that needs to be addressed and the general public must get proper awareness. The situation

Table 1: Mean and mean percentage of area-wise knowledge of women regarding coronary artery disease (*n*=102)

Areas of knowledge and score range	Mean	Mean (%)
Meaning of CAD (1–3)	2.3	77.3
Risk factors (1–9)	4.8	52.8
Signs and symptoms (1–3)	2.5	83.0
Diagnosis and treatment (1–4)	2.3	57.0
Lifestyle modification (1–11)	8.3	75.5

CAD: Coronary artery disease

is not different in other parts of world also.[15,30] In India, among 80 female patients admitted in cardiology unit, 21.2% reported lack of awareness about symptoms which were the reason for delayed reporting at hospital.[31]

A study done in Malaysia[30] revealed that comparatively better knowledge among public (half of the samples were female) about signs and symptoms and risk factors. Study from Oman[13] reported adequate knowledge regarding some of the risk factors and good knowledge regarding lifestyle modification among public (40% samples were female).

In KSA, 46.6% had good knowledge regarding risk factors, 71.2% had awareness regarding prevention of diseases, and 67.2% had poor knowledge regarding signs and symptoms.[18]

One study done in Mangalore[9] reported inadequate knowledge among the group dominated by females and another study in North India[10] shows contradictory findings that 98% had adequate knowledge (48% of samples were female). This may be due to the difference in grading of knowledge score and the difference in the measurement tools.

Similar findings of the present study were reported in another study conducted in Kerala[12] among 200 rural women as 6.0% of women had excellent knowledge regarding CAD, 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%), location, function of heart and meaning of CAD (79%), signs and symptoms (85%), and lifestyle modification (72%). The close similarity of the findings may be due to the fact that both studies were conducted in same district of Kerala and also the similar analysis methods adopted in both studies.

A systematic review of studies published between 2004 and 2015 reported that being aware that CHD is the leading cause of death in women and knowledge regarding the risk factors of CHD were found to be generally suboptimal in the women studied.[32]

Lifestyle practices among women

In the present study, 69.6% had good (61–70%) lifestyle practices, 19.6% had very good (71–80%), and 10.8% had average (50–60%) lifestyle practices. None of them had either excellent (>80%) or poor (<50%) lifestyle practices. This study reported that majority of women had lifestyle practice score between 61 and 70% and no one had a lifestyle practice score of above 80%. Table 2 depicts area-wise analysis of lifestyle practices and it shows that a lower mean percentage was noted with regard to dietary practices (62.9%) and physical activity (57.3%) compared to habits (86.7%) and sleep, and rest and stress reduction measures (77.2%).

The present study pointed out the mean physical activity scores (57.3%) are the lowest when compared to others and is followed by mean diet practice score (62.9%). The mean

Table 2: Mean and mean percentage of area-wise scores of lifestyle practices of women. ($n=102$)

Areas of lifestyle practices and score range	Mean	Mean (%)
Dietary practices (1–140)	88.05	62.9
Physical activity (1–28)	16.05	57.3
Habits (1–14)	12.2	87.1
Sleep, rest and stress reduction measures (1–28)	21.6	77.1

habits score is excellent (86.7%), because no one in the present study is a smoker, alcoholic, or tobacco user. The only problem is that a good percentage of men smoke in Kerala (28%)[33] and the women may expose to passive smoke at workplace or home. Diet practice scores are also low when compared with the knowledge level regarding lifestyle modification. The reasons include rising cost of vegetables and fruits, fear that too much pesticides are added in fruits and vegetables and the non-availability of fresh items at the setting of the present study. It is also noted during the study that if plenty of fish are available in the area, they prefer to eat only that rather than buying vegetables or meat. NCD survey[23] reports that 58% of the respondents eat fish daily. For majority buying and eating, a fruit is something that happens rarely during special occasions or festivals. People in Kerala consume fruits, on an average 3 days a week, whereas vegetables were consumed 5 days a week. Only 13% of the population consumed five or more servings of fruits and vegetables per day[23] and another issue that is noted that even if they buy fruits, the women never eat it rather share it among other members in the family. NCD survey[23] report that 15% of the respondents eat local fried food daily in Kerala, but the figure is high in the present study (32.4%).

Most of the rural women are housewives and they get leisure time to watch television and relax all days except those who are employed. However, it is practically not possible between tight schedules at home and work place for those women who are employed. Only few women were employed in the present study and that may be the reason for fairly good mean scores for sleep, rest, and relaxation measures (77.2%).

Physical inactivity has affected the rural households of Kerala especially due to the available labor-saving technologies. Hence, people become physically inactive especially women both in both urban and rural area. They are physically inactive compared to their male counterparts. No urban and rural difference is also observed.[24,33] The fast urbanization is the main cause for such a high prevalence of physical inactivity.

The middle-aged women are the back bone of each family in culture of Kerala. They usually pay more attention to other members in the family specially spouse, children, and parents and care less about themselves. They rarely get time to go for a walk like men as engaged due to household works and also our culture does not encourage women to go out and walk especially in rural areas of Kerala. Another factor is that women cannot cook food for themselves due to many reasons such as short of money, time, fuel, and laziness. The middle-aged

women get less time to rest, relax, and sleep compared to men and women in other age groups. The situation in Kerala suggests people run the risk for developing the risk factors of CAD and that especially among women.

The situation is not different in other countries also. According to data from a 2011 National Health Interview Survey in adults, inactivity was higher 33.2% versus 29.9% in women than men.[34] The study that was done in Pakistan also reported physical inactivity is higher among women (71.1%).[25]

Association of knowledge and lifestyle practices with socio-personal variables

The level of education and level of knowledge are associated significantly at $P < 0.001$ level. There was no significant association between lifestyle practices and any socio-personal variables such as age, education, and occupation.

The present study reports that knowledge level of women and educational status is associated at $P < 0.001$ level. No significant association noted between age and occupation with knowledge in the present study. Many studies report the association between knowledge level and educational status.[14,30,35-39] Although statistically insignificant, a trend toward a good knowledge level was associated with higher levels of education.[8] However, contradictory to this, a study in KSA[18] shows no association between knowledge and education.

In the present study, lifestyle practice is not significantly associated with age, education, and occupation. Education and occupation comprise socioeconomic status. A study conducted recently in India by Jaya etal[17]reports no significant difference in lifestyle practices (physical activity) between urban and rural area. Low socioeconomic background was found to be a high predictor (high risk group) for habit of smoking, alcohol consumption, stress, and unhealthy diet.[40]

Conclusion

Women are found to have poor awareness about CAD and the lifestyle practices to prevent CAD. As the women are the backbone of each family, they should be well educated about the lifestyle modification.

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Conflicts of interest

Nil.

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