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Cardiovascular Disease Knowledge, Attitude and Practice and its Association among Women in Belagavi

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Abstract: ***Objectives: To evaluate the association between Knowledge, Attitude and Practice on Cardiovascular Disease among women population in Belgaum city, using the KAP questionnaire. Design: This was an observational study with non – probability sampling design. Setting participants: Total of 210 healthy women were selected from general community in Belagavi. Intervention: The subjects were made to understand the questionnaire completely in the language they found easy. These outcome measures were subjective and were dependent on the individual's knowledge, attitude and practice towards cardiovascular diseases. Measurements: A total of 210 healthy women within the age group of 25 - 35 years were included in the study. They were selected from general community in Belagavi city. Recruited were non illiterate young adult women without psychotic symptoms. Consented participants were given a set of validated KAP questionnaire. The values were obtained and analysed. Main Results: R^2 = 0.013 that means the linear regression explains 1.3% of the variance in the practice score which is the dependent variable by the knowledge score which is the independent variable. R^2 = 0.012 that means the linear regression explains 1.3% of the variance in the practice score which is the dependent variable by the attitude score which is the independent variable. R^2 = 0.012 that means the linear regression explains 1.3% of the variance in the practice score which is the dependent variable by the attitude score which is the independent variable. The regression outcome from results shows that practice score is weakly affected by the attitude score, practice weakly affected by knowledge score and attitude weakly affected by knowledge score. Conclusions: It is necessary to recognise the relationship between a subject's knowledge, attitudes, and behaviour which have to be taken into account when planning any strategy for preventing disease.***

Keywords: cardiovascular disease, hypertension, diabetes mellitus, KAP questionnaire

1. Introduction

CVD is one of the leading causes of death in India. In the year 2016, there was an estimated 62.5 million years of life lost due to CVD in India, respectively. However, because of India's large population, the absolute estimated prevalence in India (54.6 million) is 60% larger than in the United States (33.6 million).[1 - 2]

Heart disease is no longer a man disease per se as highlighted by initial researchers and doctors since it has been causing a vast majority of death among women as well for almost a century and more women compared to men had died of it every year since 1984. Although there has been a decline in overall mortality for CVD, the incidence of CVD in women has been steadily increasing.[3 - 5]

In this age of massive development, there are lifestyle changes seen in Indian population. As compared to other countries, the sedentary lifestyles and active lifestyles to fast foods, India is moving faster in a much shorter span of time than other nation. The mortality rates related to chronic diseases like cardiovascular diseases (CVDs), diabetes, stroke and coronary heart diseases (CHDs), have increased rapidly in the last decade with CVDs taking a major share. However, it is affecting the productive population by imposing a vast socioeconomic burden.4

Renewed attention has been drawn by the American Heart Association (AHA) for the primary and secondary prevention of CVDs.6 Various studies have proven that physical inactivity in women is the most common cause of CVD morbidity and mortality, either directly or through its effect on other risk factors

Decreased levels of physical activity have been associated with increased levels of cardiovascular disease (CVD) risk factors in females. As a result of the relationship between CVD and cardiorespiratory fitness, physical fitness has been found to decrease the CVD risk factors in women.[7 - 8]

Realization of risk factors for CVD and its prevention steps are an important key that can ensure early detection of CVD.[9 - 10]

Due to these high risk factors and risk - related behaviour patterns for CVD in women, more needs to be learned about the knowledge, the attitude and practise towards the CVDs on, physical activity, epidemiology of fitness and CVD risk in the population.[12]

So, the greater awareness and knowledge of specific risk factors and symptoms should be enhanced in order to reduce its morbidity and mortality. However, lack of knowledge and misconceptions may alter the acceptance of CVDs risk factors and associated uncertainties initiating worry. Knowledge and attitude and its practice thus becomes importance in recognizing CVDs risk factors.

2. Materials and Methods

This was an observational study with non – probability sampling design. The duration of the study was one year. Ethical clearance was obtained from the Institutional Ethical Committee. After finding the suitability as per the inclusion criteria subjects were selected to participate in the study.230 participants with subacute stroke were assessed for the eligibility in the study.210 individuals were enrolled in the study based on the following inclusion and exclusion

criteria. Informed consent form was obtained from all the participants before commencing the intervention.

Inclusion criteria were as follows: A total of 210 healthy women, ranging from 30 to 45 years old were randomly chosen from the community in Belagavi city.

Exclusion criteria were as follows: 1) Subjects diagnosed with psychological disorders, neurological disorder or chronic illness. 2) Subjects who are not willing to participate.

Outcome measure -
Knowledge Attitude and Practice (KAP) Questionnaire on Cardiovascular Diseases.

This set of questionnaires was divided into 4 parts.

The first part of the questionnaire consisted of demographic data. The next part of the questionnaire included 19 questions on knowledge, 13 questions on attitude, and 14 questions on practice regarding the risks of CVD.

Scores given for the correct answers on knowledge were three, two for "do not know, " and one for incorrect answers. On the other hand, scores given for questions on attitude depended on positive and negative statements. If the statement was positive, five marks were given for "strongly agree, " four for "agree, " three for "neutral, " two for "disagree, " and one for "strongly disagree, " and vice versa for the negative statements. Finally, the scores for questions on practice were given as four for "almost every day, " three for "frequent, " two for "seldom, " and one for "never, " if the activities were positive, and vice versa for the negative activities**.**

Procedure: The study consisted of 210 female subjects who were assessed for the KAP questionnaire on CVD. They were briefed about the nature and process of the study and informed consent was taken from each one. The subjects were made to understand the questionnaire completely in the language they found easy. These outcome measures were subjective and were dependent on the individual's knowledge, attitude and practise towards cardiovascular diseases.

Statistical analysis: Statistical analysis for present study was done using SPSS version 23. For this purpose, data were entered on Microsoft Excel 2017, tabulated and subjected to statistical analysis. To evaluate the relationship between knowledge attitude and practice, Pearson correlation coefficient was used. Level of significance was set at 5% and probability values of less than 5% was considered as statistically significant.

3. Result

Outcome of knowledge score (**table 1, fig 1)** among the data distribution gives Mean and SD of 51.25±3.48

For attitude score (**table 2, fig 2)** the outcome of data distributed gives Mean and SD of 59.08±2.79

Outcome of distribution of data for practise score (**table 3, fig 3)** gives Mean and SD of 43.82±3.88

The correlation association was studied for Practice and Knowledge **(table 4)** with R value being at 0.112 which indicates a positive linear correlation coefficient with a weak association between the select variables in the model. It is inferred that, as Knowledge score enhances so as the practice scores also augments.

Regression analysis for Practice and Knowledge was carried out for model development. R^2 value indicated regression coefficient which explains extent or percentage of variability in the dependent variable is accounted for by the independent variable. The R^2 value is observed to be 0.013 which is non - significant as well as indicated weak level influence of independent variable on the dependent variable in the model.

We would infer the result as, the **R^2 = 0.013** that means the linear regression explains **1.3%** of the **variance** in the practice score which is the dependent variable by the knowledge score which is the independent variable. The regression outcome from above table shows that practice score is weakly affected by the knowledge score. **(table 4)**

For association between practice and attitude **(table 4),** the **R^2 = 0.012** that means the linear regression explains **1.3%** of the **variance** in the practice score which is the dependent variable by the attitude score which is the independent variable. The regression outcome from above table shows that practice score is weakly affected by the attitude score.

For association between attitude and knowledge, (**table 4)** the **R^2 = 0.012** that means the linear regression explains **1.3%** of the **variance** in the practice score which is the dependent variable by the attitude score which is the independent variable. The regression outcome from above table shows that practice score is weakly affected by the attitude score.

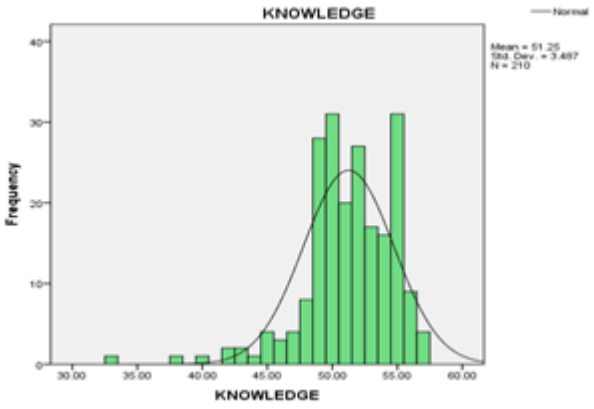

Figure 1

Table 1:

Particular	Range	Minimum	Maximum	Mean	Std. Deviation
Knowledge	24.00	33.00	57.00	51.25	3.48

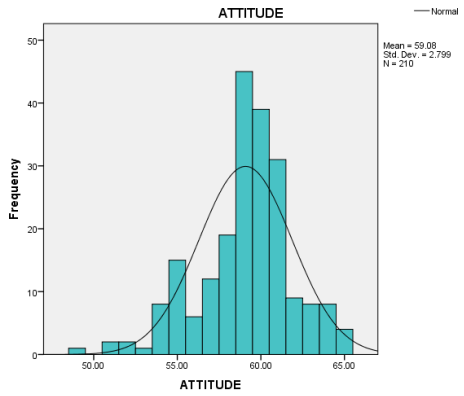

Figure 2

Table 2

Particular	Range	Minimum	Maximum	Mean	Std. Deviation
Attitude	16.00	49.00	65.00	59.08	2.79

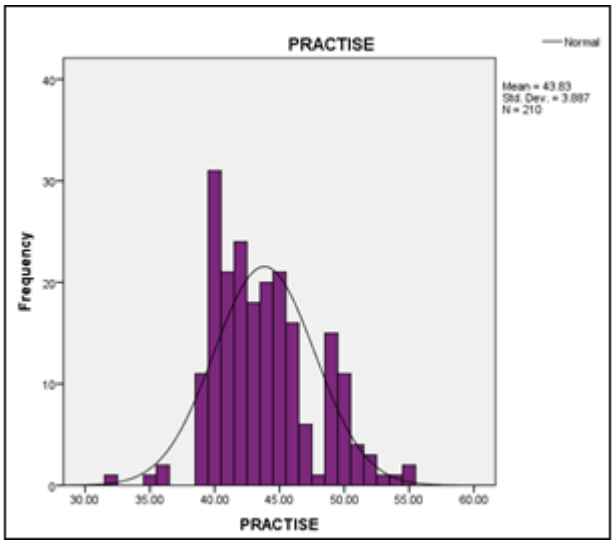

Figure 3

Table 3

Particular	Range	Minimum	Maximum	Mean	Std. Deviation
Practise	23.00	32.00	55.00	43.82	3.88

Table 4: Correlation and Regression Analysis

Dependent Variable	Independent Variable	Correlation coefficient R	Regression coefficient R^2	Result
Practice	Knowledge	0.112	0.013	Insignificant at 5% level with Positive association & weak influence
Practice	Attitude	0.109	0.012	Insignificant at 5% level with Positive association & weak influence
Attitude	Knowledge	0.021	0.001	Insignificant at 5% level with Positive association & weak influence

4. Discussion

The purpose of the study was to determine the knowledge, attitude and practice on cardiovascular diseases its association among women in Belagavi. Cardiovascular diseases are the leading cause of death. In India the prevalence for CVD is 54.6 million that is 60% larger than other countries. Lifestyle changes are considered as an important factor for contribution in cardiovascular disease progression. Adaptation to sedentary life has worsened the disease. Physical inactivity has added to increase risk for morbidity and mortality in female population. To reduce CVD incidence, increase in women adherence to healthy lifestyle by educating, screening, detecting and treating modifiable risk factors have become important since women do not practice heart healthy behaviors on a routine basis.

The findings of the study revealed that the regression outcome from results shows that practice score is weakly affected by the attitude score, practice weakly affected by knowledge score and attitude weakly affected by knowledge score with the correlation coefficient 'R' score of 0.112, 0.109 and 0.021 respectively.

A study conducted by Abhinav VaidyaUmesh Raj Aryal[11] on "Cardiovascular health knowledge, attitude and practice/behaviour in an urbanising community of Nepal". It was a population - based cross - sectional study. The study population included 777 respondents from six randomly selected clusters from villages. The study stated that out of 70% women screened about 44% of respondents had insufficient knowledge and less than 20% had highly satisfactory knowledge. Among those with highly satisfactory knowledge, only 14.7% had a highly satisfactory attitude and 19.5% and 13.9% had satisfactory and highly satisfactory practices, respectively. It concluded that a gap exist between cardiovascular health knowledge, attitude and practice/ behaviour in a low - income nation, even among those already affected by cardiovascular disease.

A cross - sectional survey conducted by Abdelmoneim Awad* and Hala Al - Nafisi[13] on "Public knowledge of cardiovascular disease and its risk factors in Kuwait". The study was performed using a pretested self - administered questionnaire on 900 sample which were randomly selected Kuwaiti individuals. . About 60% of respondents did not know type of CVD, and coronary heart disease was the commonest identified type (29.0%). Two - fifths of participants were not aware of any heart attack symptoms, and the most commonly known were chest pain (50.4%) and shortness of breath (48.0%). Half of respondents did not recognize any stroke symptoms, and the most commonly recognized were 'confusion or trouble speaking' (36.4%) and 'numbness or weakness' (34.7%). Knowledge regarding CVD risk factors was moderate.

A study conducted by Everett Longa[14], et al on "Knowledge, attitudes, and beliefs related to hypertension and hyperlipidaemia self - management among African - American men living in the south - eastern United States". This study showed knowledge, attitudes, and beliefs on hypertension and hyperlipidaemia management on 34 of African - American men with hypertension and/or

hyperlipidaemia, within the age group of 40–65yrs. The study resulted that the participants had a high level of knowledge about hypertension self - management, but not much cholesterol self - management. Barriers to self - management included medication side effects and unhealthy dietary patterns. Facilitators included social support and positive healthcare experiences. The study concluded that there is a gap in knowledge of hyperlipidaemia versus hypertension.

5. Acknowledgement

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6. Conclusion

The study concluded that it is necessary to recognise the relationship between a subject's knowledge, attitudes, and behaviour which has to be taken into account when planning any strategy for preventing disease. Insignificant and weak associations between knowledge, attitude, practice found in this study encourages health care providers to take it as a challenge to educate community, motivate and provide full support to those who wish to modify their lifestyle. Several recommendations that we can offer to improve the knowledge, attitude and practice on CVD among women in our population is by the empowerment of health promotion, lifestyle modification and prevention programme on CVD among women.

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