Current Knowledge Attitude and Practice on Life Style and Associated Factors among Cardiovascular Disease Patients in a Multispeciality Hospital

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ABSTRACT:
BACKGROUND:
The cardiovascular disease is one of the leading cause of death is 4.77million, its prevalence rate is 26% and this can be reduced with educating people with awareness programme on modifiable risk factors and life style changes.
AIM:
To assess the Current Knowledge, Attitude and Practices (KAP) on life style and associated factors among cardiovascular disease patients in a multi-specialty hospital.
MATERIALS and METHODS:
A prospective descriptive study using a semi-structured questionnaire was conducted among 162 cardiovascular disease patients, Convenient sampling technique was followed.
RESULTS:
Statistical analysis - CHI SQUARE method was implemented to prove the association between demographic variables (Gender, Age, Occupation, Population) and overall KAP score were statistically significant (less than 0.05).The KAP scores of Knowledge-36% , Attitude-49% , Practice-47%.
CONCLUSION:
Poor KAP level leads to poor lifestyle.Education programme on cardiovascular diseases must be conducted that would implement patients healthy lifestyle..
KEYWORDS: Cardiovascular disease, Knowledge, Attitude, Practice.

I. INTRODUCTION

The Cardiovascular diseases (CVD) are a group of disease affecting your heart and blood vessels.[1] The heart pumping action ensures constant circulation of the blood. The heart pumps blood in two ways, they are pulmonary circulation and systemic circulation.[2] Cardiovascular Disease occurs due to abnormal functioning i.e., inability of the heart to pump blood, insufficient oxygen supply to the body parts etc.[2] The Cardiovascular Disease is an group of disorder it consist of hypertension, coronary artery disease (CAD), Cerebral vascular disease, Myocardial infarction, Congestive Heart Failure, Angina, Ischemic Heart Disease, Cardiac Arrhythmic, Peripheral Artery Disease, Rheumatic Heart Disease, Deep Vein Thrombosis, Pulmonary Embolism, and Aneurysm.[3]Many elderly people are affected by cardiovascular diseases(CVD) or the majority of cardiovascular patients are elderly people. Cardiovascular patients has an interrelation between obesity ,diabetic mellitus and hypertension.[4]Several epidemiological studies states the condition of cardiovascular disease in an highly prevalence condition in recent days.The annual number of deaths from cardiovascular disease in India is projected to rise from 2.26million (1990) to 4.77million (2020).[5]

Specific sign and symptoms:

There are several warning signs and symptoms of an unhealthy heart that may appear as simple inconvenience or non serious issues but one needs to get himself tested and try to induce change in life style.[6]Some common symptoms of heart related ailments are aching in the shoulder and chest, snoring and sleeping problems ,puffy legs and feet ,dizzy, persistent cough, random bouts of cold sweats, shortness of breath and fatigue.[7]Symptoms of heart is not similar in male and female. Each sign and symptoms of heart indicates different complication in heart such as angina, cardiomyopathy, coronary arterydisease, stroke, heart failure, congenital heart defects, endocarditis, valvular heart problems.[7]A buildup of fatty plaques in your arteries is known as atherosclerosis which damages the blood vessels and heart.

Heart arrhythmia symptoms include:
- Fluttering in your chest.
- Racing heart beat(tachycardia).
- Slow heartbeat(bradycardia).
- Chest pain or discomfort.
- Shortness of breath.[8]

This study is made on the basis to provide awareness among the people to prevent cardiacdiseases by modifying with lifestyle and dietary changes. The awareness could be made by explaining specific sign and symptoms of heart problems to the people, so they could assess the problem and move to the hospital. The risk of heart problem can be decreased by the awareness programmed .Most of the people are unaware of certain problems ,which is been a cause of increased mortality rate, which can be rectified by providing awareness.[8]

Risk factors:
There are certain risk factors that involve cardiac problems ranges severe; the risk factors are
- Age
- Sex
- Family history
- High blood pressure
- Cholesterol
- Obesity
- Alcohol consumption & smoking
- Not enough of sleep
- Increased stress
- Unhealthy life style.[15]

These are the general risk factors which induce heart problems, these are explained below:

1. Age :
Mostly cardiac disorder occurs in new born as well as in adults and older people. In new born babies congenital heart defect occurs and in adults, older people other heart problems like heart attack, coronary artery disease, myocardial infarction etc.. Occurs. According to epidemiological studies from 40-60 years are likely to appear heart problems.[15]

2. Gender :
Male and female both are likely to have heart problems. More than female male are usually having cardiac issues; this occurs due to other co-morbidity conditions, stress etc.in some cases of cardiac problem female are affected. The sign and symptoms are different in both genders.[16]

3. Family history:
Mostly genetic condition is also a major factor in heart problems. Inhereditary conditions such as hypertension, diabetic mellitus, are common cause of unhealthy heart.[15]

4. High blood pressure:
High blood pressure is termed as hypertension. This is a common cause of unhealthy heart condition. It is a condition in which blood flow is against the artery walls. The force of blood flow is high.[16]

5. Cholesterol:
Cholesterol is an fat that is present in the body at a limited level, if high cholesterol occurs it would deposit in the walls of arteries and produces atherosclerosis condition. It is having a condition like low cholesterol level, high cholesterol level.[16]

6. Obesity:
Increased body mass index is termed as obesity, it is a condition in which caused by diabetic conditions and other health issues. It occurs mostly in genetic condition and due to metabolic condition.[16]

7. Alcohol consumption &smoking:
Alcohol consumption & smoking is causing organ damage very slowly, this makes an unhealthy life style to the people most people are addicted to alcohol and smoking are well likely to produce chronic illness with co-morbidity conditions.[15]

8.Stress:
Stress may lead to high blood pressure which easily causes heart attack. Chronic stress leads to severe cardiac problems.[15]

9. Unhealthy life style:
Unhealthy life style is linked with sleep, stress etc …poor sleep can hurt your heart, includes high stress, low physical activity and unhealthy food habits.[15]

Prevention on cardiac problems:
The risk of cardiovascular diseases can be prevented by modifying life style and dietary changes. The life style is modified based on individualized monitoring results of the patient.

Need of the study:
1. The Cardiovascular Diseases is one of the leading causes of deaths globally. The annual number of deaths from cardiovascular disease in India is projected to rise from 2.26 million (1990) to 4.77million (2022). About 12 lakh people die of cardiac problems in every year. [Johns Hopkins]
2. In the period between January and June 2021, nearly 3,000 people lost their lives due to heart disease , which was around 500 in 2020. [Johns Hopkins]
3. This could be prevented by providing awareness to the cardiovascular disease patients on specific symptoms, signs, stages of the cardiac complications and modification of the life-style, dietary changes.
4. Therefore, we take up this study to assess the perception of cardiovascular disease patients to lifestyle modifications and factors associated with them. Also, emphasis will be given to create awareness on practicing these lifestyle changes to prevent the risk of cardiovascular disease and reduce the death rate.

METHODOLOGY
Study site: Department of Cardiology, Sudha Institute of Medical sciences, Erode.
Study design: Prospective descriptive study
Study population: Cardiovascular disease patients
Sample size: 162
Sampling method: Convenient sampling
Study duration: March - August 2022
Ethical consideration:
Institutional ethical committee,Sudha Hospital approved our study
SH/IEC/Approval-019/March 2022
Registration
Number:ECR/948/Inst/TN/2018/RR-22.

Data collection:
A structured questionnaire was prepared by reviewing relevant literature and face validated. The questionnaire was distributed to the cardiovascular disease patients after obtaining their informed consent. Most of the questions are open ended with yes or no options. Final questionnaire includes 30 questions, where10 knowledge,10 attitude,10 practice based questions. The total scores for knowledge, attitude and practices are calculated separately for all. The levels of knowledge, attitude and practice scores are given as:

$$\% \ (knowledge, attitude, practice) = \frac{Obtained \ score}{Total \ no. \ of \ subjects} \ X \ 100$$

A pamphlet on lifestyle modifications in cardiovascular disease patients was designed by the study team. These pamphlets were distributed to the patients and the necessary lifestyle changes were explained to them.

Inclusion criteria:
➢ Patients both genders 40 - 70 years of age.
➢ Patients with cardiovascular diseases along with other medical complications such as diabetes mellitus, coronary heart disease, myocardial infarction, heart failure, etc.
➢ Patients with specific sign and symptoms (pain or discomfort in center of the chest, pain in left shoulder, arm, elbows, jaws, irregular heartbeat, and swelling of joints).

Exclusion criteria:
➢ Patients with chronic diseases such as cancer and drug induced diseases were excluded.
➢ Patients with infectious disease and with congenital anomalies of the heart.
➢ Patients with chronic kidney or liver diseases were excluded.
➢ Pregnant and lactating women.

Statistical analysis:
➢ Data was coded, entered and analyzed using SPSS Version 22.
➢ The comparison of the knowledge, attitude and practices of cardiovascular disease patients were done using descriptive statistics.

The association between demographics of cardiovascular disease patients and their KAP was assessed using Chi-square test.

Plan Of The Study
The entire study was planned to be carried out for a period of 6 months from march 2022- august 2022.The proposed study was designed in following phases to achieve the objectives.

Phase 1
☐ Framing the research question
☐ Literature survey on basis of the study

Phase 2
☐ Aim and Objective
☐ Preparation of KAP queries form

Phase 3
☐ Protocol submission
☐ Obtaining IRB approval

Phase 4
☐ Data Collection
☐ Statistical Analysis

Phase 5
☐ Results and discussion

II.   RESULTS & OBSERVATIONS:

A total of 162 responses were collected from cardiovascular disease patients in a multi specialty hospital with the help of questionnaire forms. The demographic characteristics of cardiovascular disease patients in a multi specialty hospital are summarized below in Table 1.

S.No	Variables	Total No.of Respondents(n=162)	% of respondents
1	Gender Male Female	110 52	67.90% 32.09%
2	Age(Years) 40-49 50-59 60-70	55 42 65	33.95% 25.92% 40.12%
3	Occupation Farmer Daily wages Driver Others	50 74 18 20	30.86% 45.67% 11.11% 12.34%
4	Population Rural Urban	67 95	41.35% 58.64%

Table 2: Response on knowledge of cardiovascular disease patients

S.No	Knowledge query (N-162)	Correct response n[%]	Incorrect response n[%]
1	Is cardiovascular disease are leading cause of death in human?	109[66.6]	54[33.3]
2	Is there a history of cardiovascular disease in your family that would develop heart problem?	106[65.4]	56[34.5]
3	Does pain, pressure, burning in chest can be symptoms of a cardiac diseases?	122[75.3]	40[24.6]

4	Pain and sudden discomfort in jaw, neck can be the symptoms of heart disease?	125[77.1]	37[22.8]
5	Smoking, drinking alcohol can cause severe heart related problems?	112[75.3]	40[24.6]
6	Avoiding unhealthy junk foods can prevent heart related problems?	110[67.9]	52[32.0]
7	Will inactive lifestyle cause cardiovascular problem?	103[63.5]	59[36.4]
8	Will uncontrolled blood glucose in diabetic patient causes heart related problems?	100[61.7]	62[38.2]
9	Does eating fatty foods would affect my blood cholesterol level?	101[62.3]	61[37.6]
10	Do you think men with heart problems are highly affected than women?	102[62.9]	60[37.0]
11	Do you know the sign and symptoms of heart problems?	101[62.3]	61[37.6]
12	Can heart problem be normalized?	79[48.7]	83[51.2]
13	The older a person is greater to the risk of heart problem?	77[47.5]	85[52.4]

Table 3: Response on attitude towards cardiovascular disease patients

S.No	Attitude query (n-162)	Correct response n [%]	Incorrect response n [%]
1.	Do you think physician can prevent cardiovascular disease in patient?	105[64.8]	57[35.1]
2.	Do you think over weight can cause a risk of cardiovascular disease?	108[66.6]	54[33.3]

3.	Do you think tobacco can cause serious effect on cardiovascular disease?	123[75.9]	39[24.0]
4.	Do you think controlling blood glucose and diabetics can reduce the risk of cardiovascular disease?	123[75.9]	39[24.0]
5.	Do you think reducing high blood pressure can prevent cardiovascular disease?	115[70.9]	47[29.0]
6.	Do you think lifestyle changes can prevent from heart related problems?	107[66.0]	55[33.9]
7.	Do you think by controlling the stress and mental pressure can prevent from heart related problems?	106[65.4]	56[34.56]
8.	Do you think regular exercise keep your body fit and healthy?	100[61.7]	62[38.2]
9.	Do you think, if affected by diabetes mellitus and hypertension patient can prevent from heart related problems?	102[62.9]	60[37.0]
10.	Do you think heart disease are better defined as chronic illness or short term illness?	98[60.0]	64[39.5]

Table 4: Response on practice towards cardiovascular disease patients

S.No	Practice query (n-162)	Correct response n[%]	Incorrect response n[%]
1.	Does daily intake of fruits and vegetables has beneficial effects on cardiovascular disease?	99[61.1]	63[38.8]

2.	Does salty and canned food increases blood cholesterol level and level of electrolyte?	111[68.5]	51[31.4]
3.	Can dietary changes prevent cardiovascular disease?	111[68.5]	51[31.4]
4.	Regular walking can help in reducing cholesterol level?	108[66.6]	54[33.3]
5.	Have you ever taken vitamin and mineral in your daily diet?	104[64.1]	58[35.8]
6.	Sleeping for 6-8 hours would keep away your stress and mental pressure?	98[60.4]	64[39.5]
7.	Do you think healthy lifestyle would prevent you from heart problem?	97[59.8]	65[40.1]

Association between demographics and KAP of cardiovascular disease patients

Table 4. Association between demographics and knowledge of cardiovascular disease patients

Variables	Significance
Gender	0.46
Age	0.67
Occupation	0.84
Population	0.01*

*P<0.05 is considered statistically significant

The association between demographics and knowledge of cardiovascular disease patients using Chi square test is depicted in Table 4.

Table 5: Association between demographics and attitude of cardiovascular disease patients.

Variables	Significance
Gender	0.46
Age	0.74
Occupation	0.96
Population	0.01*

*P<0.05 is considered statistically significant

The association between demographics and attitude of cardiovascular disease patients using Chi square test is depicted in Table 5.

Table 6. Association between demographics and practices of cardiovascular disease patients.

Category	Significance
Gender	0.01*
Age	0.14*
Occupation	0.06*
Population	0.27

*P<0.05 is considered statistically significant

The association between demographics and practice of cardiovascular disease patients using Chi square test is depicted in Table 6.

III.   CONCLUSION:

This study showed that,patients from Erode have a better attitude rather than knowledge and practice compared to the rest of Tamil Nadu. The attitude on KAP reporting by patients was comparatively good across Tamil Nadu. However, the poor knowledge scores failed to influence their attitude and their practices. Therefore, there is an improvement in the reporting of KAP. Patients are discouraged from reporting KAP due to a lack of knowledge, time, training and confidence. Relevant awareness campaigns such as education awareness programme should be intended to improve KAP reporting which is likely to benefit patient.

LIMITATIONS:

1. Cardiovascular disease is an common disease in recent days,the growth of cardiac disease is high to lower we can do awareness programme and reduce the disease range.

2. Low willingness to participate in the study, fearing a negative impact on KAP reporting.

FUTURE DIRECTIONS:
The future perspectives could be:
1. Conduct a pre-post intervention study including an awareness program on KAP reporting.
2. Encourage patients to report KAP.

EXPECTED OUTCOMES:
Analyzing the understanding the level of patients on knowledge, attitude and practice in cardio-vascular disease, risk factors, stages of cardiac disease and preventive measures to people and creating awareness to them.

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