



“AWARENESS ON RISK FACTORS AND WARNING SIGNS OF MYOCARDIAL INFARCTION AMONG PATIENTS ATTENDING OPD’S AT TERTIARY CARE CENTRE, TIRUPATI.”

¹Miss. Vennapusa Revathi, ²Dr. M. Nagarathnam and ³Mrs. V. Naganandini

¹M.Sc. Nursing student, Department of Medical Surgical Nursing,

²Associate Professor, College of Nursing, SVIMS, Tirupati, Andhra Pradesh, India.

³Senior Nursing tutor Grade- I, College of Nursing, SVIMS, Tirupati, Andhra Pradesh, India.

ABSTRACT

Objectives:

- ❖ To assess the knowledge on risk factors and warning signs of myocardial infarction among patients attending OPD’s.
- ❖ To determine the association between level of knowledge on risk factors and warning signs of myocardial infarction with their selected socio demographic variables.

Materials and methods:

Methodology: The research approach used for the present study was Cross-Sectional Descriptive Research Design. The sample of the study chosen by Non - Probability Convenience Sampling Technique, which includes 150 selected patients attending OPD’s, SVIMS. A self structured questionnaire was used to collect the data which consists of 42 dichotomous questions.

Results:

The major findings of the study was out of 150 patients ; 94 (62.7%) had moderate knowledge, 30 (20%) had adequate knowledge and 26 (17.3%) had inadequate knowledge on risk factors and warning signs of myocardial infarction. The association of demographic variables with the level of knowledge on risk factors and warning signs of myocardial infarction determined by using chi-square test which revealed that there was a highly significant association with type of family, duration of chewing tobacco, duration of alcohol consumption, BMI and source of information.

Conclusion:

The study findings revealed that, majority of patients attending OPD’s were had moderate knowledge on risk factors and warning signs of myocardial infarction. Hence, patients attending OPD’s should improve their knowledge regarding risk factors and warning signs of myocardial infarction to lead a better life.

Key words: Awareness, risk factors, warning signs, myocardial infarction

I. INTRODUCTION

Myocardial infarction (MI) commonly known as a heart attack is a deadly medical emergency occurs when blood flow decreases or stops to the coronary artery of the heart, causing damage to the heart muscle. This is usually caused by a blockage in the arteries that supply blood to the heart. If blood flow isn't restored quickly, a heart attack can cause permanent heart damage and death.¹

Heart attack risks includes modifiable and non modifiable factors. Non modifiable risk factors are : Age >45 years in men and >55 years in women, Gender –Men are more likely to have a heart attack than women, family history of heart attacks might be at increased risk, race and culture. Modifiable risk factors includes : Tobacco use - includes smoking and long-term exposure to second hand smoke, alcoholism. Obesity - BMI >30 are at higher risk of getting heart attack, High blood pressure - damages arteries, High cholesterol or triglycerides - high levels of bad cholesterol narrows arteries. Diabetes mellitus - high blood sugars increases the risk of a heart attack. Lack of physical activity is linked to a higher risk of heart attacks. Unhealthy diet–diet high in sugars, animal fats, processed foods, trans fats and salt. Stress - such as extreme anger. Illegal drug use - cocaine and amphetamines are stimulants triggers a coronary artery spasm that can cause a heart attack. Autoimmune condition - rheumatoid arthritis or lupus can increase the risk of a heart attack. Metabolic syndrome - combination of at least the following things: high blood pressure, high triglycerides, high blood sugar.²

Warning signs are the signs that appear before the occurrence of disease that appears as sudden and rapid. The most common warning sign of heart attack is chest pain. Some heart attacks are sudden and intense but most of signs starts slowly, with mild pain or discomfort. General symptoms for a heart attack can include: Chest discomfort in the center of the chest lasts more than a few minutes or it may go away and then return. It can feel like uncomfortable pressure, squeezing, fullness or pain. Discomfort in other areas of the upper body, Pain or discomfort in one or both arms, the back, neck, jaw or stomach, Shortness of breath - can occurs with or without chest discomfort Other possible signs include breaking out in a cold sweat or diaphoresis, nausea or light headedness, dizziness, fatigue, upper body pain, trouble breathing, who are experiencing the above heart attack symptoms should contact emergency services immediately.³

NEED FOR STUDY:

For every 40 seconds an adult dies from a heart attack or other adverse outcomes of cardiovascular diseases (CVD). These deaths account for about one third (30.9%) of all deaths or more than 8,00,000 deaths each year globally - 2022. About 1 in 5 of these deaths is a person younger than 65. Approximately 1.5 million heart attacks (myocardial infarctions) and strokes occur in the United States each year. Each year, approximately 6,05,000 new heart attacks and 2,00,000 recurrent heart attacks occur in the U.S. (American Heart Association, 2021). Globally, nearly 18.6 million people died of cardiovascular disease in 2019, that reflects a 17.1% increase over the past decade. There were more than 523.2 million cases of cardiovascular disease in 2019, an increase of 26.6% compared with 2010.53 percent of Indians in the age group of 26-40 years are at high risk of cardiovascular diseases due to double trouble of obesity and hypertension.⁴

According to the Indian Heart Association, 50% of all heart attacks in Indian men occur under the age of 50. India has 2-3 times higher percentage of heart diseases than western countries, warned by top experts and every fourth death occurring due to Cardio vascular Disease (CVD). The annual number of deaths from cardiovascular diseases in India is projected to rise from 2.26 million (1990) to 4.77 million (2020).⁵

STATEMENT OF THE PROBLEM:

“A STUDY TO ASSESS THE KNOWLEDGE ON RISK FACTORS AND WARNING SIGNS OF MYOCARDIAL INFARCTION AMONG PATIENTS ATTENDING OPD’S, SVIMS, TIRUPATI”.

OBJECTIVES:

- ❖ To assess the knowledge on risk factors and warning signs of myocardial infarction among patients attending OPD’s.
- ❖ To determine the association between level of knowledge on risk factors and warning signs of myocardial infarction with their selected socio demographic variables.

OPERATIONAL DEFINITION:

- **Assess:** Assess refers to determining the knowledge of patients regarding risk factors and warning signs of myocardial infarction.
- **Knowledge:** Knowledge refers to information given by the patients regarding risk factors and warning signs of myocardial infarction by using self structured questionnaires.
- **Risk factors:** A factor that increases the chance of developing disease makes particularly vulnerable to an unwanted or unhealthful event.
- **Warning signs:** A warning sign indicates that there is potential hazard or problem requiring special attention especially in future.
- **Myocardial infarction:** Myocardial infarction (MI) is defined as the damage and death of heart muscle occurs when blood flow decreases or stops to the coronary artery by a blood clot.
- **Patients:** The person who are sick or ill who comes to OPD for treatment

ASSUMPTION:

- Patients may not have adequate knowledge regarding risk factors and warning signs of myocardial infarction.

CONCEPTUAL FRAMEWORK:

The conceptual framework for the present study was adopted from ‘**General system theory by Ludwig Von Bertalanff (1968)**. General system theory explains that, a system of interrelated elements in the abstract system are the human being their environment. A system must achieve the balance internally and externally. According to general system theory, ‘silence of wholeness and its purpose is scientific thinking across the discipline and which provide frame work for analyzing the whole of any system’.

A system can be resolved into an aggregation of feedback circuit such as:

- Input
- Throughput
- Output

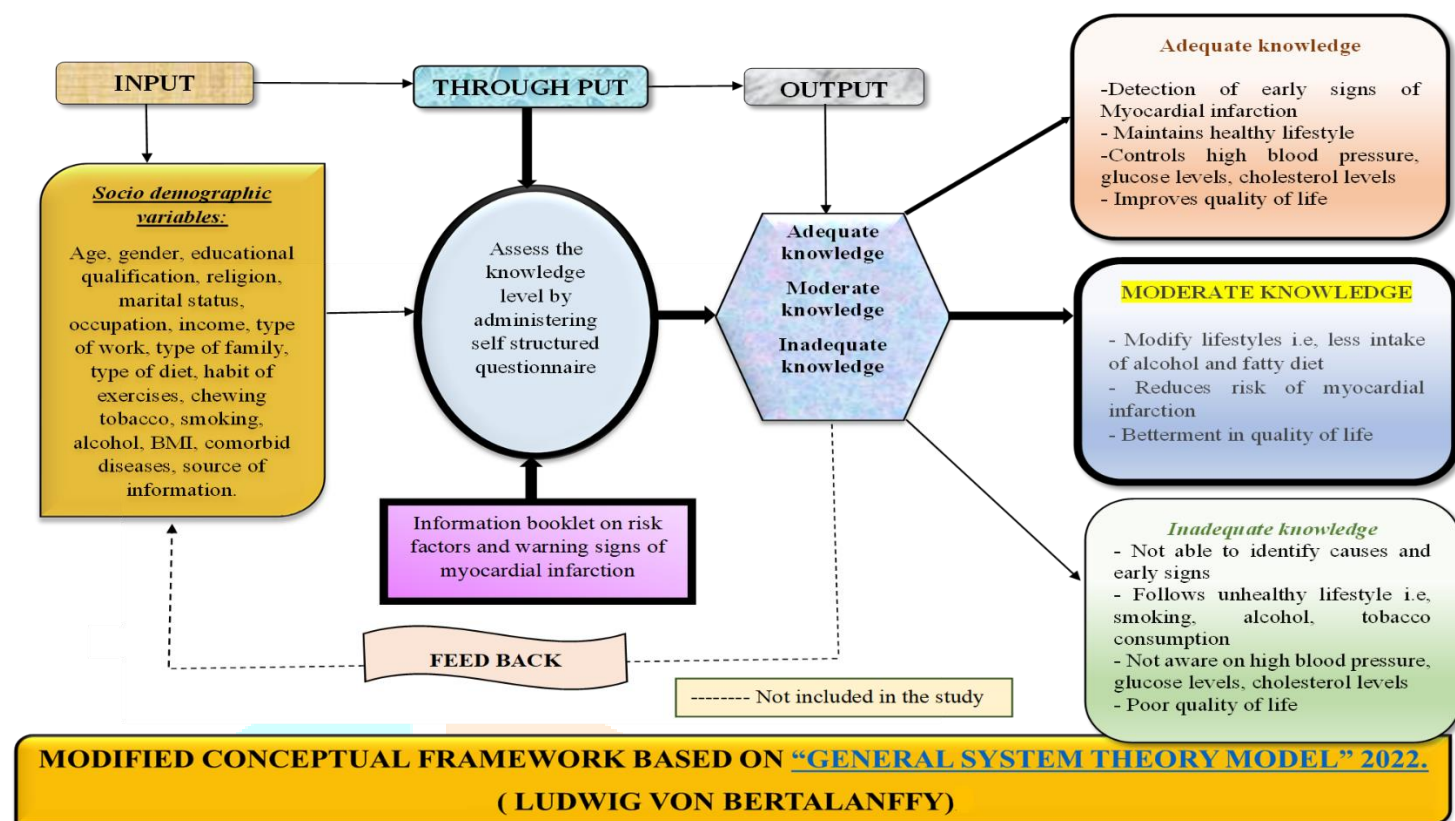


Fig-1: Conceptual Frame work

II. METHODOLOGY

RESEARCH APPROACH:

The research approach adopted was Descriptive research approach to achieve the objective of the study, which is felt to be most appropriate in the field of education for its practicability in real life situations. It has the advantage of practicability, feasibility and to a certain extent for generalization.

RESEARCH DESIGN:

The research design selected for the present study was Cross-Sectional Descriptive Research Design.

VARIABLES:

Socio-demographic Variables: Which could influence the study includes age, gender, educational qualification, religion, marital status, occupation, income, type of work, type of family, exercises, habits, BMI, comorbid diseases, source of information.

Research variables: Knowledge on risk factors and warning signs of myocardial infarction.

SETTING OF THE STUDY:

The study was conducted at OPD's, SVIMS, Tirupati. The setting was chosen based on of investigation's feasibility in terms of availability of required sample. The study was conducted during the month of July 2022.

POPULATION:

The population in this study includes the patients who came for OPD's either for check -ups or follow ups.

SAMPLE:

The sample includes patients attending OPD's who fall under inclusion criteria.

SAMPLE SIZE:

Sample size consists of 150 patients who fall under inclusion criteria.

SAMPLING TECHNIQUE:

Non probability convenience sampling technique was adopted based on the inclusion criteria.

CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:- Patients who are:-

- Both male and female >18 years are included.
- Willing to participate in the study and available during the period of data collection.

Exclusion criteria:- Patients who are:-

- Diagnosed with myocardial infarction

DEVELOPMENT AND DESCRIPTION OF THE TOOL:

The tool was developed with the help of related literature from various textbooks, journals, websites, discussions and guidance from experts.

The tool consists of II sections.

SECTION I : Consists of socio demographic data such as age, gender, educational qualification, religion, marital status, occupation, income, type of work, type of family, exercises, habits, BMI, comorbid diseases, source of information.

SECTION II : Self structured questionnaires to assess the knowledge on risk factors and warning signs of myocardial infarction.

SCORING KEY:

Section-I:- By coding the demographic variables.

Section-II :- Dichotomous questions were given with two options “YES or NO”. In the questionnaire, correct answer “YES” carries “1” mark and wrong answer “NO” carries “0” mark.

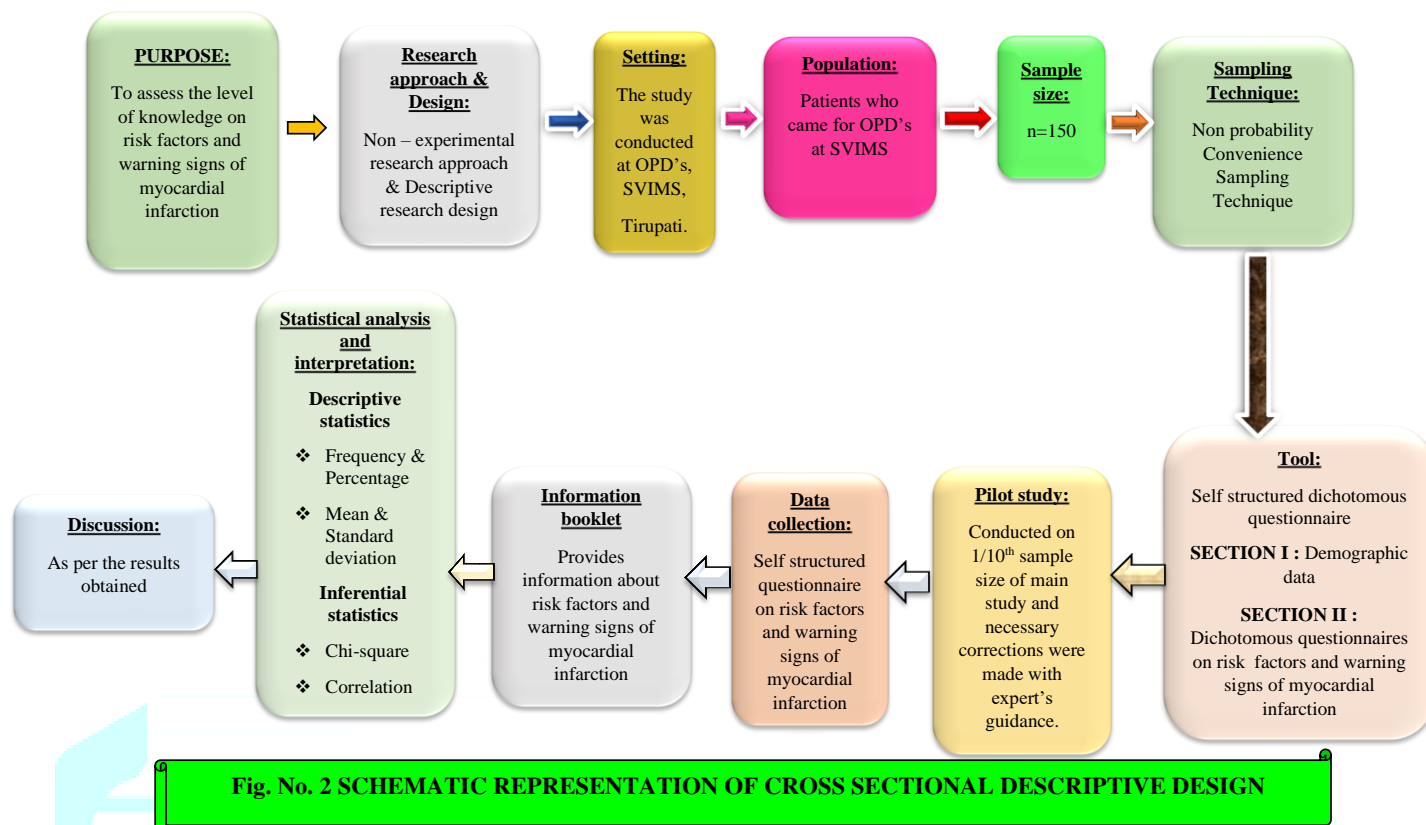
Scoring interpretation:

- <50% - Inadequate knowledge.
- 51-75% - Moderate knowledge.

> >76%

Adequate

knowledge.



III. RESULTS

Majority of patients shows that 36.7% were belongs to age group of 45 – 55 years , 71.3% were males, 47.3 % were secondary education, 87.3% were married, 84% belongs to Hindu religion, 31.3 % were daily wage workers, 48.7% income were below Rs10,000/- per month, 50% were doing moderate work, 74.4% were nuclear family, 74% were consuming mixed diet, 72% were have habit of doing exercise, 45.3% were doing exercises daily, 43.3% were doing walking, 17.3% were have habit of chewing tobacco, 6.7% were chewing tobacco from 16 – 20 years, 16% were have habit of smoking, 7.3% were smoke more than 7 cigarettes per day, 5.3% were smoking >20 years, 26.7% were have habit of alcohol consumption, 12.7% were take alcohol rarely, 20% were take <100ml of alcohol, 42% were have family history of myocardial infarction, 17.3% were have relationship of myocardial infarction from their fathers, 42.7% were overweight, 33.3% were suffering hypertension, 16.7% were having comorbid disease with a duration of 16-20 years, 73.3% were received information regarding risk factors and warning signs of myocardial infarction, 33.3% received information from medical & nursing professionals.

The study findings revealed that 94 (62.7%) had moderate knowledge, 30 (20%) had adequate knowledge, 26 (17.3%) had inadequate knowledge on risk factors and warning signs of myocardial infarction.

Table 1: Frequency and percentage distribution of level of knowledge on risk factors and warning signs of myocardial infarction among patients attending OPD's.

(N=150)

S. NO.	KNOWLEDGE ON RISK FACTORS AND WARNING SIGNS OF MYOCARDIAL INFARCTION	FREQUENCY(F)	PERCENTAGE (%)
1.	Moderate knowledge	94	62.7
2.	Adequate knowledge	30	20
3.	Inadequate knowledge	26	17.3

Table 2: Distribution of frequency, percentage, mean and standard deviation on various aspects of risk factors and warning signs of myocardial infarction among patients attending OPD's.

(N=150)

S.NO	VARIABLES	KNOWLEDGE ON RISK FACTORS AND WARNING SIGNS OF MYOCARDIAL INFARCTION						
		Inadequate (<50%)		Moderate (51 – 75%)		Adequate (>76%)		MEAN ± STANDARD DEVIATION
		F	P (%)	F	P (%)	F	P (%)	
1.	General information	29	19.3	64	42.7	57	38	6.77 + 2.29
2.	Risk factors	18	12	96	64	36	24	13.87 + 2.20
3.	Warning signs	14	9.3	104	69.3	32	21.3	11.35 + 2.20
	Overall							31.97 + 5.10

The association of demographic variables with the level of knowledge on risk factors and warning signs of myocardial infarction revealed that Chi-square value related to type of family ($p = 0.002$), duration of chewing tobacco ($p = 0.000$), duration of alcohol consumption ($p = 0.004$), BMI ($p = 0.001$), source of information ($p = 0.001$) shows highly significant association at ($p < 0.0$) level, age ($p = 0.040$), gender ($p = 0.011$), educational qualification (0.040), occupation ($p = 0.010$), family income ($p = 0.016$), type of work ($p = 0.033$), type of diet ($p = 0.007$), habit of exercise ($p = 0.042$), frequency of exercise ($p = 0.053$), habit of chewing tobacco ($p = 0.007$), history of comorbid diseases ($p = 0.020$) shows significant association at ($p < 0.05$) level. The other variables such as marital status ($p = 0.824$), religion ($p = 0.230$), type of exercise ($p = 0.142$), habit of smoking ($p = 0.218$), frequency of smoking ($p = 0.096$), habit of alcohol consumption ($p = 0.296$), quantity of alcohol consumption ($p = 0.548$), Family history of myocardial infarction ($p = 0.296$), relationship with individual ($p = 0.115$), duration of illness ($p = 0.374$), received information on risk factors & warning signs of myocardial infarction ($p = 0.259$) were not found any significant association with risk factors and warning signs of myocardial infarction.

The correlation of demographic variables with the level of knowledge on with risk factors and warning signs of myocardial infarction revealed that age, educational qualification, family income per month, family income per month, habit of chewing tobacco, duration of chewing tobacco, Number of cigarettes smoke per day, duration of comorbid illness were found highly correlated with $p < 0.01$ significance; type of diet, type of exercise, habit of smoking, history of comorbid illness showed correlated with $p < 0.05$ significance and other variables were not correlated with knowledge on risk factors and warning signs of myocardial infarction.

IV. CONCLUSION

The study findings concluded that patients attending OPD's had moderate knowledge on risk factors and warning signs of myocardial infarction and some of the demographic variables were statistically significant, hence it can be concluded patients need to improve their knowledge and are advised to follow the healthy lifestyle pattern to improve their health status and also to reduce risk of developing myocardial infarction. So, informational booklet has been given for improving knowledge and practice.

IMPLICATIONS:

The implications drawn for the present study are vital concern to all of patients, including nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE:

The present health care delivery system gives emphasis on comprehensive health care, which includes preventive, promotive, curative and rehabilitative care.

- Planned health teaching programme to be scheduled at OPD's for all patients and their family members on fixed days regarding risk factors and warning signs of myocardial infarction
- Hand notes can be given to the patients and family members, in their own language, with an appropriate picture.

NURSING EDUCATION:

Nursing students should be encouraged to teach the patients and their family members regarding the importance of the general information, risk factors and warning signs of myocardial infarction both in hospital and community.

- Conduct in-service education programme for nurses regarding risk factors and warning signs of myocardial infarction
- Educational programme should emphasize teaching of patients to improve their knowledge on risk factors and warning signs of myocardial infarction.

NURSING ADMINISTRATION:

- The nurse administrator has to conduct workshops on risk factors and warning signs of myocardial infarction.
- Nursing administration should give instructional module to the patients and their caretakers on risk factors and warning signs of myocardial infarction during their outpatient visit.
- The nurse administrators can take part in developing strategies and health education programs.

NURSING RESEARCH:

- Research studies can be conducted on each area of myocardial infarction to identify their knowledge in that aspect.
- Nursing research can be done on assessment and management of myocardial infarction.

LIMITATIONS:

- The study is limited to the patients attending OPD'S, SVIMS, Tirupati.

RECOMMENDATIONS: On the basis of findings the following recommendations have been made for further study:

- Similar study can be done among nurses and nursing students.
- A structured teaching programme can be conducted on knowledge on risk factors and warning signs of myocardial infarction in different settings and different population.
- A comparative study can be conducted on various aspects of myocardial infarction with large sample.

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