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# "A Descriptive Study To Assess The Knowledge Regarding The Risk Factors And Management Of Myocardial Infarction Among Staff Nurses Working In Selected Hospital Of District Patiala, Punjab With The View To Develop An Informational Booklet".

**1MRS. SHIVANI, 2Mrs. Jaya Shirshetty**

**1Research Scholar,, 2Principal**

**1ADARSH COLLEGE OF NURSING, PATIALA, PUNJAB.,**

**2ADARSH COLLEGE OF NURSING, PATIALA, PUNJAB.**

## ABSTRACT

**STATEMENT OF PROBLEM: "**A descriptive study to assess knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop informational booklet".

**BACKGROUND OF THE STUDY**: Myocardial Infarction is common and are increasing in number as more person survive globally. The prevalence of myocardial infarction is the highest prevalence of MI seen in younger than 45 years of age compared to those older than 60 years.

**AIM OF THE STUDY:** The aim of the study is to assess the knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop informational booklet".

**METHODOLOGY:** A descriptive research design is used. The total sample size of the study is comprises of 100 staff nurses knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab. Study sample is selected by using Convenience sampling technique. Knowledge is assessed by using self structured knowledge questionnaire.

**RESULTS:** From the Findings of the present study it was concluded that the knowledge score regarding risk factors and management of Myocardial Infarction among staff nurses shows that majority of Average level of knowledge was 72% among staff nurses whereas 14% good level of knowledge and 13% poor knowledge was found. 1% of very poor level of knowledge among staff nurses.

**CONCLUSION:** Knowledge level will be improved after distributing informational booklet among staff nurses.

**KEYWORDS:** Assess, Risk factors, Management, Myocardial Infarction, Staff Nurses

## BACKGROUND OF THE STUDY

# CHAPTER 1

# BACKGROUND OF THE STUDY

## 1.1 INTRODUCTION

**"The most beautiful things in the world cannot be seen or even touched, they must be felt with the heart"-Helen keller.**

The heart is a muscular organ that serves to collect deoxygenated blood from all parts of the body, carries it to the lungs then, it transports the oxygenated blood from the lungs and distributes it to all the body parts. The heart pumps around 7,200 litres of blood in a day throughout the body. The heart has a somewhat conical form and is enclosed by the pericardium. It is positioned posteriorly to the body of the sternum with one-third situated on the right and two-thirds on the left of the midline. The heart wall consists of three layers enclosed in the pericardium i.e Epicardium , Myocardium and Endocardium.(1)

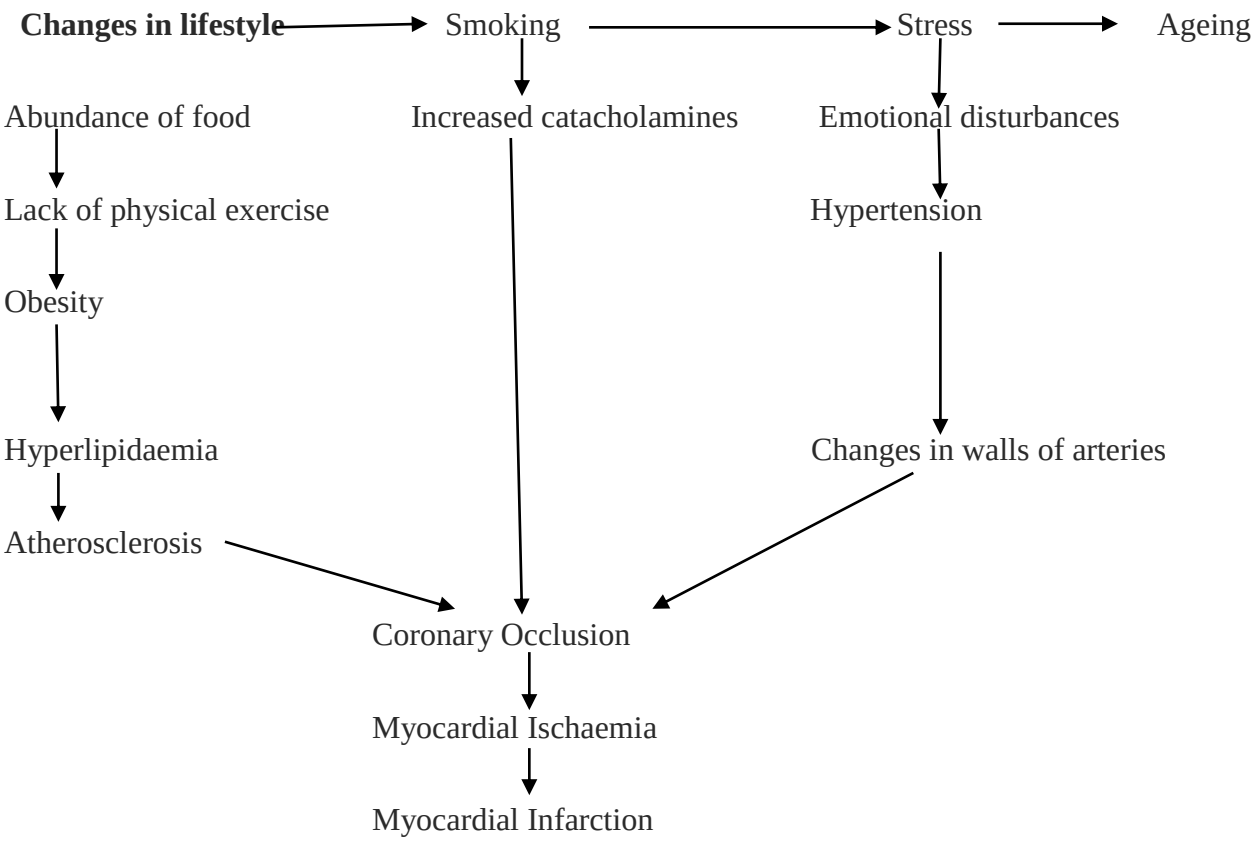
Globally, cardiovascular diseases (CVDs) are the number one cause of mortality. According to the World Health Organization (WHO), it is estimated that 7.4 million deaths were due to coronary heart disease in 2015. Eighty-two percent of deaths in low- and middle-income countries are accountable for CVD. The age-standardized estimate of mortality by cardiovascular diseases and diabetes per 100,000 people. It is estimated that 23.6 million people will die from CVDs by 2030. These are projected to remain the leading cause of mortality.(2)

Prevalence of myocardial infarction approaches 3 million people worldwide, with more than one million deaths in the united states annually. According to 2014, based on the national survey of the UK, the prevalence of MI was reported as 640,000 in men and 275,000 in women; this represents about 915,000 people that have suffered an MI in the UK. The prevalence of age- specific MI extends from 0.06% of men <45 years of age to 2.46% 0f those >75 years old. In contrast to these developed countries, South Asian countries (India, Pakistan, Sri Lanka, Bangladesh, and Nepal) have the highest prevalence of MI seen in younger than 45 years of age compared to those older than 60 years.(3)

Myocardial infarction (MI) is one of the five main manifestations of coronary heart disease, namely stable angina pectoris, unstable angina pectoris, MI, heart failure and sudden death. The phrase 'acute coronary syndromes' includes unstable angina, non-ST-elevation MI, ST-elevation MI and sudden cardiac death. In epidemiological studies, the incidence of MI in a population can be used as a proxy for estimating the coronary heart disease.

The burden is greater in LMICs because of much larger population sizes and widespread exposure to increasing levels of risk factors such as unhealthy diet, physical inactivity, obesity, tobacco use,

diabetes, raised blood pressure and abnormal blood lipids. Often in LMICs there is a lack of information on the role of risk factors. The consequences of globalization and urbanization are also contributory factors. In order to track the trends of this global epidemic, the incidence, prevalence and mortality of coronary heart disease need to be monitored. Case definitions for different presentations of coronary heart disease are required. They need to be scientifically valid, consistent when applied across countries, generally applicable and robust.[4]




**WEB OF CAUSATION FOR MYOCARDIAL INFARCTION**

The epidemiology of Cardiovascular diseases remains the principal cause of death in developed and developing countries, claiming 17.1 million lives a year. According to the WHO, it is predicted that CVD will be the most important cause of mortality in India by 2020. Among several CVDs particularly MI has become a worldwide health problem affecting all economic groups of the society and it continues to be a major public health problem, not only in western and industrialized countries but also increasingly in developing countries, such as India and makes a significant contribution to the mortality statistics. It is the leading cause of mortality for both men and women in developed and developing countries. In developed countries, MI accounts for 10%–25% of all deaths.[5,6]

Myocardial infarction (MI), colloquially known as "heart attack," is caused by decreased or complete cessation of blood flow to a portion of the myocardium. Myocardial infarction may be "silent," and go undetected, or it could be a catastrophic event leading to hemodynamic deterioration and sudden death. Most myocardial infarctions are due to underlying coronary artery disease, the leading cause of death in the United States. With coronary artery occlusion, the myocardium is deprived of oxygen. Prolonged deprivation of oxygen supply to the myocardium can lead to myocardial cell death and necrosis. Patients can present with chest discomfort or pressure that can radiate to the neck, jaw, shoulder, or arm. In addition to the history and physical exam, myocardial ischemia may be associated with ECG changes and elevated biochemical markers such as cardiac troponins. This activity describes the pathophysiology, evaluation, and management of myocardial infarction and highlights the role of the interprofessional team in improving care for affected patients .[7]

- Risk factors such as **Non-modifiable risk factors-** Age- The risk increases for men who are 55 or older and women who are 65 and older. Ethnicity- Black men have a higher risk of heart failure than white men. Genetic predisposition an elevated risk of a *trait* associated with an increased heart disease risk and family history of heart diseases**,** Menopause-It increase the risk of MI due to low estrogen level**.** Environmental Exposures- adverse seasonal temperature exposure can cause myocardial infarction **Modifiable risk factors-** Serum lipids: Elevated triglycerides, Low density LDL cholesterol; decreased HDL cholesterol can clog arteries and forms a clot for heart attack. Smoking is the chief cause of heart attacks in people under 40., alcohol intake can raise the level of fat in the blood. Obesity- especially if most excess weight is located in the abdominal area. Physical inactivity-people who engage in regular exercise have a decreased risk of heart problem. psychological factors such as extreme emotional trauma or physical stress can cause heart attack, hyperlipidaemia. **Contributing factors-** Diabetes Mellitus can damage blood vessels and nerves that control heart. Hypertension can increase the force of blood through arteries which can damage walls. c-reactive protein can increase the risk of heart attack. Homocysteine levels can cause blood clots and damage arteries. Fibrinogen can infilitrate the vessel wall due to increase blood viscosity and thrombus formation, Delayed reperfusion, Low ejection fraction, Presence of congestive heart failure, Depression.[8]

**Classification of Myocardial infarction**-Classification of MI is based on location of the infarction and the layers of the heart involved. Left Ventricular Myocardial Infarction: In this the portion of the left ventricle damaged by MI is largely determined by the anatomic distribution of the occluded coronary artery. Anterior Myocardial Infarction occurs with the occlusion of the left anterior descending coronary artery. Inferior/ Posterior Myocardial Infarction may result in occlusion of right coronary artery. Lateral Myocardial Infarction results from occlusion of coronary branches supplying the lateral wall of the left ventricle. Right ventricular Myocardial Infarction clearly occurs in association with inferior LV infarction. Non- ST Segment Vs Segment Elevated Myocardial Infarction is associated with deterioration of a once stable atherosclerotic plaque. with thrombus formation.

Assessment and Diagnostic Findings: Electrocardiogram(ECG),Stress test, Echocardiogram, Nuclear stress test, Coronary angiography, Cardiac CT scan or MRI, Blood test (cardiac markers),Chest X-rays.

**Management: M**-Morphine**, O**-Oxygen therapy**, N**- Nitrates**A-** Aspirin, **T**-Thrombolytics,**A-** Anticoagulants**, S**-Stool softner**, S**-Sedatives**,** IV Nitroglycerin , B-Adrenergic blockers, Angiotensin-

converting enzyme inhibitors like Captopril, Antidysrhythmia drugs and cholesterol- lowering drugs can prevent of MI. **Nutritional therapy:** Diet is advanced as tolerated to a low- salt, saturated fat, and low cholesterol diet. The patient should be advised to eat more fish, fruits and vegetables, bread, pasta, potatoes, olive oil. **NURSING INTERVENTION**: Administer oxygen along with medication therapy to assist with relief of symptoms.Encourage bed rest with the back rest elevated to help decrease chest discomfort and dyspnea. Encourage changing of positions frequently to help keep fluid from pooling in the bases of the lungs.Check skin temperature and peripheral pulses frequently to monitor tissue perfusion. Monitor the patient for changes in cardiac rate and rhythm, heart sounds, blood pressure, chest pain, respiratory status, urinary output.

Health education: The nurse must teach the patient about heart- healthy living.The nurse can advice for regular physical activity which can help the heart and the rest of your body to get stronger and work better. The Physical activity improves your energy level and lifts your spirits. It also reduces the chances of future heart problems, including heart attack. Counseling and education can help in quitting smoking, eat right, lose weight and lower blood pressure. Counseling help to manage stress and to feel better about health. The client should avoid activities like weight lifting, isometric exercises which can cause vagal stimulation. The patient should sleep atleast 8 hours per day. The patient should be advised for limiting caffeine and alcohol intake. The patient should be advised for necessary lifestyle modification. The patient should be instructed for following symptoms that appear like- chest pressure, shortness of breath, unusual fatigue, swelling of feet and ankles, fainting, dizziness, very slow or rapid heart rate.

## 1.2 NEED OF THE STUDY:

The heart requires a balance between oxygen supply and demand in order to function properly. The integrity of the coronary artery is an important determinant of oxygen supply to the heart muscles. Any disorders that reduces the size of lumen of coronary arteries may cause a decrease in blood flow and oxygen delivery to the myocardium which is life threatening condition characterized by the formation of local necrotic areas within the myocardium. Acute myocardial infarction usually follows the sudden occlusion of a coronary artery and the abrupt cessation of blood and oxygen flow to the heart muscles. Because the heart muscle leads to development of necrotic areas which can be lethal.[(9)]

Joyce M. Black, Jane Hokanson hawks. Text book of medical surgical nursing, Philadelphia: Nursing Elsevier company,7th edition, 1701 and 07,2002.

Myocardial infarction (MI), colloquially known as "heart attack," is caused by decreased or complete cessation of blood flow to a portion of the myocardium. Myocardial infarction may be "silent," and go undetected, or it could be a catastrophic event leading to hemodynamic deterioration and sudden death. Most myocardial infarctions are due to underlying coronary artery disease, the leading cause of death in the United States. With coronary artery occlusion, the myocardium is deprived of oxygen. Prolonged deprivation of oxygen supply to the myocardium can lead to myocardial cell death and necrosis. Patients can present with chest discomfort or pressure that can radiate to the neck, jaw, shoulder, or arm.[(10)]

**Mr. Dhirajkumar Mane; Miss. Adheena Mathew etol (2019)** conducted an descriptive cross-sectional study to assess the knowledge of risk factors and prevention about the acute myocardial infarction among the patient admitted in tertiary care hospital, karad. The data was collected through standard questionnaire. The result concludes that among 210 subjects, 144 (68.57%) were males while 66 (31.43%) were females. 49% of the patients were having poor level of knowledge. Income was significantly associated with Acute myocardial infarction. The study shows that there are so many risk factors of acute myocardial infarction which increases complications.[7] As atherosclerosis is the predominant cause of acute myocardial infarction, risk-factors for atherosclerotic disease are often mitigated in the prevention of disease. Modifiable risk factors account for 90% (men) and 94% (female) of myocardial infarctions. Modifiable risk factors include cigarette smoking, exercise, hypertension, obesity, cholesterol, LDL, and triglyceride levels. In contrast, age, sex, and family history are non-modifiable risk factors for atherosclerosis.[11]

A recent study which analyzed all major world ethnic groups in relation to heart disease found that Indians have the highest risk of coronary heart disease, with rates three to four times higher than Americans, six times more than the Chinese and 20 times more than the Japanese. In North India, 7-10% of people have coronary heart disease while the prevalance is as high as 14% in South India. The prevalence of coronary artery disease (CAD) has progressively increased in India during the later half of the half century and is the major cause of morbidity and mortality burden in the world. Global burden of disease study estimate that by the year 2020, the burden of atheroembolic cardiovascular disease in India would surpass that in any other region in the world [12]

**Carlo Pruneti ,Federica Giaroli etol (2020)** conducted an observational study on Stress related components in patients with acute myocardial infarction. The study was conducted in Maria Nuova Hospital. The sample consist of 25 subjects (23 male and 2 female) aged between 40 and 60 with a diagnosis of Acute Myocardial Infarction. The data was collected through questionnaires. The results includes that the dysfunctional behaviours in particular, patients show high scores in the Hyperactivity and Vigor subscales. The study confirms that presence of stable personality traits and the tendency to adopt risky behaviours for stress-related physical disorders in a group of infarcted patients and highlights the need for a multidimensional and multidisciplinary approach in order to promote psychological well-being, encourage the improvement of physical conditions and prevent any relapses.[13]

**B.JENKINS, S.KENT J.F.MAYBERRY etol(2016)** conducted a teaching programme to assess Patients' evaluation of a post-myocardial infarction administered by nurses in Royal Gwent Hospital, Newport. The sample is comprising of Two-hundred and twenty-eight patients with a confirmed myocardial infarction. The information session was conducted by nurses through questionnaires. The

result includes that Between 76% and 91% of patients were considered the necessary and there was a significant improvement in their understanding of what an infarction was. More than 80% of patients found a booklet entitled Recovering from your Heart Attack particularly helpful. The great majority of patients believed that more health education should be given at school and that members of the general public should be taught the techniques of cardio-pulmonary resuscitation. The conclusion shows that teaching programme appears to have reduced the admitted smoking habits of patients.[14]

### 1.3 STATEMENT OF THE PROBLEM

A Descriptive study to assess the knowledge regarding the risk factors and management of myocardial infarction among working staff of selected hospital district Patiala, Punjab with the view to develop an informational booklet.

### 1.4 AIM OF STUDY

The aim of study is to assess the knowledge regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet.

### 1.5 OBJECTIVES OF THE STUDY

**1.** To assess the socio- demographic profile of the sample.

2. To assess the knowledge regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

3. To find out association between the knowledge scores regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet with their selected socio-demographic variables.

4. To develop and distribute an informational booklet of risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

### 1.6 OPERATIONAL DEFINITION

**1. Descriptive**: It is presenting observations about the characteristics of someone or something.

**2. Assess:** "To judge or determine the significance, worth or quality."In this study, it refers to determine the knowledge of staff nurses regarding the risk factors and management of myocardial infarction.

3. **Knowledge:** "Is a awareness or understanding of someone or something such as facts, skills". In this study. It refers to the correct response of the staff nurses to the self- structured knowledge questionnaire regarding risk factor and management of myocardial infarction.

4. **Risk Factors:** Something that increases the chance of developing a disease.

5. **Myocardial Infarction:** A heart attack (MI) happens when one or more areas of the heart muscle don't get enough oxygen.

6. **Management:** It is the process of planning and organizing the resources and activities to achieve specific goals in the most effective and efficient manner possible.

7. **Staff nurses:** "Is a registered nurses who provides high quality care to employees of a company, or patients in a hospital

8. **Informational booklet:** These are designed to help others to understand important points about a particular topic.

**1.7ASSUMPTIONS**

1. Majority of Staff nurses may have adequate knowledge regarding risk factors and management of myocardial infarction.

2.Majority of staff nurses may have knowledge, practice and different attitude regarding risk factors and management of myocardial infarction which will affect the study.

3. The knowledge may vary according to the personal variables.

4. An informational booklet will be useful to enhance the knowledge.

**1.8 DELIMITATION:**

The study is delimited to staff nurses:

1. Working in hospitals of district Patiala, Punjab.

2. Who are willing to participate in the study.

3. Who are available during the period of data collection.

4. The study was delimited to only 100 samples.

## 1.9 CONCEPTUAL FRAMEWORK

Science is deeply involved in developing a body of knowledge essential to nursing research and practice. Identification of the knowledge base requires the development and recognition of concepts and theories specific to nursing. A concept is defined as a complex mental frame work of an object, property or event that is derived from individual perception and experience. It influences nursing most significantly and determines its practice.

Conceptualization is a process of forming ideas, designs and plans. A conceptual framework deals with concepts assembled together by virtue of their relevance and the research problem, which provides a certain frame of reference for clinical practice, research and education. The model gives direction for planning research design, data collection and interpretation of the findings. Each conceptual framework for the study was developed on the basis of **Health Promotion Model**. Health promotion can be defined as behaviour motivated by the desire to increase well being and actualize human health potential.

Health Promotion Model (revised 2002) proposed by Nola J. Pender, Murdagh C.L Parsons M.A identifies factors that enhance or decrease health promotion behaviour. It explains the likelihood that healthy lifestyle patterns or healthy behaviours will occur and it is useful to the nurse as a framework for client assessment. It states that individuals are likely to change their behaviour to feel better physically, psychologically, socially and spiritually.

This health Promotion Model focuses on three following areas:

1. Individual characteristics and experience,
2. Behaviour-specific cognition and effect
3. Behavioural outcome.

### 1. INDIVIDUAL CHARACTERISTICS AND EXPERIENCE

This depends on the target behaviour for health promotion. This model is flexible in the sense that the characteristics that are relevant to the particular health behaviour can be selected. This includes personal factors and prior related behaviour.

- **Personal factors:** These factors are catergorized as biological, psychological and socio cultural. Some personal factors may influence the behaviour change. In this study personal factors are age, gender, type of family , source of education, source of information and basic qualification.
- **Prior related behaviour:** It includes previous knowledge and skill in health promoting actions. In this study prior related behaviour includes the risk factors and management of Myocardial Infarction among staff nurses.

### 2. BEHAVIOUR-SPECIFIC COGNITIONS AND EFFECT

This set of variables within this model is considered as major motivational significance for acquiring and maintaining health behaviour. They can be modified through nursing interventions. This includes the following-

- **Perceived benefits of action**: Anticipated benefits or an outcome of action effect the persons plan to engage in health promoting behaviour may facilitate continuous practice. In this study perceived benefits of action are improvement in the risk factors and management of Myocardial Infarction among staff nurses.

- **Perceived barriers to action:** Persons perception about available time, inconvenience, expense and difficulty in performing the activity may act as barriers. In this study perceived barriers to action are lack of awareness and lack of resources of information regarding risk factors and management of myocardial infarction among staff nurses.
- **Perceived self efficacy:** It is the individual's strong belief that he/she can successfully perform the behaviour necessary to achieve a desired outcome. In this study perceived self efficacy is self awareness of staff nurses regarding risk factors and management of myocardial infarction.
- **Interpersonal Influences:** These are person's perceptions concerning the behaviour, beliefs or attitude of others. This includes expectations of significant others and social support. In this study interpersonal influences includes mass media, friends, colleagues, senior staff and others which can enhance the knowledge level of staff nurses regarding risk factors and management of myocardial infarction.
- **Situational Influences:** These are direct and indirect influences on health promoting behaviours and include perception of available options, demand characteristics and the aesthetic features of environment. In this study situational influence includes availability and accessibility of health services.

**C. BEHAVIOUR OUTCOME**

This includes-

- **Commitment to plan of action:** This involve the process i.e, commitment and identifying, specific strategies for carrying out and reinforcing the behaviour. It is not included in the study.
- **Health promoting behaviour:** This is directed towards attaining positive health outcomes for the client resulting in his/ her improved health, enhanced functional ability and better quality of information regarding knowledge of risk factors and management of myocardial infarction among staff nurses.
- **Pender's health promotion model (2002):**Addresses the relationship between stress level staff nurses and health promotion of patients. It is a way of understanding and predicting knowledge level of staff nurses in relation with patient care. This model helps the investigator to understand the knowledge level of staff nurses. So, the investigator felt that Pender's health promotion model is suitable as conceptual framework for this study to improvement in knowledge level of staff nurses regarding risk factors and management of myocardial infarction**.**

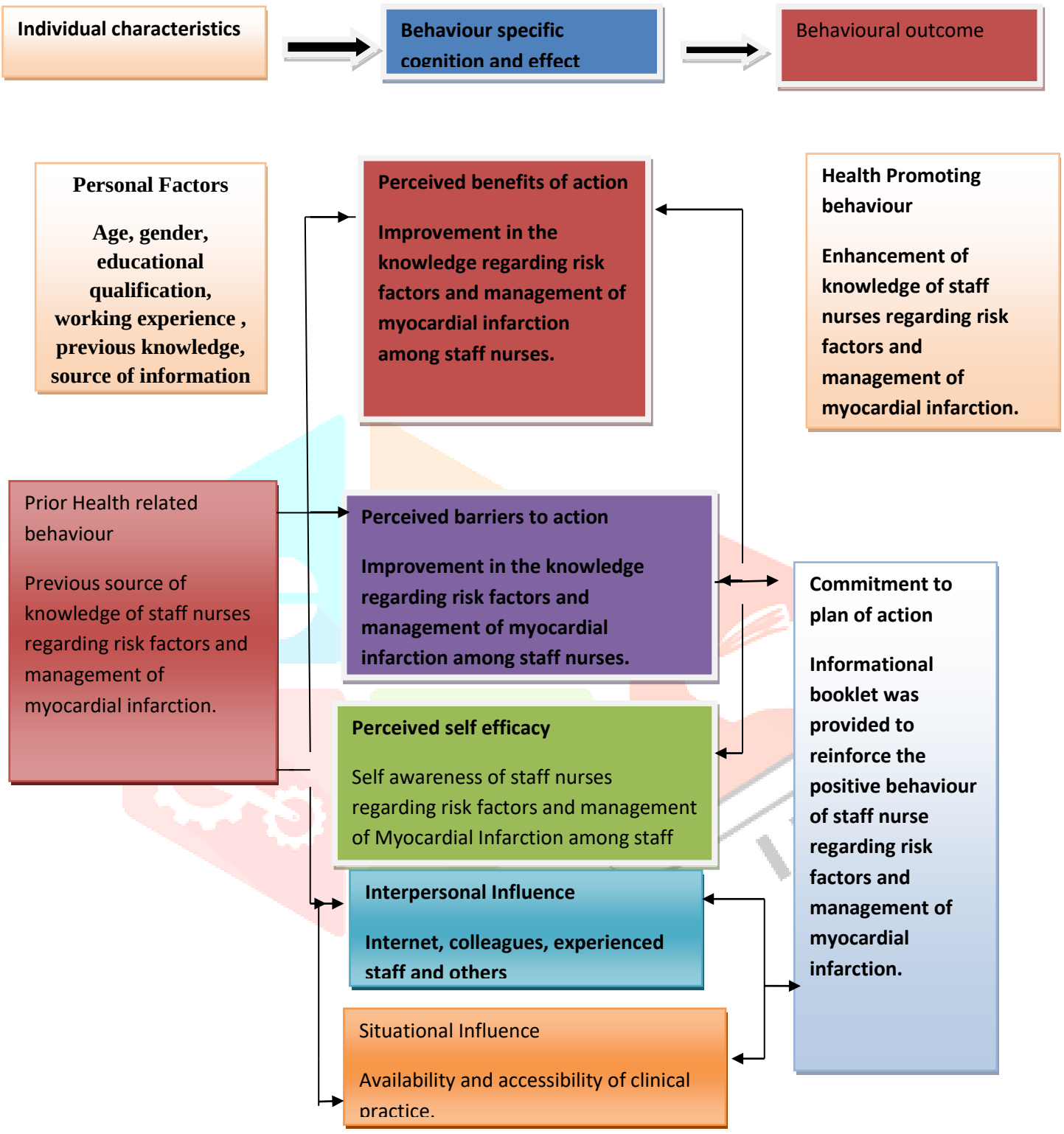
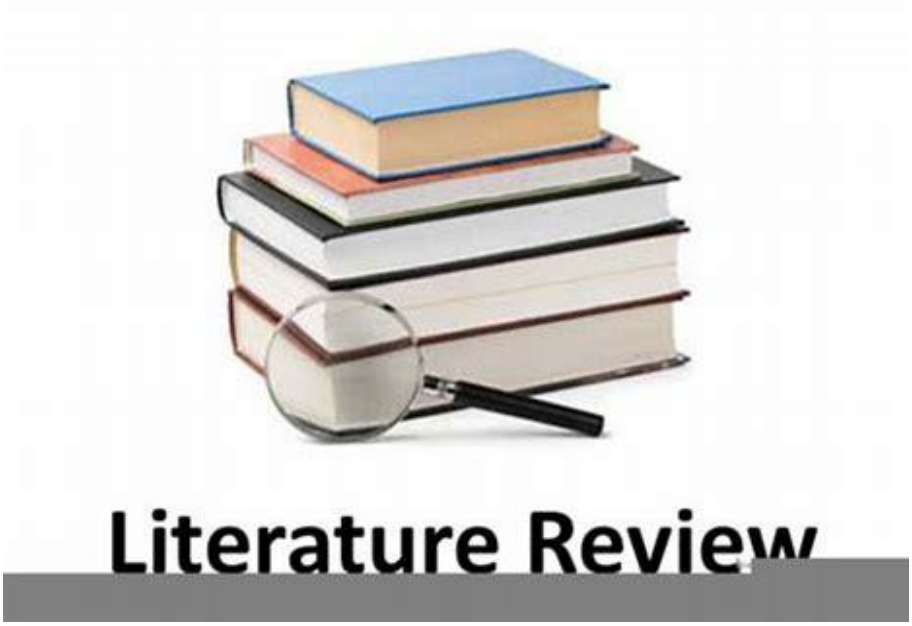



**Figure 1.1: Modified Conceptual Framework Based on Health Promotion Model (2002)**

**Summary**

This chapter deals with the background of the study , need for the study, Problem statement, aim of the study , objectives on which study based, operational definition of some of the common terminology, assumptions, delimitations, conceptual framework and organization of the report.




## CHAPTER 2

## REVIEW OF LITRATURE

"A Researcher cannot perform significant research without first understanding the literature in the field."

**BOOTE& BEILE(2005)**

The review of literature is a broad, comprehensive, in- depth, systematic and critical review of scholarly literature and summary of the written material that contains information relevant to the research topic was done to collect maximum information for laying the foundation of the new study. The process of review begins even before the selection of the topic and continues till the publication of the report.

REVIEW OF LITERATURE

The review of literature is related to assess the knowledge regarding the risk factor and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet.

SECTION-A: Literature review related to knowledge regarding risk factor of myocardial infarction.

SECTION- B: Literature review related to management of myocardial infarction.

**SECTION-A: Literature review related to knowledge regarding risk factor of myocardial infarction.**

**Bahaa Mirza Skal Sabah Abbas Ahmed(2021)** conducted an pre-experimental study to assess nurses' knowledge and find out the effectiveness of the educational program among nurses about risk factors for bleeding of acute myocardial infarction in patient receiving thrombolytic therapy at coronary care unit in Al-Diwaniyah Teaching Hospital Iraq among 40 staff nurses . The result of the study illustrated that there is a highly significant differences among the nurses' knowledge about risk factors for bleeding AMI in a patients receiving thrombolytic therapy at the score post-test compared with the score pre-test(at post -test M= 1.76 versus at pre -test M= 1.26 at p-value 0.0001) to the nurses' participation in these study. The study concluded that the nurses' knowledge were (low), and after Implementation the educational program, the nurses' knowledge were improving to (good) about risk factors for bleeding AMI in a patients receiving thrombolytic therapy at coronary care.[17]

**Elise Kvalsund Bårdsgjerde , Bodil J Landstad etol (2020)** conducted an qualitative study to assess nurses' perceptions of patient participation in different phases of the myocardial infarction pathway. The study was conducted at two hospitals of Norway, among nurses one with percutaneous coronary intervention and one without intervention .The result concluded that nurses' perceptions of patient participation in different phases of the myocardial infarction pathway were identified: (a) variation between paternalism and autonomy in the acute phase; (b) individualization of dialogue and patient participation during treatment; (c) lack of coherence in the pathway hinders patient participation at discharge; and (d) cardiac rehabilitation promotes patients' autonomous decisions in lifestyle changes.[18]

**Hiroki Kitakata, Takashi Kohno etol (2018)** Conducted an Observational cross-sectional study to assess patient perspectives on secondary lifestyle modification. The study was conducted in hospital center japan among population of 237 consecutive patients who underwent percutaneous coronary intervention( PCI) .The collection of data was completed by survey questionnaire from the patients. The result shows that patient had a high level of confidence (confident or completely confident,>75%) about smoking cessation, alcohol restriction and medication adherence. However, they had a relatively low level of confidence (<50%) about the maintenance of blood pressure control, healthy diet, body weight and routine exercise (≥3 times/week) were identified as factors associated with lower confidence levels. 28% of the responders were confident in their ability to distinguish between heart attack symptoms and other conditions. The study concluded that there were substantial disparities in the confidence levels associated with lifestyle modification and recognition/response to heart attack. [19]

**KHEYALIBAG(2018 )**conducted an pre-experimental study to assess the effectiveness of structured teaching programme on knowledge of staff nurses regarding selected coronary intervention for secondary prevention of myocardial infarction. The study was conducted among 50 staff nurses working in a selected hospital, Bangalore . The data was collected by using self-administered structured knowledge questionnaire .The result shows that In pre-test 44 (88%) staff nurses had inadequate knowledge and none of them had adequate knowledge on secondary prevention of MI. whereas in posttest 50 (100%) of staff nurses had gained adequate knowledge on selected coronary intervention for secondary prevention of MI .There was a significant association found in relation to socio demographic variables such as total years of clinical experiences. The study concludes that there was significantly effective in improving the knowledge of staff nurses regarding selected coronary intervention for the secondary prevention of MI.[20]

**Punam Dahal[*] and Rekha Karki(2017**) conducted an descriptive cross sectional study to assess Knowledge and practice regarding prevention of myocardial infarction among visitors of Sahid Gangalal national heart center, Kathmandu, Nepal. The study was conducted among staff nurses working in the Sahid Gangalal National Heart Centre with a sample of 101.The data was collected through semi structured questionnaire. The result of the study included that majority (53.4%) were age more than 30 years, majority (52.5%) were male. Chhetries were in majorities (29.7%) and highest number (79.2%) of Hindus were found. Majority were literate (93.1%); out of them, highest number(78.2%) had above secondary level education. Majority (42.6%) were non-service holders and most (79.2%) were from urban setting. The study concluded that Level of Knowledge was moderate among majorities but all of participants had inadequate practice despite highest literacy level and majority from urban setting.[21]

**Ahmed Abdalla Jaralnabi, Sami Atawi Waleed, Idris Sagiron etol(2017)** conducted a experimental study to evaluate the effectiveness of education program on nurses' knowledge, attitudes and intentions towards Myocardial infarction , prevention and treatment. The sample consist of 194 nurses working in three hospitals located in Khartoum. The data was collected through survey to assess and examine the influence of an educational program . The study results showed that an educational program improves nurses' knowledge, attitudes and intentions towards MI prevention and treatment. The mean scores of nurses' knowledge for the experimental group improved significantly (P<001 from(10.5) at pre-test to (15.26) at post-test. Paired t test showed statistically significant difference between pre and post intention scores of the experimental group (t=-6.7, P=<0,001). The study concluded that there is a need for conducting updated- programs for all nurses to keep the nurses' knowledge on MI built on evidence and routinely assess to improve patient outcome.[16]

**Bahaaedin A. Elkhader, Alsafi A. Abdulla etol (2016**) conducted an prospective cohort study to assess Correlation of Smoking and Myocardial Infarction Among Sudanese Male Patients Above 40 Years of Age. The study population comprised of total number of 168 adult male patients who underwent cardiac ultrasound scanning. The collection of data was carried out via a questionnaire. The result shows that total number of 144 cases, 65% (94) of patients were smokers, 74% of the 94 cases smoked for more than 10 years, and 26% of the 94 cases smoked for less than 10 years**.** The study concluded that smoking is a risk factor for the development of myocardial infarction. This study showed that patients with myocardial infarction are more likely to have a past history of smoking.[23]

**Mandeep Kaur, Parampal Kaur Cheema(2016)** conducted a quasi- experimental study to assess the effectiveness of planned teaching program (PTP) on knowledge regarding early sign and symptoms of MI among hypertensive patients. The study was conducted in the hospital of india. The sample of the study was 60 patient. The data was collected by self structured knowledge questionnaire.The result In experimental group, mean pretest knowledge score was 13.87 and posttest mean knowledge score was 23.57. In control group, mean pretest knowledge score was 13.97 and posttest mean knowledge score 13.83. As per t-test, difference between mean posttest knowledge score (23.57, 13.83) of both groups was found statistically significant (t = 15.767 ***, P< 0.001). [24]

**Mona A Abed , Raeda M Abu Ali , Motaz M Abu Ras etol (2015)** conducted an Descriptive correlational study to assess the relationship of patients' demographics, clinical characteristics and sources of information about acute myocardial infarction with their symptom expectations, actual experiences and symptom incongruence. The study was conducted among Patients from ten hospitals in Jordan .The sample consist of age 18 years or older and diagnosed with acute myocardial infarction. The data was collected through interview. The result shows that Patients (N=299) were mostly males (80%) and married (92%). The average age was 56±12.3 years. Patients expected a limited number of acute myocardial infarction symptoms and these expectations were largely confined to typical symptoms and matched their experiences.. The study concluded that Patients' experienced acute myocardial infarction symptoms and incongruence varied according to their demographic and clinical characteristics.[25]

**LelePallaviPradeep(2014**)conducted a experimental study to assess the effectiveness of planned teaching on knowledge of early signs and symptoms and immediate treatment of myocardial infarction among patients. The study was conducted in the various hospital of India. The sample of the study was 50 patient. The data was collected through pre test post test. The result shows that majority of the samples 38 percent were in the age group 51-60 years, majority shows that habits of tobacco chewing, smoking and alcohol is more.[26]

**H Brokalaki , K Giakoumidakis, N V Fotos, etol (2011**) conducted a cross-sectional study to assess Factors associated with delayed hospital arrival among patients with acute myocardial infarction . The study was conducted among 477 AMI patients in two large tertiary hospitals in Greece. The data was collected through Structured face-to-face interviews . The result shows that patient with delayed hospital arrival among AMI were due to the absence of companion/attendant/escort present during the AMI [odds ratio (OR) 2.1, 95% confidence interval (CI) 0.98-4.4, P = 0.049], previous medical history of diabetes mellitus (OR 3.4, CI 1.6-7.2, P = 0.002), absence of dyspepsia (OR 9.2, CI 3.6-23.3, P < 0.001) and nausea/vomiting symptoms (OR 16.9, CI 4.1-69.1, P < 0.001), and also being at a distance of more than 10 km from the hospital (OR 19.6, CI 5.4-70.6, P < 0.001).The study concludes that a number of factors that might delay hospital arrival among patients with AMI should be taken into account in healthcare service planning.[27]

**SECTION- B: Literature review related to management of myocardial infarction.**

**Dimitrios Doudesis, Kuan Ken Lee(2023)** conducted an cohort study to improve diagnosis by Machine learning for the diagnosis of myocardial infarction using cardiac troponin concentrations. The study was conducted in the hospital of Scotland. The sample was 10,038 patients. The data was collected through questionnaire method. The result shows that Patients identified as having a low probability of myocardial infarction had a lower rate of cardiac death than those with intermediate or high probability 30 days (0.1 versus 0.5 and 1.8%) and 1 year (0.3 versus 2.8 and 4.2%; $P < 0.001$ for both) from patient presentation.[28]

**Senait Abraham Tesfamichael, Raja Antonysamy(2021**) conducted an quantitative study to assess the knowledge of nurses of the Emergency and Intensive Care Unit nurses regarding initial management of Myocardial Infarction. The study was conducted in the two National Referral Hospitals, in Asmara, Eritrea. The sample of the study was 54 nurses of emergency and ICU. The data was collected through structured questionnaire .The result was tested at significance level of 0.05. 40.7% of the nurses were found with poor level of knowledge. Nurses in the age group between26-35years were observed to have better knowledge compared to ≤ 25 years (p=0.006) as well as 36 years or above (p=1.000). Significant knowledge difference was observed among associate, diploma and degree nurses (P=0.002).[29]

**Kapila Raina1,*, Neelima Verma(2020**) conducted an A cross sectional study to check Prevalence of conventional risk factor in acute myocardial infarction. The study was conducted in Jammu Medical College. The sample of the study was 40 patient. The data was collected through questionnaire. The result shows that AMI incidence was high in non-vegetarians as compared to vegetarians. Alcohol was a major risk factor for AMI. Incidence of AMI was statistically significant.[30]

**Ms.Preetha .V.S Ms Smitha J S*(2019)** conducted an descriptive study to assess the knowledge regarding the management of myocardial infarction among staff nurses in selected tertiary care hospital

at Thiruvananthapuram. The study was conducted among 292 staff nurses working in selected hospital. The collection of data was standard questionnaire to assess the level of knowledge regarding management of myocardial infarction. The study revealed that the majority (63.7%) of staff nurses had average knowledge regarding management of myocardial infarction. The Majority of 50.3% of the staff nurses were in the age group between 25-29yrs and 36% belongs to 20-24 years of age. Only 9.9% were in the age group of 30-34yrs and 3.8%belongs to the age group greater than or equal to 35yrs of age. There was significant association between knowledge score socio personal variable such as area of working and total year of experience.(31)

**Yashvi Gupta, Anjalee(2019)** conducted an observational study to assess the quality of life after myocardial infarction in women. The study was conducted in tertiary care rural hospital from central India .The Sample size of the study was 50 patients. The data was collected through knowledge questionnaire. The result concluded that Mean age 60 years; mean duration since MI – 7.88 months; 74% were married and 88% on vegetarian diet. Those women with mean age of 40 years, vegetarian and married had better mean scores. The emotional score improved over a period of time whereas the physical and social score remained the same.(32)

**Mr. Dhirajkumar Mane[1], Miss. Adheena Mathew (2019**) conducted an descriptive study to assess the Knowledge of Risk Factors and Prevention about the Acute Myocardial Infarction among the Patient Admitted in Rural Tertiary Care Hospital. The study was conducted in the Krishna hospital, Karad. The sample of the study was 210 patient. The data was collected through interview method. The result was 144 (68.57%) were males while 66 (31.43%) were females. 49% of the patients were having poor level of knowledge. Income was significantly associated with AMI.(33)

**Mrs. Lakshmi KN, (2018)** conducted a study to assess the level of knowledge regarding assessment and management of myocardial infarction among nursing staff in selected hospital at Mysore. The Sample consist of 60 nursing staff was selected by convenience sampling technique. The Data was collected by administering personal proforma and structured knowledge questionnaire regarding assessment and management of myocardial infarction. The result revealed that 9(15%) had poor knowledge, 43(71.66%) had average knowledge and 8 (13.33%) had good knowledge regarding assessment and management of myocardial infarction among nursing staff and they need to update their knowledge regarding assessment and management of myocardial infarction by conducting continuing nursing educational programs.(34)

**Udit Narang[1], Ankit Gupta[2](2018)** conducted an cross sectional prospective study to assess the prevalence of cardiovascular risk factors among different regions of the country show variation in different age groups of urban and rural population. The study was conducted in rural tertiary care hospital in Northern India. The sample of the study was100 consecutive subjects of first episode of myocardial infarction were enrolled. The data was collected through clinical data. The result shows that

male comprised of 72% from study population, while, 70% of patients belong to rural population. 46% of study subjects were either labor or farmer by occupation. 34% and 66% of the subjects were less than 45 years and more than 45 years of age respectively. Mean age 54.64 (range: 35-85 years). Smoking (66%) was the commonest conventional risk factor to be present in our study population followed by sedentary lifestyle (50%) and excessive alcohol (44%). Hypertension (HTN) and diabetes mellitus were 28% and 22% respectively.[35]

.**Eva Brink[1*], Ulla Fredriksson-Larsson**(2018) conducted an qualitative study to construct the multidimensional Post-Myocardial Infarction Fatigue (PMIF) scale based on empirical data gathered in coronary heart disease contexts. The study was conducted in the hospital of Swedish. The sample of study was 141 persons ≤75 of age, diagnosed with MI two months earlier. The data was collected through interviewing method. The results showed that the PMIF scale represents three dimensions: physical, cognitive and emotional fatigue. It was also found that the scale is suitable for summing the items to obtain a total score representing a post-MI global fatigue dimension.[36]

**Fariba Nasiri Ziba, Fahime Barghi Shirazi(2017**) conducted an descriptive cross sectional study to determine the level of nurses' awareness about pain management in myocardial infarction as a critical care issuebased on the clinical data. The study was conducted in Shahid Beheshti University of Medical Sciences, working in the affiliated hospitals.The sample of the study was 200 nurses. The data was collected through a questionnaire.The result shows that the nurses' knowledge (skills and expertise) about myocardial infarction pain management had a significant relationship with their consciousness, type of employment (P = 0.022), and sex (P = 0.024).[37]

**M. Sumathi Dr. V. Selvanayaki(2017**) conducted an descriptive study with cross sectional survey to assess the knowledge regarding emergency management of patients with myocardial infarction. The study was conducted in a selected private hospital, Salem among 50 staff nurses between the ages of 20-50 years. The data was collected through closed ended multiple choice questionnaire. The result revealed that highest percentage (69 %) of staff nurses were in the age group of 21 to 25 years and 82% of them were females. Majority (74%) of staff nurses were degree holders and 48 % of them were working in general wards. Highest percentage (70%) of them had the working experience of 3-4 years and most (92%) of nurses did not attend any in-service program on emergency management of myocardial infarction. The study conclude that overall mean score (22.06 ± 0.48) which was 48% of total mean score shows that the staff nurses had average knowledge regarding emergency management of myocardial infarction.[38]

**Lisanne A Gitsels1, Elena Kulinskaya(2017**) conducted an cohort study to estimate survival after acute myocardial infarction in the general population aged 60 and over and the effect of recommended treatments The study was conducted in 310 general practices that contributed to The Health Improvement Network database. The sample of the study was patients who were born between 1920 and 1940 and turned the initial age in 1987–2011 were selected. The initial ages were 60, 65, 70, and 75. The data was collected through questionnaire method. The result shows that Compared with no history

of AMI by age 60, 65, 70, or 75, having had 1 AMI was associated with an adjusted hazard of mortality.[39]

**Hassanat Elbashir, Mohamed Mustafa etol(2016)**conducted an descriptive study to assess the Determination of nurses' knowledge about initial drugs used during emergency management of acute myocardial infarction. The study was conducted at cardiac care units (CCU) and emergency departments, in Khartoum five public hospitals among 139 staff nurses. The tool used for data collection was standardized structured questionnaire. The study results revealed that the total mean knowledge scores of the studied subjects related to the initial treatment of acute myocardium infarction was found to be low than bench mark with t & p values (t = 6.87 at p = .000). The study concluded that subjects had poor levels of knowledge related to the drugs used for initial management of acute myocardial infarction specifically those related to understanding the thrombolytic agents.[40]

**AnitaKosePeter, Larisa Martha Sams(2016**) conducted a descriptive study to assess the quality of life and coping strategies among male and female patients attending OPD with myocardial Infarction. The study was conducted in selected hospital of Mangaluru. The sample of the study was 40 patient. The data was collected by survey method. The result shows that there were no significant difference in the quality of life among male and female patients(t1=.543,t2=.396) coping strategies among male and female patients.[41]

**.Dlzar Omer Qadir Yousif Mohammed Younis(2015)** conducted an descriptive study to assess the quality of nursing care for patients with acute myocardial infarction in the coronary units in Erbil city hospitals. The study was conducted in four hospitals (Hawler Teaching Hospital, Rizgari Teaching Hospital, Cardiac Centre and Rojhalat Emergency Hospital) in Erbil City among 70 nurses. The data was collected through questionnaire and three observational checklists . The result shows that mean age of the participants was 30 years. Majority of the samples were male, graduated from nursing institute, having 1-8 years of nursing experience. The highest percentage (75.7%) of nurses provided fair levels of quality of nursing care. Age group 22-28 years, male gender, nursing experience from1-8 years and nursing experience in coronary care unit from 1-5 years were significantly associated with provision of high quality of nursing care. The study concluded that the majority of nurses provided fair levels of quality of nursing care.[42]

**Vinay Rao[1], Prasannalakshmi Rao (2014**) conducted an case control study to assess the Risk factors for acute myocardial infarction in coastal region of india. The study was conducted in the Intensive Coronary Care Unit of the Medical College Hospital. The sample was 100 patient. The data was collected through interview method. The result shows that The most important predictor of acute myocardial infarction (AMI) was high low-density lipoprotein (adjusted odds ratio [OR]: 4.124, confidence interval [CI]: 1.44-11.73, *P* = 0.008) history of hypertension and of overt diabetes mellitus

were also independent risk factors (OR: 2, CI: 1.4-3 and OR: 2.29, CI: 1.5-3.5), respectively. Low high-density lipoprotein was found to have no significant association with AMI. Heavy drinkers were found to have a high-risk (OR: 68), while moderate drinkers were found to have protection.(43)

**Emily B Levitan, Monika M Safford(2013)** conducted an cross sectional study for the assessment tool for unrecognized myocardial Infarction**.** The study was conducted in *the District of Columbia. The sample of the study was* 16,653 participants. The data was collected through standardized questionnaire. The result concluded that the basic assessment tool had a c-statistic of 0.638(95% confidence) and included age, race, smoking status, body mass index, systolic blood pressure and self reported history of ischemia, deep vein thrombosis, falls, diabetes and hypertension.(44)

**Dr. Dergham Majeed Hameed** (2011) conducted an descriptive study to determine the nurses' knowledge about the care provided to patient with myocardial infarction. The study was conducted in Al-Sadder Medical City, AL-Hakeem General Hospital. The sample of study was randomized (simple random sample) method consists of (38) nurses . The total of the sample 20 males and 18 females of age ranged between (22-51) years were included in this study. (19 subjects) of nursing staff used to work at in CCU, ICU and ED and Medical Wards, of general hospital. The data, was collected through questionnaire about acute myocardial infarction. The results show that there is non-significant relationship between the age and level of knowledge. Also there is non-significant relationship between the gender and level of knowledge and practice of the nursing staff and its effect on the type of nursing care.(45)

**Paul Valensi, Luc Lorgis(2011**) conducted an Cohort study to retrieve information on the prevalence, incidence, and predictive/prognostic factors of silent MI. The study was conducted in the general population or subjects at risk for CAD. The sample of the study was1000 patient.The data was collected through questionnaire method. The result shows that silent MI was detected by ECG (Q wave and/or ST-T abnormalities in two studies). The prevalence of silent MI was also high among the young subjects included in the Northern Sweden .(46)

**Summary**

This chapter deals with the critical review of the most important scholarly literature on the knowledge regarding the risk factors and the management of myocardial infarction among staff nurses.


## CHAPTER-3
## METHODOLOGY

Research methodology is the way to systematically solve the problem. Research methodology adopted for the study includes research design, description of setting, variables, population, sample and sampling technique, development and description of tools used for data collection, content validity and reliability of tool, pilot study, procedure for data collection and plan for data analysis.

### 3.1RESEARCH APPROACH:

Quantitative Research approach was adopted in this study.

### 3.2RESEARCH DESIGN:

Research design is overall plan for collecting and analyzing data. It was used to assess the knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospital of Patiala, Punjab with a view to develop an informational booklet. Keeping in view the

objectives of the study, the quantitative approach with descriptive research design was used in the present study.

**3.3RESEARCH SETTING:**

The study was conducted in selected hospital of district Patiala, Punjab

**3.4TARGET POPULATION:**

The target population of the study consists of staff nurses working in selected hospitals of district Patiala, Punjab.

The population is the unit (people, events, objects or institutions) from which data is collected. The population of main study comprised of staff nurses in selected hospitals of district Patiala, Punjab.

**3.5 RESEARCH VARIABLES:**

**1. DEPENDENT VARIABLE:** Knowledge of staff nurses regarding risk factors and management of myocardial infarction.

2**. INDEPENDENT VARIABLE:** Informational booklet

**3.6 SAMPLE SIZE:**

The sampling size of the study will be comprising of 100 staff nurses working in selected hospitals of district Patiala, Punjab.

**3.7 SAMPLING TECHNIQUE:**

Convenience sampling technique will be used to select the sample for the study.

**3.8 SAMPLING CRITERIA:**

**Inclusion criteria:**

**The study will include the staff nurses:**

- Staff nurses who will be willing to participate in the study.
- Staff nurses who will be available during the period of data collection.
- Able to read and write Hindi and English.

**Exclusion criteria:**

- Staff nurses who will not be willing to participate in the study.

- Staff nurses who will be suffering from any complication.

### 3.9 SELECTION AND DEVELOPMENT OF RESEARCH TOOL:

The most important aspect of investigation is the collection of appropriate information which provides necessary data to answer the question that will be raised in the study. So, the tool will be developed on the basis of extensive review of literature and cosultatation with experts from nursing and research field. The tool used for collecting the background information including age, gender, educational qualification, working experience, source of knowledge regarding risk factor and management of myocardial infarction.

The self –structured knowledge questionnaire was administered as a tool for the present study. Tool was selected after reviewing the related literature and after the consultation with expert.

### 3.10 DESCRIPTION OF TOOL:

Questionnaire will comprise of two sections:

a) **Section-A:** This section is the first section seeking information in Socio-demographic data is age, gender, working experience, educational qualification source of information regarding risk factors and management of myocardial infarction.
b) **Section-B:** Self-structured knowledge questionnaire to assess the knowledge regarding the risk factors and management of Myocardial Infarction among staff nurses working in selected hospital of Patiala, Punjab.

**Table No.3.1: Scoring according to level of knowledge score among staff nurses**

| Level of knowledge | Grading | Number | Percentage |
|---|---|---|---|
| Very Poor | 0-7 | 1 | 1% |
| Poor | 8-14 | 13 | 13% |
| Average | 15-21 | 72 | 72% |

| | | | |
|---|---|---|---|
| **Good** | **22-28** | **14** | **14%** |
| **Excellent** | **29-35** | **0** | **0%** |
| **Total** | | **100** | **100%** |

### 3.11 DEVELOPMENT OF RATING SCALE

A rating scale was prepared for assessing the knowledge regarding risk factors and management of myocardial infarction among staff nurses. The tool was developed after the extensive review of research and non research literature, seeking the opinion of experts and guides, formal and non-formal discussion with the peer group and investigator's professional experience.

A blue print was prepared by specifying the domains of area. Details of the blue print are shown in **table1. Item writing was done after preparing a blue print specifying the domains of objectives.**

**Table 3.2**

**Blue print of rating scale to assess knowledge level**

**Blue print of content –wise distribution of items on rating scale for assessing the knowledge score level regarding the risk factors and management of myocardial infarction.**

| SR.NO | AREA | NUMBER OF STATEMENTS | TOTAL NUMBER OF STATEMENTS | PERCENTAGE |
|---|---|---|---|---|
| **1.** | **Anatomy of heart** | 1,2,3,4,5 | 5 | 14.285% |
| **2.** | **Risk factors** | 6,7,8,9,13,14,15,16 | 8 | 22.857% |
| **3.** | **Symptom** | 10,11,12,17,18 | 5 | 14.2% |
| **4.** | **Diagnostic evaluation** | 19,20,21,22,23 | 5 | 14.2% |
| **5.** | **Complication** | 24,25,29,30 | 4 | 11.4% |
| **6.** | **Treatment** | 26,27,28,31,32 | 5 | 14.2% |
| **7.** | **Alternate Therapy** | 33,34,35 | 3 | 8.57% |
| | **TOTAL** | | 35 | 100% |

### 3.11 VALIDITY OF TOOL:

The content validity of self- structured knowledge questionnaire will be done by expert opinion on the relevance of items. The tool will be given to 7 experts of cardiologists and as per their suggestions, needed amendments were done.

### 3.12 RELIABILITY OF TOOL

After administering the tool to 100 subjects reliability was computed. The reliability of the tool was established by split-half method (Spearman's Brown Prediction Formula) to check the internal consistency of the tool when they were scored as 1 or 0. The reliability co-efficient was found to be 0.73 which was found to be valid, reliable and feasible for studying.

### 3.13 PILOT STUDY

**The objectives of the pilot study:**

1. To find feasibility of conditioning the final study.
2. To find the difficulties faced.

Pilot study was conducted in the month of april 2023 at Sadbhawna hospital, district Patiala Punjab after formal permission from Medical officer of the hospital. Informed Consent was obtained from each subject and confidentiality was assured by the investigator. The investigator selected 10 percent (four) of total sample population. Responses were obtained and data was analyzed. The analysis of the pilot study found the feasibility to conduct the main study and also revealed the objectives of the study could be fulfilled. Based on the information, the investigator proceeded with the actual data collection for the main study. The pilot study subjects were excluded from the main study.

### 3.14 DATA COLLECTION PROCEDURE:

1. A prior formal permission will be obtained from the concerned authority.
2. The purpose of the study will be explained and consent will be obtained from the subjects.
3. The investigator will select samples as per inclusion and exclusion criteria.
4. Knowledge regarding risk factor and management of myocardial infaction among staff nurses working in selected hospitals of district Patiala, Punjab will be assessed by self-structured knowledge questionnaire before administration of informational booklet.
5. Informational booklet will be administered.
6. After collecting the data, answers obtained will be analysed and calculated.

### 3.15 ETHICAL CONSIDERATION:

Prior to the study, ethical clearance will be obtained from the concerned authorities to conduct the study in selected hospitals of district Patiala, Punjab and also from ethical research committee of Adarsh College of Nursing, Patiala. Anonymity and Confidentiality of the study participants will be maintained.

### 3.16 PLAN OF DATA ANALYSIS:

Descriptive and inferential statistics will be used to analyse the data. The data will be presented in the form of tables and figures.

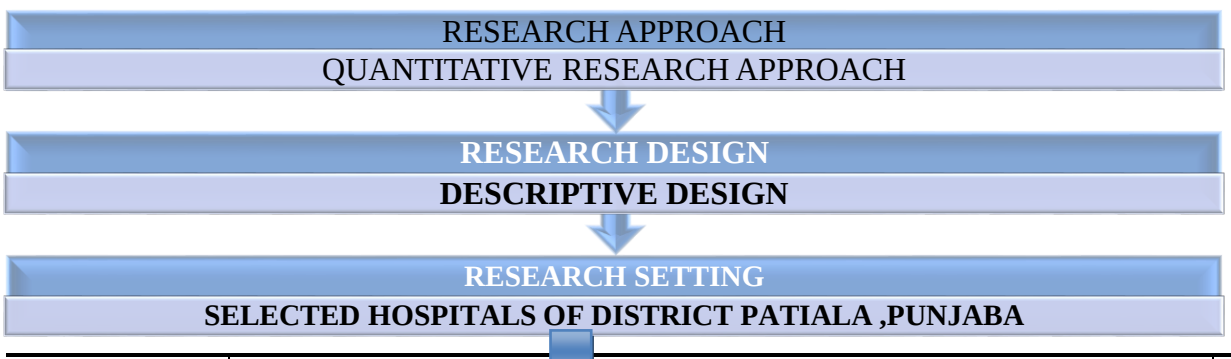
- **Descriptive Statistics:** frequency, mean, median, mean percentage and standard deviation will be used to analyse the demographic profile of staff nurses.
- **Inferential statistics:** 't-test' will be used to find out knowledge of informational booklet. Chi-square test will be used to find out knowledge scores and their selected socio-demographic variables.

### 3.17 PROJECTED OUTCOME:

After the study, the researcher will be able to assess the knowledge of informational booklet on risk factor and management of myocardial infarction among staff nurses working in selected hospitals of district Patiala, Punjab.

**Summary**

This chapter deals with the research approach, research design, setting of the study, variables under the study, population, sample and sampling technique, criteria for sample selection, selection and development of tool , content validity of the tool, reliability of the tool, pilot study, data collection procedure, and plan of data analysis.



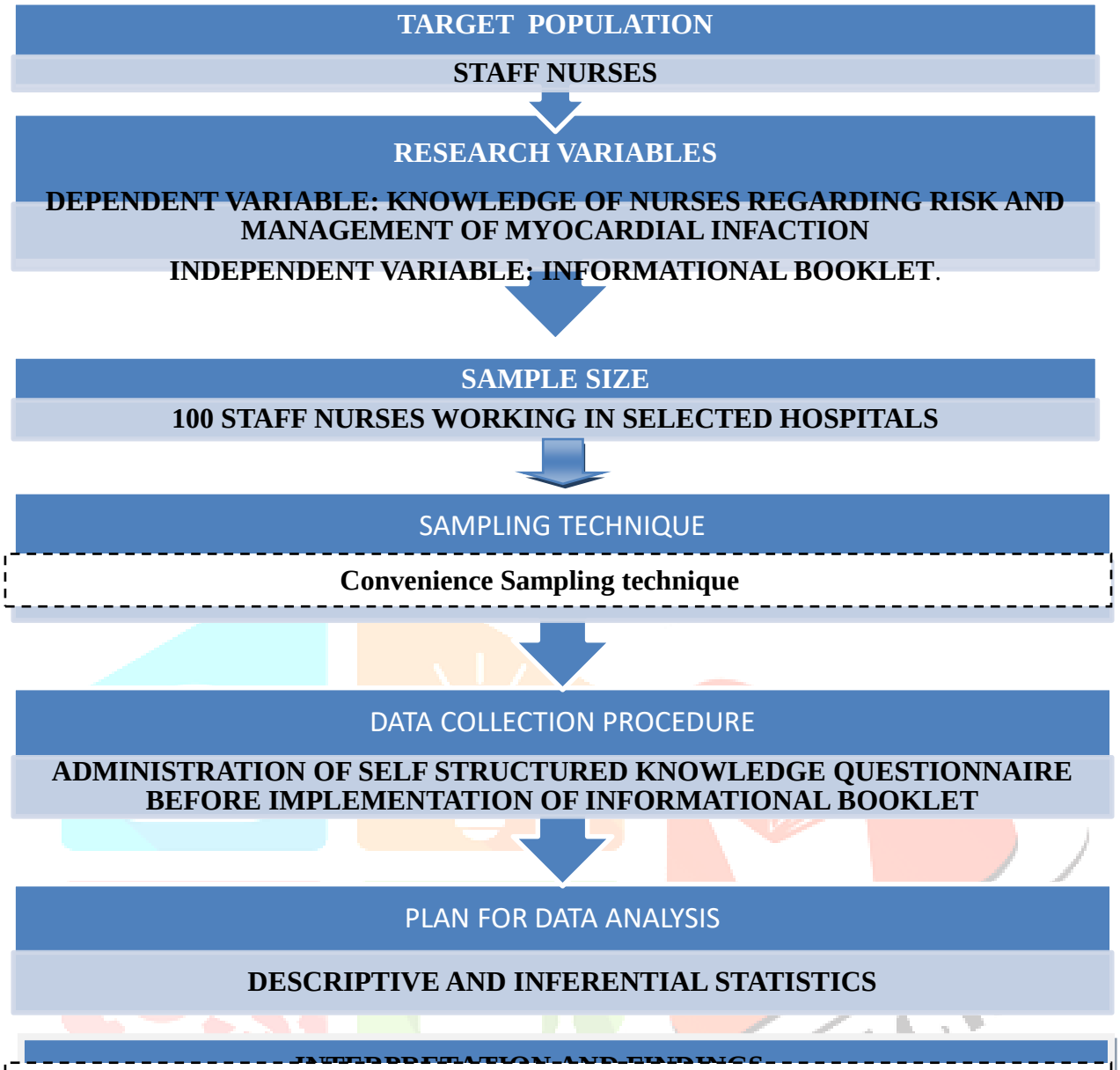



FIGURE 3.1: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY

**Summary:** This chapter deal with the research approach, research design, setting of the study, variables under the study, population, sample and sampling technique, criteria for sample selection, selection and development of tool , content validity of the tool, reliability of the tool, pilot study , data collection procedure, and plan of data analysis.


DATA ANALYSIS AND
INTERPRETATION

## CHAPTER-4

## ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the description of samples, analysis and interpretation of data collected from working staff nurses of Patiala. Data analysis enables the researchers to reduce, summarize, organize, interpret, and communicate numerical information.(Polit and Hungler 1995)

Kerlinger 1973, described analysis as the categorizing, ordering, manipulating and summarizing data to reduce it to a tangible and interpretable from so that research problem can be studied and tested including the relationship between the variables.

The data analysis was done accordance with the objectives of the study. The data was analysed by calculating the frequency, percentage, distribution, mean, standard deviation, unpaired t-test and chi-square test.

## PURPOSE

The purpose of the study is to assess the knowledge level regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of Patiala, Punjab with a view to develop an informational booklet.

## OBJECTIVES OF THE STUDY

**1.** To assess the socio- demographic profile of the sample.

2. To assess the knowledge regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

3. To find out association between the knowledge scores regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet with their selected socio-demographic variables.

4. To develop and distribute an informational booklet of risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

## OBJECTIVE-1

1. **To assess the socio-demographic profile of the sample**.

**4.1Frequency & percentage distribution of selected socio-demographic variables of staff nurses working in selected hospitals.**

| SR.NO | SOCIO DEMOGRAPHIC VARIABLES | STAFF NURSES | PERCENTAGE |
|---|---|---|---|
| **1.** | **GENDER** | | |
| a. | Female | 74 | 74% |
| b. | Male | 26 | 26% |
| c. | Transgender | 0 | 0% |
| d. | 0thers | 0 | 0% |
| **2.** | **Age in Number** | | |
| a. | 25-30 years | 61 | 61% |
| b. | 31-35 years | 28 | 28% |
| c. | 36-40 years | 9 | 9% |
| d. | More than 40 years | 2 | 2% |
| **3.** | **WORKING EXPERIENCE** | | |
| a. | 1-5 years | 61 | 61% |
| b. | 6-10 years | 26 | 26% |
| c. | 11-15 years | 11 | 11% |
| d. | More than 15years | 2 | 2% |
| **4.** | **EDUCATIONAL QUALIFICATION** | | |
| a. | GNM | 46 | 46% |
| b. | Post B.sc Nursing | 21 | 21% |
| c. | B.Sc. Nursing | 27 | 27% |
| d. | M.Sc. Nursing | 6 | 6% |
| **5.** | **SOURCE OF KNOWLEDGE** | | |

| | | | |
|---|---|---|---|
| a. | Mass Media | 15 | 15% |
| b. | Newspaper | 14 | 14% |
| c. | Working Experience | 58 | 58% |
| d. | Internet | 15 | 15% |
| 6. | **Previous Knowledge** | | |
| a. | Yes | 86 | 86% |
| b. | No | 14 | 14% |

**Table 4.1 Shows the percentage distribution of staff nurses working in Patiala, Punjab hospita**l.

Shows that majority of staff nurses gender represents that (74%) staff is female. Whereas 26% is male. While, transgender and others are same. i.e (0%)

The study result revealed that majority of staff nurses age represent that (61%) staff between the age group 25-30 years.(28%) of the staff are in group of 31-35 years. Whereas 9% of the staff is in 36-40 years. While, 2% of staff is above 40 years.

The study findings revealed that majority of staff nurses working experience represent that 61% of the staff is between 1-5 years. Whereas 26% of the staff is between 6-10 years. While, 11% of the staff is between 11-15 years. Only 2% of the staff is found between above 15 years of experience.

The study result shows that majority of staff nurses educational qualification represent 46% of the staff is GNM. Whereas 21% of the staff is Post B.Sc. Nursing. While, 27% of the staff is B.Sc Nursing. Only 6% of the staff is M.Sc.

The study result shows that majority of staff nurses has source of knowledge from working experience i.e58%. whereas 13% from the internet. Meanwhile, 14% from newspaper and 15% from Mass Media.

The study findings shows that majority of staff nurses has 86% of previous knowledge on myocardial infarction. whereas only 14% of the staff has less Knowledge.

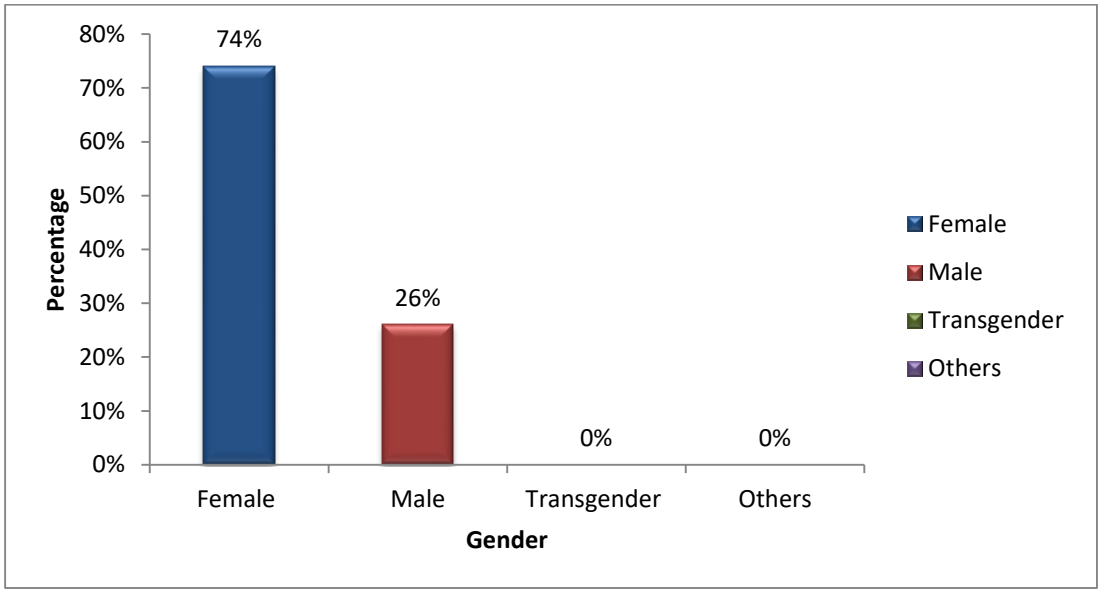



**Table No.4.1 and Figure No: 4.1 Bar graph showing percentage and frequency distribution of gender of Staff Nurses.**

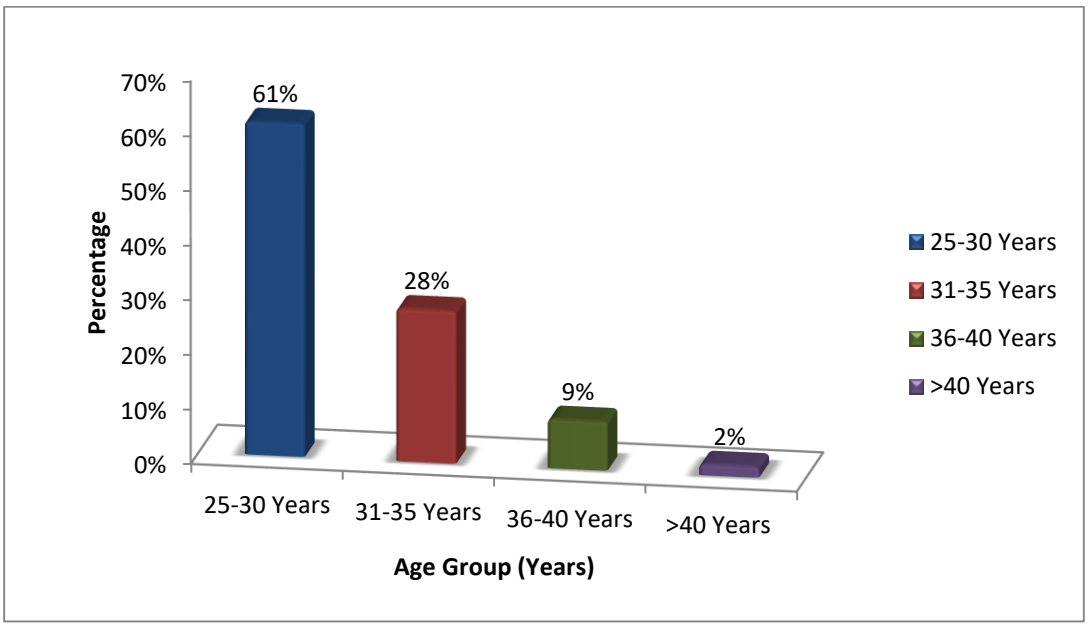



**Table No. 4.1 & Figure No.4.2 bar graph showing percentage and frequency distribution of age of Staff Nurses (in years).**

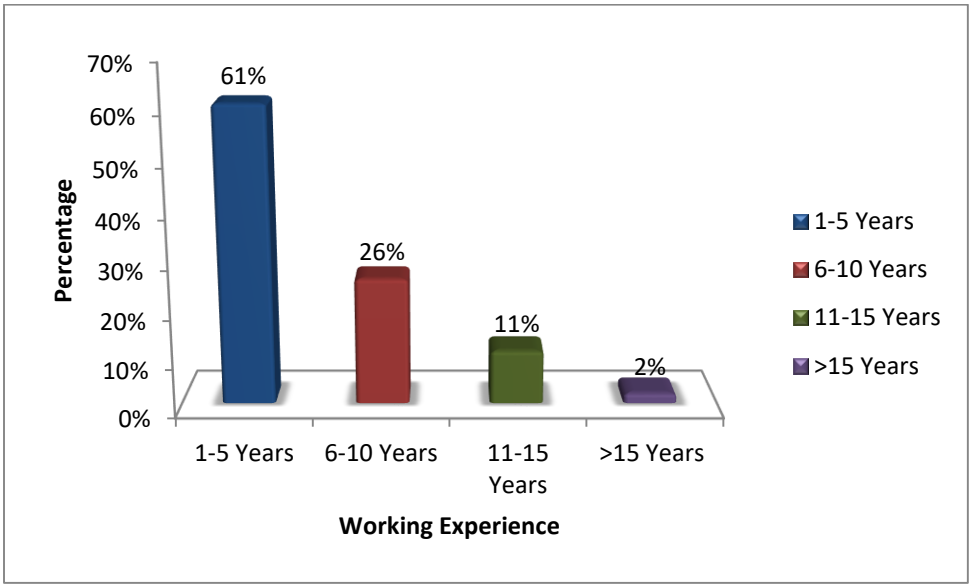



**Table No. 4.1 & Figure No.4.3 Bar graph showing percentage and frequency distribution of working experience of Staff Nurses.**

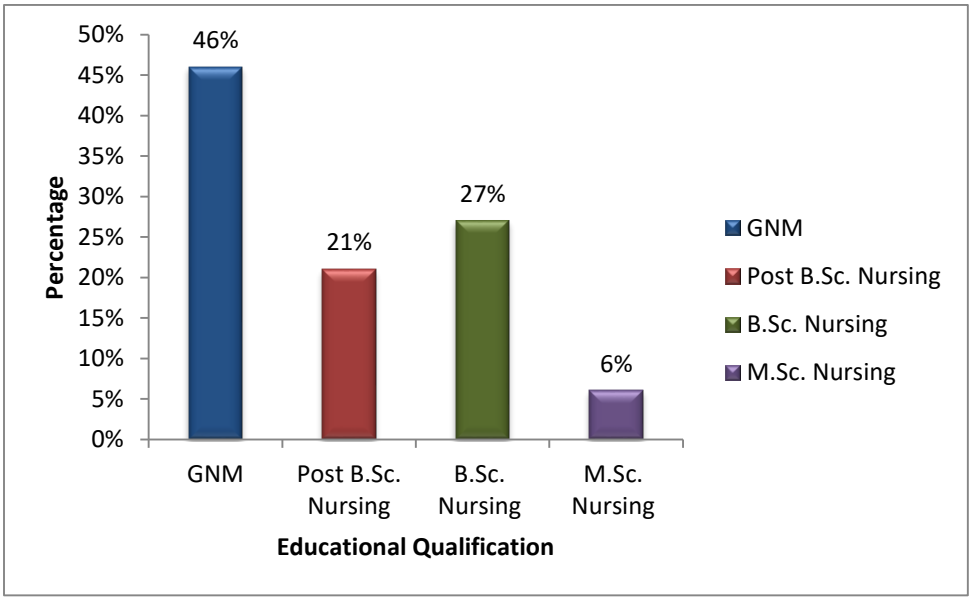



**Table No.4.1 & Figure No.4.4 Bar graph showing percentage and frequency distribution of Educational Qualification of staff nurses.**

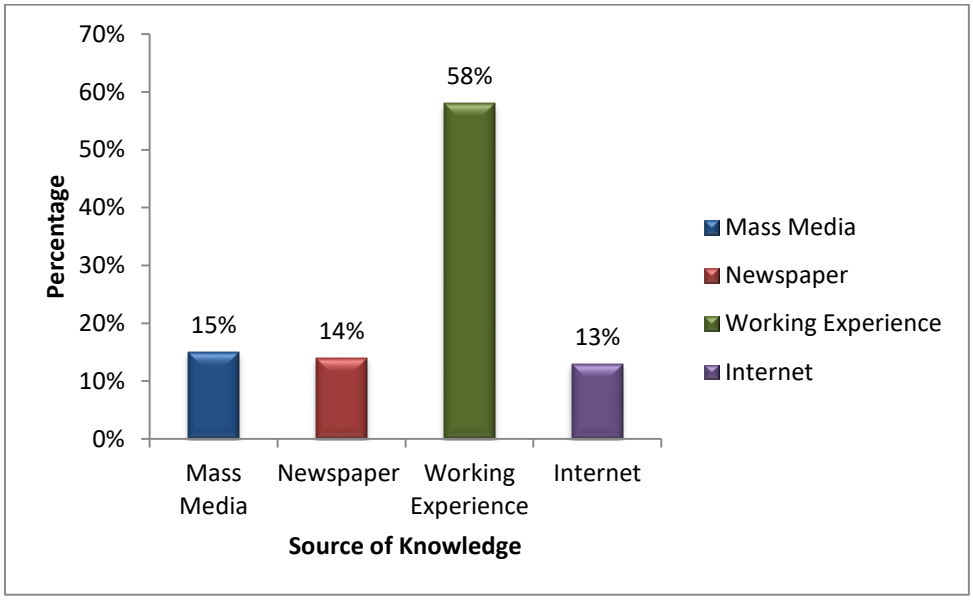



**Table No. 4.1 & Figure No.4.5 Bar graph showing percentage and frequency distribution of Source of Knowledge of staff nurses.**

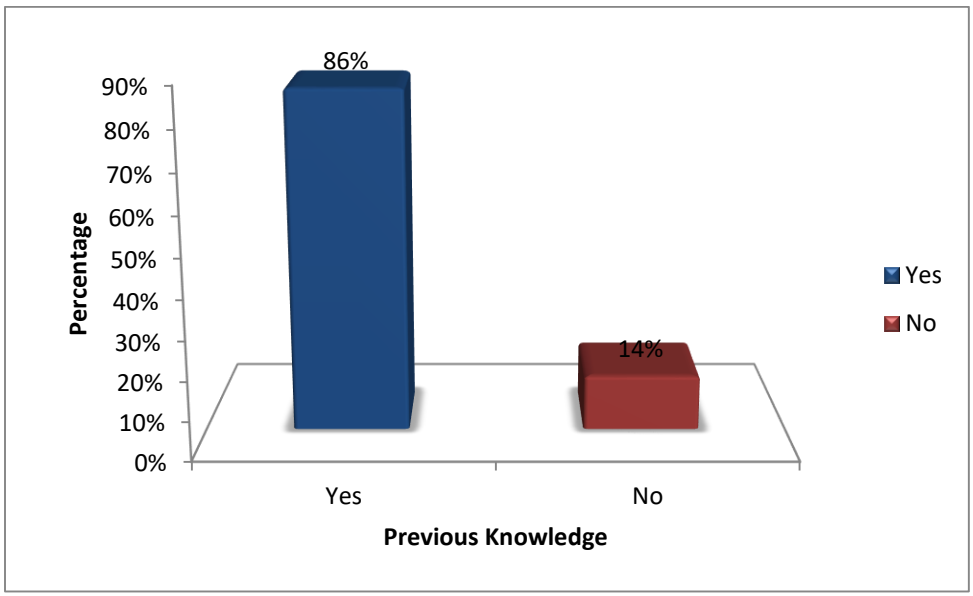



**Table No. 4.1 & Figure No.4.6 Bar graph showing percentage and frequency distribution of Previous Knowledge of staff nurses.**

## SECTION-B

## OBJECTIVE-2

**To assess the knowledge regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.**

**4.2 Percentage and frequency distribution of level of knowledge among staff nurses.**

| Level of Knowledge | Grading | Number | Percentage |
|---|---|---|---|
| Very Poor | 0-7 | 1 | 1% |
| Poor | 8-14 | 13 | 13% |
| Average | 15-21 | 72 | 72% |
| Good | 22-28 | 14 | 14% |
| Excellent | 29-35 | 0 | 0% |

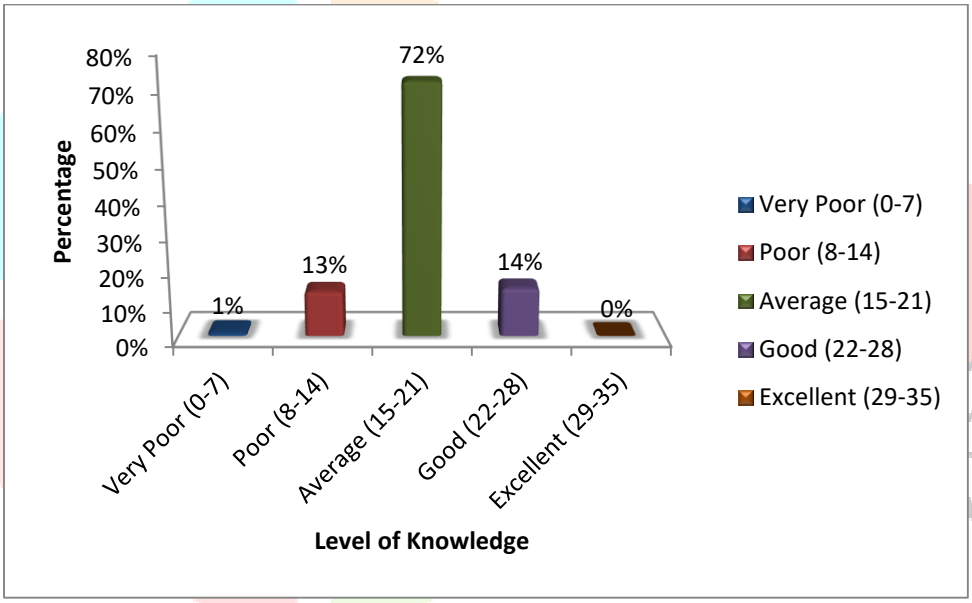
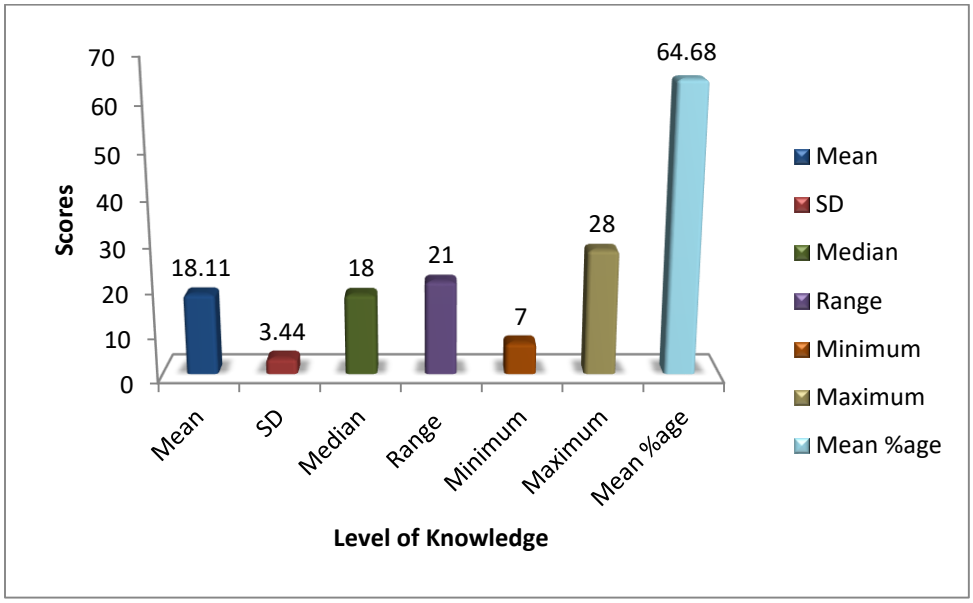



**Table 4.2** shows that majority of Average level of knowledge 72% among staff nurses followed by 14% good level of knowledge and 13% poor knowledge and 1% of very poor level of knowledge among staff nurses.

**4.3 Mean level of knowledge score among staff nurses.**

| | Mean | SD | Median | Range | Minimum | Maximum | Mean %age |
|---|---|---|---|---|---|---|---|
| Knowledge Score | 18.11 | 3.44 | 18.00 | 21.00 | 7.00 | 28.00 | 64.68 |




**4.3,** depicts the Mean, Standard Deviation, Median, range of the level of knowledge score among staff nurses regarding Risk Factors and management of myocardial Infarction. The Mean level of knowledge score was 18.11. Standard deviation was 3.44 with Median 18 and Range 21.00. The maximum obtained score was 28.00, and minimum obtained score was 7.00. Out of the total possible score of 35.

**OBJECTIVE-3**

**To find out association between the knowledge scores regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet with their selected socio-demographic variables.**

**4.4Association of level of knowledge score with their selected socio- demographic variables.**

| Socio Demographic Information | | Level of Knowledge | | | | | $X^2$ | df | Table value | p value |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Very Poor | Poor | Average | Good | Excellent | | | | |
| Gender | Female | 1 | 8 | 53 | 12 | 0 | 2.405 | 3 | 7.815 | 0.555 |
| | Male | 0 | 5 | 19 | 2 | 0 | | | | |
| | Transgender | 0 | 0 | 0 | 0 | 0 | | | | |
| | Others | 0 | 0 | 0 | 0 | 0 | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |
| Age Group (Years) | 25-30 Years | 1 | 10 | 43 | 7 | 0 | 5.976 | 9 | 16.919 | 0.629 |
| | 31-35 Years | 0 | 1 | 22 | 5 | 0 | | | | |
| | 36-40 Years | 0 | 2 | 5 | 2 | 0 | | | | |
| | >40 Years | 0 | 0 | 2 | 0 | 0 | | | | |
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |
| Working Experience | 1-5 Years | 0 | 8 | 45 | 8 | 0 | 14.402 | 9 | 16.919 | 0.111 |
| | 6-10 Years | 0 | 2 | 18 | 6 | 0 | | | | |
| | 11-15 Years | 1 | 3 | 7 | 0 | 0 | | | | |
| | >15 Years | 0 | 0 | 2 | 0 | 0 | | | | |
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |
| Educational Qualification | GNM | 0 | 5 | 32 | 9 | 0 | 8.906 | 9 | 16.919 | 0.400 |
| | Post B.Sc. Nursing | 0 | 2 | 16 | 3 | 0 | | | | |
| | B.Sc. Nursing | 1 | 6 | 19 | 1 | 0 | | | | |
| | M.Sc. Nursing | 0 | 0 | 5 | 1 | 0 | | | | |
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |
| Source of Knowledge | Mass Media | 0 | 0 | 11 | 4 | 0 | 7.480 | 9 | 16.919 | 0.612 |
| | Newspaper | 0 | 2 | 10 | 2 | 0 | | | | |
| | Working Experience | 1 | 10 | 42 | 5 | 0 | | | | |
| | Internet | 0 | 1 | 9 | 3 | 0 | | | | |
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |
| Previous Knowledge | Yes | 0 | 13 | 62 | 11 | 0 | 9.926 | 6 | 12.592 | 0.113 |
| | No | 1 | 0 | 10 | 3 | 0 | | | | |
| | Total | 1 | 13 | 72 | 14 | 0 | | | | |

**Ns= Non Significant**

**Table No.4.4** shows the association between the level of knowledge score with their selected socio demographic variables .It was obtained that the chi-square value for gender of staff nurses(chi square value= 2.405 less than the table value was 7.185, df=3), age of staff nurses (chi square value=5.976 less than the table value was 16.91,df=9), working experience of staff nurses( chi square value=14.40 less than the table value was 16.91, df=9), Educational Qualification of staff nurses(chi square value =8.906 less than the table value was 16.91, df=9), Source of Knowledge of staff nurses (chi square value= 7.480 less than the table value was 16.91, df=9), Previous knowledge of staff nurses ( chi square value= 9.926 less than the table value was 12.59, df= 6). Hence, it reveals that each demographic variable has p>0.05 which suggest statistically

Non- Significant association of knowledge score regarding risk factors and management of myocardial Infarction among staff nurses with their selected socio- demographic variables.

Table shows that the association between the level of Knowledge score regarding risk factors and management of Myocardial Infarction among staff nurses with their selected socio- demographic variable. Based on the objectives chi- square test used to associate the level of knowledge score regarding risk factors and management of myocardial infarction among staff nurses with their selected socio- demographic variables. There is no significance association between the level of knowledge score.

**Summary:** This chapter deals with the analysis and interpretation of result of data collected to assess knowledge regarding risk factors and management of myocardial infarction among staff nurses**.**

# CHAPTER-5

# DISCUSSION

This chapter deals with the findings in accordance with the objectives of the present study, A descriptive study to assess the knowledge regarding risk factors and management of myocardial infarction among working staff of selected hospital district Patiala, Punjab with the view to develop an informational booklet."

The discussion is done under the following categories:

**According to gender of staff nurses:** In this study, gender of staff nurses, majority of data represents that (74%) staff is female. Whereas 26% is male. While, transgender and others are same. i.e (0%) .

**According to age of staff nurses:** In this study , age of staff nurses, majority of data represents that (61%) staff between the age group 25-30 years.(28%) of the staff are in group of 31-35 years. Whereas 9% of the staff is in 36-40 years. While, 2% of staff is above 40 years.

**According to working experience of staff nurses**: In this study findings revealed that majority of staff nurses working experience represent that 61% of the staff is between 1-5 years. Whereas 26% of the staff is between 6-10 years. While, 11% of the staff is between 11-15 years. Only 2% of the staff is found between above 15 years of experience.

**According to Educational Qualification of staff nurses:** In this the study result shows that majority of staff nurses educational qualification represent 46% of the staff is GNM. Whereas 21% of the staff is Post B.Sc. Nursing. While, 27% of the staff is B.Sc Nursing. Only 6% of the staff is M.Sc.

**According to Source of knowledge of staff nurses**: In this the study result shows that majority of staff nurses has source of knowledge from working experience i.e58%. whereas 13% from the internet. Meanwhile, 14% from newspaper and 15% from Mass Media.

**According to Previous Knowledge of staff Nurses**: In this the study findings shows that majority of staff nurses has 86% of previous knowledge on myocardial infarction. whereas only 14% of the staff has less Knowledge.

**The Percentage and frequency distribution of level of knowledge among staff nurses.** Majority of knowledge among staff nurses is Average level of knowledge 72% among staff nurses followed by 14% good level of knowledge and 13% poor knowledge and 1% of very poor level of knowledge among staff nurses.

**Mean level of knowledge score among staff nurses:** The Mean level of knowledge score was 18.11. Standard deviation was 3.44 with Median 18.11 and Range 21.00. The maximum obtained score was 28.00, and minimum obtained score was 7.00. Out of the total possible score of 35.

The **Association of level of knowledge score with their selected socio- demographic variables:** The result shows the association between the level of knowledge score with their selected socio demographic variables .It was obtained that the chi-square value for gender of staff nurses(chi square value= 2.405 less than the table value was 7.185, df=3), age of staff nurses (chi square value=5.976 less than the table value was 16.91,df=9), working experience of staff nurses( chi square value=14.40 less than the table value was 16.91, df=9), Educational Qualification of staff nurses(chi square value =8.906 less than the table value was 16.91, df=9), Source of Knowledge of staff nurses (chi square value= 7.480 less than the table value was 16.91, df=9), Previous knowledge of staff nurses ( chi square value= 9.926 less than the table value was 12.59, df= 6). Level of significance shows non significance association of level of knowledge score with their selected socio- demographic variables.

**Summary:** This chapter deals with explanation of research findings, where the researcher presents her findings through critical analysis along with comparison with other similar research findings.

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# CHAPTER-6

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

The chapter entails a summary of the major findings with conclusion, limitations and implications for nursing practice, education, nursing administration and nursing research. It also gives an account of suggestion and recommendations for future research in the field of medical surgical nursing.

**PROBLEM STATEMENT**

A Descriptive study to assess the knowledge regarding the risk factors and management of myocardial infarction among working staff of selected hospital district Patiala, Punjab with the view to develop an informational booklet.

**AIM OF THE STUDY**

The aim of study to assess the knowledge regarding the risk factors and management of myocardial infarction among working staff of selected hospital district Patiala, Punjab with a view to develop informational booklet.

**OBJECTIVES OF THE STUDY**

The present study was conducted on 100 staff nurses to assess the knowledge regarding the risk factors and management of myocardial infarction among working staff of selected hospital district Patiala, Punjab. The study was undertaken with the following objectives:

1**.** To assess the socio- demographic profile of the sample.

2. To assess the knowledge regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

3. To find out association between the knowledge scores regarding the risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab with the view to develop an informational booklet with their selected socio-demographic variables.

4. To develop and distribute an informational booklet of risk factors and management of myocardial infarction among staff nurses working in selected hospital of district Patiala, Punjab.

**ASSUMPTIONS:** The study assumed that,

1. Majority of staff nurses have some knowledge regarding risk factors and management of myocardial infarction.
2. There will be impact of knowledge on the staff nurses regarding risk factors and management of myocardial infarction.
3. The knowledge may vary according to the patient variables.
4. An informational booklet will be useful to enhance the knowledge.

**DELIMITATIONS**

1. The study is confined to staff nurses.
2. Working in selected hospital of district Patiala, Punjab.
3. Who are available during the period of data collection.

**CONCLUSION:** From the Findings of the present study it was concluded that the knowledge score regarding risk factors and management of Myocardial Infarction among staff nurses shows that majority of Average level of knowledge 72% among staff nurses followed by 14% good level of knowledge and 13% poor knowledge and 1% of very poor level of knowledge among staff nurses.

**IMPLICATIONS**

The findings of the study have several implications which are discussed in these areas;

- Nursing education
- Nursing service
- Nursing administration
- Nursing research

**Implications in Nursing Education**

Nursing education should offer short term continuing nursing education on risk factors and management of myocardial infarction. An awareness need to be created on importance of risk factors and management of myocardial infarction so as to prevent its complications. Teaching strategies such as demonstrations, video shows, procedure manuals and computer assisted interventions on risk factors and management of myocardial infarction can be incorporated in the curriculum.

**Implications in nursing practice**

Nurses working in intensive care unit, cardiac care unit, cath lab unit should have commitment to attend any form of education program to provide quality nursing care and update their knowledge. Nurses

needs to be equipped with knowledge regarding risk factors and management of myocardial infarction.They can update their knowledge by attending continuing education program, seminar, workshops, symposium and by in service education. Knowledge regarding risk factors and management of myocardial infarction will improve the quality of nursing care and helps in preventing complications in the early period. Hospital policies should be reviewed to enhance in service program on the care of patients regarding risk factors and management of myocardial infarction.

Implications in nursing research

The nurse researcher can encourage clinical nurses to apply the findings in their daily nursing care. The nurse can promote more research with regard to knowledge regarding risk factors and management of myocardial infarction.

1. The findings need to be disseminated through conference, seminars and published in professional journals and world wide web will make the application of the research findings to be effectively used in practice.
2. The findings of the research study will help in building and strengthening the body of knowledge in the discipline of nursing.

**Major findings**

Analysis of data was done according to the objectives of the study. Findings related to level of knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospital of Patiala, Punjab.

Out of 100 subjects, majority of level of knowledge was Average(72%) of staff nurses which was followed by good level of knowledge(14%) of staff nurses level of knowledge and 13% poor knowledge and 1% of very poor level of knowledge among staff nurses.

## RECOMMENDATION

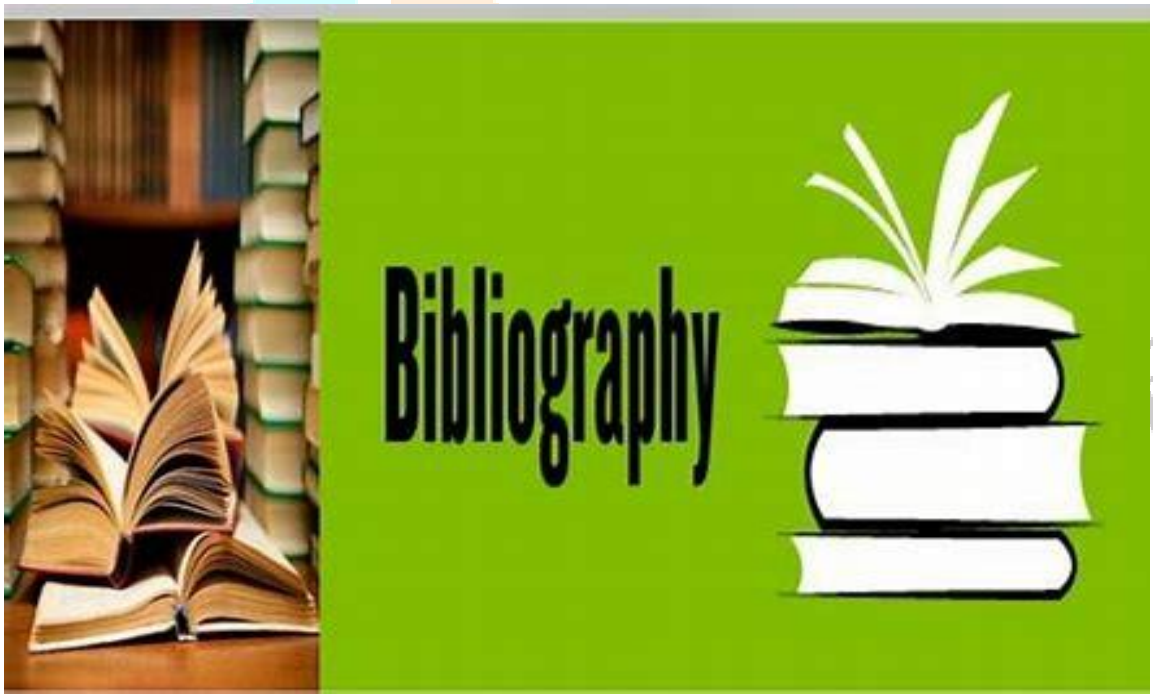
Based on the study, the following recommendations are put forward for the future research.

1. A study can be conducted to assess practice of staff nurses working in hospital regarding risk factors and management of myocardial infarction.
2. A study can be replicated with a large numbers of samples in different setting for better generalization.

3. A descriptive study can be conducted to assess the knowledge regarding risk factors and management of myocardial infarction among staff nurses working in selected hospitals.

**LIMITATIONS:**

1. The investigator found difficulty in convincing staff nurses for participating in the study because of their work level.
2. The investigator found difficulty in maintaining coordination with the staff nurses because of their busy schedule.



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**APPENDIX- 5**

LETTER REQUESTING OPINIONS AND SUGGESTIONS FROM EXPERTS FOR CONTENT VALIDATION OF THE TOOL

The

Patiala, Punjab.

Sub: Request for expert opinion and suggestions to establish content validity of the research tool and teaching plan.

Respected Sir/ Madam,

With reference to the above subject, myself Mrs Shivani , Msc.Nursing student at Adarsh College of Nursing. In partial fulfillment of the course, I am required to complete a research and submit the study to Baba Farid University Of Health Science for the award of MSc. Nursing degree.

The topic of my study," **A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING THE RISK FACTOR AND MANAGEMENT OF MYOCARDIAL INFARCTION AMONG STAFF NURSES WORKING IN SELECTED HOSPITAL OF DISTRICT PATIALA, PUNJAB WITH THE VIEW TO DEVELOP AN INFORMATIONAL BOOKLET".**

Here I have enclosed

1. Objectives of the study
2. Demographic Performa
3. Rating Scale
4. Answer key
5. Informational Booklet

I request you to kindly go through the content of the tool and give your valuable suggestion in the given column.

Thanking You

Yours Sincerely

Mrs. Shivani

Medical Surgical Nursing

MSc. Nursing 2nd year

Adarsh college of Nursing

Patiala,Punjab.

Forwarded through:

Principal

Adarsh College of Nursing

Patiala, Punjab.

Place

Date

## APPENDIX-7(a)

## SOCIO-DEMOGRAPHIC VARIABLES

**Instructions: Following items are related to socio- demographic data. Please give appropriate response to the following items which is most suitable to you.**

**THE QUESTIONNAIRE ARE CONSISTS OF TWO SECTIONS**

**SECTION A:** Socio- demographic variables

**SECTION B**: Self structured knowledge questionnaire

**SOCIO-DEMOGRAPHIC VARIABLES**

**1. Gender**

a) Female ( )

b) Male ( )

c) Transgender ( )

d) Other ( )

**2. Age**

a) 25-30 ( )

b) 31-40 ( )

c) Above 40 ( )

**3. Working Experience**

a)1- 5year ( )

b) Above 5year ( )

c) Above 10year ( )

**4. Qualification**

a) GNM ( )

b) Post Bsc ( )

c) Bsc ( )

d) Msc ( )

**5. Source of information**

a. Mass Media ( )

b. Newspaper ( )

c. Working experience ( )

d. Journals ( )

**6. Any previous knowledge regarding myocardial Infarction**

**a. Yes ( )**

**b. No ( )**

IJCRT

**APPENDIX-7(b)**

**Section-B**

**SELF- STRUCTURED KNOWLEDGE QUESTIONNAIRE**

**1. The artery commonly affected during myocardial infarction is**

a. Renal artery ( )

b. Coronary artery ( )

c. Hepatic artery ( )

d. Carotid artery ( )

**2. The lack of oxygen supply to myocardium of heart leads to**

a. Fibrillation ( )

b. Heart failure ( )

c. Angina ( )

d. Infarction ( )

**3. Myocardial Infarction(MI) commonly known as**

a. Angina ( )

b. Heart attack ( )

c. Dysrhythmias ( )

d. heart block ( )

**4. Most common site of myocardial Infarction is**

a. Anterior wall of left ventricle ( )

b. Inferior wall of left ventricle ( )

c. Post. Wall of right ventricle ( )

d. Post. Wall of left ventricle ( )

**5. If blood supply to heart interrupted more than 6 minute, it may causes**

a. Reversible MI ( )

b. Cardiac arrest ( )

c. Irreversible MI ( )

d. Cardiac block ( )

**6. The risk factors that can be modified by a patient with coronary artery disease are the following except**

a. Stress ( )

b. Body weight ( )

c. Heredity ( )

d. Lipidaemia ( )

**7. The risk of death in 95% population is**

a. Myocardial infarction ( )

b. Heart failure ( )

c. Atrial fibrillation ( )

d. Sudden cardiac arrest ( )

**8. Reducing cholesterol and BP may reduce all of the following , Except**

a. Heart disease Mortality ( )

b. Incidence of neonatal MI ( )

c. Risk of developing heart disease ( )

d. Risk of developing congenital heart disease ( )

**9. Typically, the pain of MI and angina differ in that the former is**

a. Intermittent in nature ( )

b. More responsive to rest ( )

c. Usually associated with exertion ( )

d. Rarely relieved by rest ( )

**10. A sign that is not typical in Myocardial Infarction**

a. Pain occur both at rest and exertion ( )

b. Pain is felt during effort and it is relieved by rest ( )

c. Patient becomes restless with pain ( )

d. Pain lasts longer than 30 minutes ( )

**11. Most attacks of acute MI occur during**

a. Rest and sleep ( )

b. Exertion ( )

c. Meals ( )

d. All the above ( )

**12. A patient with acute MI may go into a state of shock due to**

a. Inadequate food intake ( )

b. Inadequate tissue perfusion ( )

c. Inadequate sleep at night ( )

d. Nausea and vomiting ( )

**13. Incidence of MI is common in**

a. Men above 40 years ( )

b. Premenopausal women ( )

c. Young adults ( )

d. Adolescence ( )

**14. One of the modifiable risk factors that can place patient at increased risk for MI**

a. Age of 65 ( )

b. Smoking history of 3 packs per day for 30 years ( )

c. Male ( )

d. Vigorous exercise 3 times a week ( )

**15. Risk of myocardial Infarction (MI) increases with**

a. Using oral contraceptive pills ( )

b. Hyperlipidemia ( )

c. Elevated serum iron level ( )

d. All of the above ( )

**16. Risk factors for developing coronary heart disease include**

a. Smoking ( )

b. Hypertension ( )

c. Serum cholesterol ( )

d. All ( )

**17. One of the following is the most common symptom of myocardial infarction**

a. Chest pain ( )

b. Dyspnea ( )

c. Edema ( )

d. Palpitations ( )

**18. One of these signs or symptoms would not be true for an MI**

a. ST-elevation seen in all leads ( )

b. Chest-pressure radiating to right arm ( )

c. Dyspnea ( )

d. Nausea and diaphoresis ( )

**19. In acute myocardium infarction which enzyme is raised first**

a. CK-MB ( )

b. SGPT ( )

c. SGOT ( )

d. Troponin-T ( )

**20. Cardiac Troponin level helps in diagnosis of**

a. Myocardial Infarction ( )

b. Congestive cardiac failure ( )

c. Ventricular Tachycardia ( )

d. Atrial fibrillation ( )

**21. Tread Mill test and stress test are used to detect**

a. Congestive heart failure ( )

b. Arrhythmias ( )

c. Myocardial Infarction ( )

d. Ventricular Septa Defect ( )

**22. ECG change in myocardial Infarction is**

a. ST segment elevation ( )

b. Wide QRS complex ( )

c. Presence of U wave ( )

d. Prolonged PR interval ( )

**23. An increase in the creatinine Kinase MB isoenzyme can be caused by**

a. Cerebral bleeding ( )

b. Intramuscular injection ( )

c. Skeletal muscle damaged due to recent fall ( )

d. Myocardial necrosis ( )

**24. One of the most common complication of Myocardial Infarction**

a. Hypokalemia ( )

b. Anaphylactic shock ( )

c. Cardiac dysrhythmia ( )

d. Cardiac Enlargement ( )

**25. The complication occur within 24 hours after sustaining an Myocardial Infarction**

a. Heart failure ( )

b. Pulmonary embolism ( )

c. Ventricular aneurysm ( )

d. Atrial septal defect ( )

**26. The first choice of drug for treating MI**

a. Streptomycin ( )

b. Streptokinase ( )

c. Nitroglycerine ( )

d. Heparin ( )

**27. Therapeutic role of Morphine into pharmacological management of MI**

a. Pain relief ( )

b. Increased O2 supply to myocardium ( )

c. Increase Coronary artery Vasodilation ( )

d. Both B and C **( )**

**28. Rest is needed in patients with coronary artery disease to**

a. Correct arrhythmias ( )

b. Reduce oxygen requirements of the body ( )

c. Reduce the size of the heart ( )

d. Reduce the tendency for insomnia ( )

**29. Lung complications following MI can be prevented by**

a. Increasing the amount of fluid intake in the body ( )

b. Administering oxygen in high concentration ( )

c. Restricting the activity ( )

d. Encourage deep breathing and coughing exercises ( )

**30. A patient recovering from acute MI can return to work if he**

a. Experiences no chest pain at rest ( )

b. Has rested for 8- 10 weeks ( )

c. Walks without symptoms at a speed of 5km/hr ( )

d. Gets permission from his physician ( )

**31. Regular exercise is beneficial for the patient, because**

a. It increases the size of the heart ( )

b. It increase the cardiac output ( )

c. It improves the collateral circulation of the myocardium ( )

d. It increases the strength of the cardiac valves ( )

**32. The patient should limit the intake of diet which involve**

a. Salt ( )

b. Fat ( )

c. Cholesterol ( )

d. All of the above ( )

**33. To prevent heart attack, one should avoid**

a. Sedentary life ( )

b. Active occupation ( )

c. Mobile occupation ( )

d. Sports and games ( )

**34. The seed has lipid lowering effect**

a. Flax seed ( )

b. Pumpkin seed ( )
c. Poppy seed ( )

d. Sunflower seed ( )

**35. The tree bark is used in heart diseases as a Cardiac tonic**

a. T. arjuna tree ( )

b. Silver birch ( )

c. Beech ( )

SCORING KEY

| SERIAL NUMBER | CORRECT RESPONSE | REMARKS |
|---|---|---|
| 1 | B | |
| 2 | B | |
| 3 | D | |
| 4 | B | |
| 5 | B | |
| 6 | C | |
| 7 | D | |
| 8 | C | |
| 9 | B | |
| 10 | A | |
| 11 | B | |
| 12 | A | |
| 13 | B | |
| 14 | B | |
| 15 | A | |
| 16 | D | |
| 17 | A | |
| 18 | A | |
| 19 | A | |
| 20 | A | |
| 21 | C | |
| 22 | B | |
| 23 | D | |
| 24 | C | |
| 25 | D | |
| 26 | A | |
| 27 | B | |
| 28 | C | |
| 29 | C | |
| 30 | D | |
| 31 | C | |
| 32 | B | |
| 33 | B | |
| 34 | C | |
| 35 | A | |

**APPENDIX-8**

**EVALUATION CRITERIA RATING SCALE FOR VALIDATION OF TOOL.**

Respected Madam/Sir,

I request you to evaluate the research tool and give your valuable opinion and suggestion on the developed rating scale. There are four responses. Please tick ( ) mark in the appropriate column and give your remarks in the columns.

Your valuable opinion and kind co-operation will be highly appreciated.

Thanking you in anticipation

**Section-A**

**SOCIO DEMOGRAPHIC PROFILE**

| Item No. | Relevant | Need Modification | Not relevant | Remarks |
|---|---|---|---|---|
| 1. Gender | | | | |
| 2. Age(in years) | | | | |
| 3. Working experience | | | | |
| 4. Qualification | | | | |
| 5.Source of Knowledge | | | | |
| 6. Previous Knowledge | | | | |

**SECTION-B**

**RATING SCALE TO ASSESS THE KNOWLEDGE SCORE REGARDING RISK FACTORS AND MANAGEMENT OF MYOCARDIAL INFARCTION**

| ITEM NO. | RELEVANT | NEED MODIFICATION | NOT RELEVANT | REMARKS |
|---|---|---|---|---|
| 1 | | | | |

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| 33 | | | | |
| 34 | | | | |
| 35 | | | | |

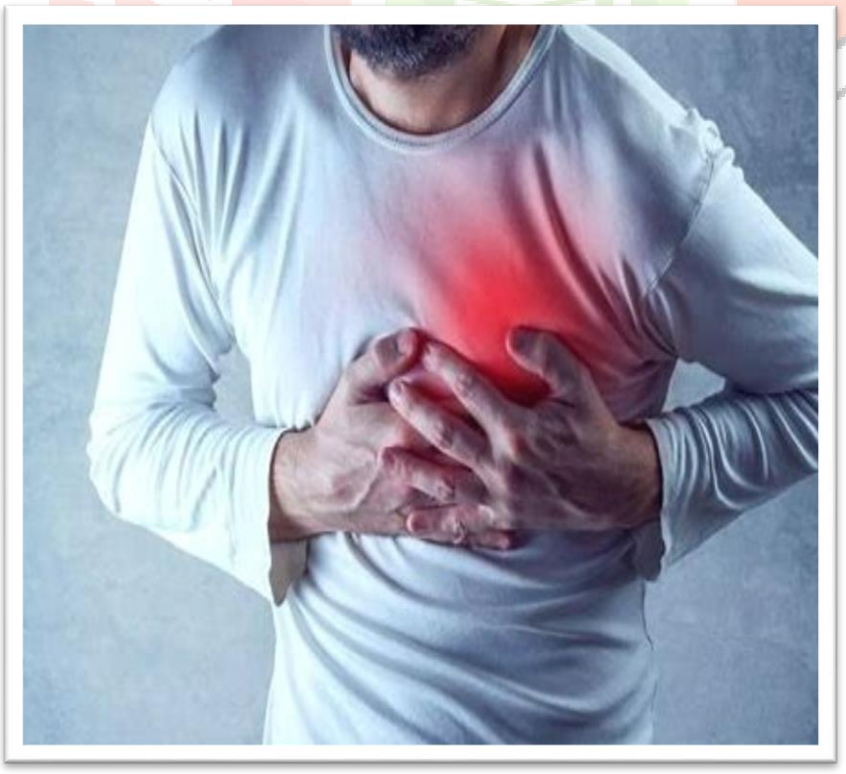
**Maximum Score=35**

**Date**

**Place**

**Suggestion if any:** **Signature of the Evaluator**

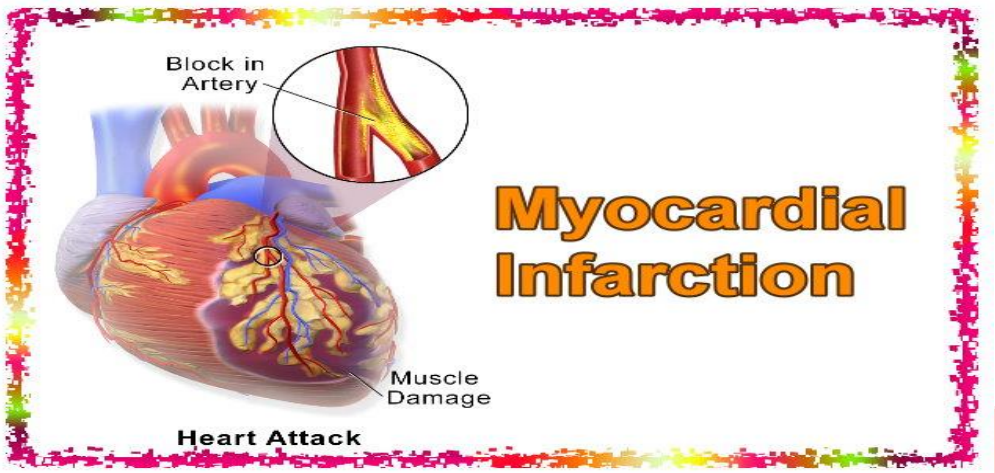
INFORMATIONAL BOOKLET ON MYOCARDIAL INFARCTION



Cardiovascular diseases are the number one cause of mortality. According to the world health organization (WHO), it is estimated that 7.4 million deaths were due to coronary heart disease in 2015. 82 % of deaths in low and middle income countries are accountable for CVD.

## WHAT IS MYOCARDIAL INFARCTION?

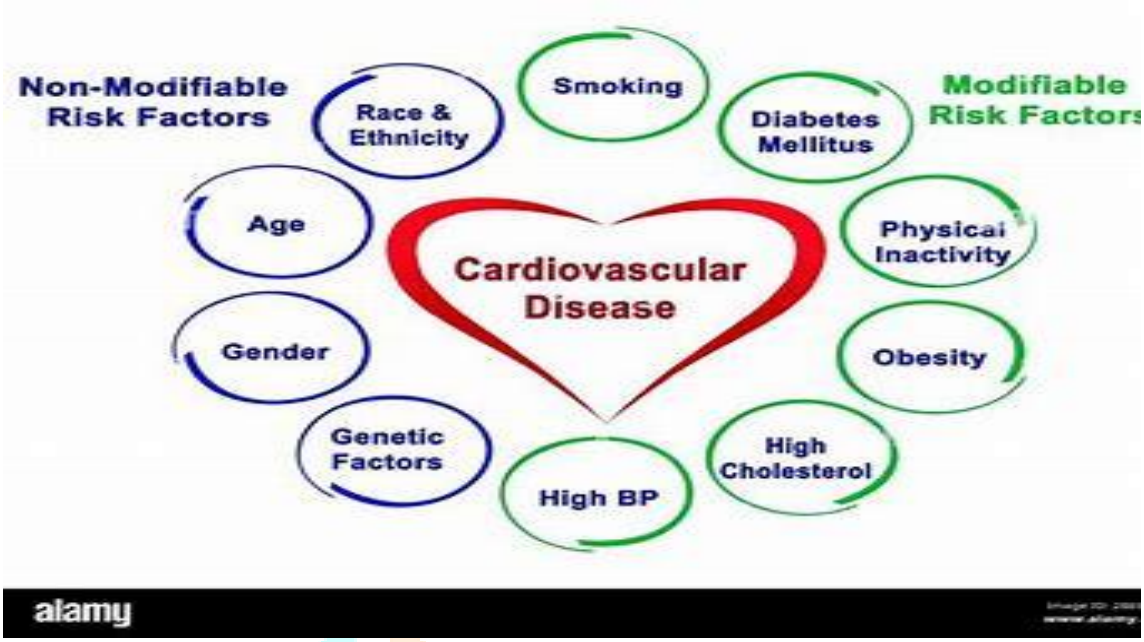
Myocardial infarction (MI), colloquially known as "heart attack," is caused by decreased or complete cessation of blood flow to a portion of the myocardium. Myocardial infarction may be "silent," and go undetected.




## WHAT ARE THE RISK FACTORS AND CAUSES OF MYOCARDIAL INFARCTION?

Predisposing risk factors- Family history of premature coronary disease

- Fibrinogen
- C-reactive protein
- Homocysteine
- Menopause
- Psychological factor

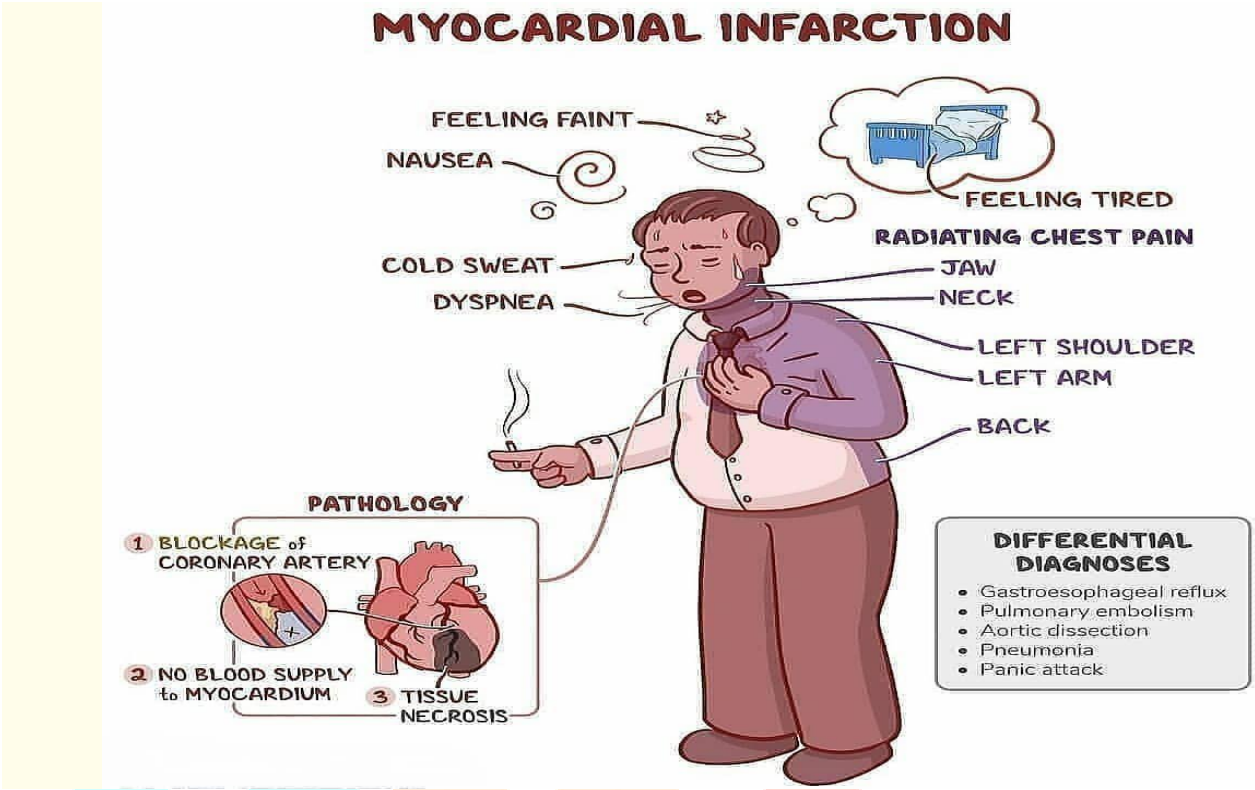



Other contributing factors are- Physical exertion

- Emotional stress
- Cold temperature
- Cocaine use
- Eating a heavy or large meal

**WHAT ARE THE SIGN AND SYMPTOMS FOR MYOCARDIAL INFARCTION?**

- Chest pain
- Neck or Jaw pain
- Fast heartbeat
- Shortness of breath
- Nausea and vomiting
- Sweating
- Fatigue




## WHAT WILL BE THE DIAGNOSTIC TEST?

- Electrocardiogram(ECG)
- Stress test
- Echocardiogram
- Nuclear stress test
- Coronary angiography
- Cardiac CT scan or MI
- Blood test (cardiac markers)
- Chest X-rays



**What will be the Pharmacological management for Myocardial Infarction?**

- **M-**Morphine
- **O-**Oxygen therapy
- **N-** Nitrates
- **A-** Aspirin
- **T-**Thrombolytics
- **A-**Anticoagulants
- **S-**Stool softner
- **S-**Sedatives

**NUTRITIONAL THERAPY**:

Diet is advanced as tolerated to a low- salt, saturated fat, and low cholesterol diet. The patient should be advised to eat more fish, fruits and vegetables, bread, pasta, potatoes, olive oil .

**NURSING MANAGEMENT**

**NURSING ASSESSMENT-**

1. Assess for chest pain not relieved by rest or medications.
2. Monitor vital signs, especially the blood pressure and pulse rate.
3. Assess for presence of shortness of breath, dyspnea, tachypnea, and crackles.
4. Assess for nausea and vomiting.
5. Assess for decreased urinary output.

**NURSING INTERVENTION-**

1. Administer oxygen along with medication therapy to assist with relief of symptoms.
2. Encourage bed rest with the back rest elevated to help decrease chest discomfort and dyspnea.
3. Encourage changing of positions frequently to help keep fluid from pooling in the bases of the lungs.

4. Check skin temperature and peripheral pulses frequently to monitor tissue perfusion.
5. Monitor the patient for changes in cardiac rate and rhythm, heart sounds, blood pressure, chest pain, respiratory status, urinary output.

**HEALTH EDUCATION-**

1. Education- The nurse must teach the patient about heart- healthy living.
2. The nurse can advice for regular physical activity which can help the heart and the rest of your body to get stronger and work better.
3. The Physical activity improves your energy level and lifts your spirits. It also reduces the chances of future heart problems, including heart attack.
4. Counseling and education can help in quitting smoking, eat right, lose weight and lower blood pressure.
5. Counseling help to manage stress and to feel better about health.
6. The client should avoid activities like weight lifting, isometric exercises which can cause vagal stimulation.
7. The patient should sleep atleast 8 hours per day.
8. The patient should be advised for limiting caffeine and alcohol intake.

9. The patient should be advised for necessary lifestyle modification.

10. The patient should be instructed for following symptoms that appear like- chest pressure, shortness of breath, unusual fatigue, swelling of feet and ankles, fainting, dizziness, very slow or rapid heart rate.

IJCRT

**APPENDIX-10**

**CONTENT VALIDITY CERTIFICATE**

This is certify that the tool developed by Mrs. Shivani, MSc. Nursing 2nd year, student of Adarsh College of Nursing, Patiala, Punjab (Affiliated to Baba Farid University of health Sciences) is validated by undersigned and allowed to conduct the main study for dissertation entitled " **A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING THE RISK FACTOR AND MANAGEMENT OF MYOCARDIAL INFARCTION AMONG STAFF NURSES WORKING IN SELECTED HOSPITAL OF DISTRICT PATIALA, PUNJAB WITH THE VIEW TO DEVELOP AN INFORMATIONAL BOOKLET".**

Date: Signature and seal of expert

Place: Name and Designation



**APPENDIX-11**

**COPY OF THE CONSENT FORM**

I am voluntarily participating in the study conducted by M.SC. Nursing 2nd year student at Adarsh College of Nursing, Patiala. Titled:

**"A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING THE RISK FACTOR AND MANAGEMENT OF MYOCARDIAL INFARCTION AMONG STAFF NURSES WORKING IN SELECTED HOSPITAL OF DISTRICT PATIALA, PUNJAB WITH THE VIEW TO DEVELOP AN INFORMATIONAL BOOKLET".**

I will also co-operate with the researcher in providing necessary information. I was explained that the information provided would be kept confidential and used only for above mentioned study purpose only.

Date: Signature and seal of expert

Place: Name and Designation

**LIST OF EXPERTS**

## APPENDIX- 11

## LIST OF EXPERTS

1. **Mrs. Jaya Davidu Shirshetty**
   Principal ACON, Patiala
   MSc in MSN

2. **Mrs. Deeksha Sharma**
   Associate professor (MSN)
   MULNA University, Himachal pardesh .

3. **Mrs. Deepika Thakur**
   Nursing Officer, GMCH chandighar
   MSc.in MSN

4. **Mrs. Ruchi Choudhary**
   M.Sc in M.S.N
   NSCN Palampur,HP.

5. **Mrs Shelza Thakur**
   MSc in MSN
   NSCN Palampur, HP.

6. **Dr. Sudhir Verma**
   M.B.B.S, MD (Cardiology)
   H.O.D Cardiology department
   Sadhbhavna Medical & heart Institute, Patiala.

7. **Dr. Bharat. B. kukreti**
   M.B.B.S, MD, DM
   Associate Director- cardiology
   Paras hospitals, Gurugram.

8. **Dr .Ambika Sharma**
   M.B.B.S, MD (Cardiology)
   Paras hospitals, Gurugram.

## APPENDIX -12

### LIST OF FORMULA'S

1. **Mean** $= \frac{\sum x}{N}$

2. **Median** $M = \frac{(n+1)}{2}$

3. **Standard deviation**

$$SD = \frac{\sqrt{\sum (x - x^2)}}{\sqrt{n}}$$

4. **Karl pearsons correlation coefficient**

$$r = \frac{\sum(X-\overline{X})(Y-\overline{Y})}{\sqrt{\sum(X-\overline{X})^2}\sqrt{(Y-\overline{Y})^2}}$$

Where, $\overline{X}$ = mean of X variable
$\overline{Y}$ = mean of Y variable

## 5. Chi square test

$$\chi^2 = \sum(O_i - E_i)^2/E_i$$

## 6. Unpaired t test

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$s^2 = \frac{\sum_{i=1}^{n_1}(x_i - \bar{x}_1)^2 + \sum_{j=1}^{n_2}(x_j - \bar{x}_2)^2}{n_1 + n_2 - 2}$$