"A STUDY TO ASSESS THE EFFECTIVENESS OF PROGRAMMED INSTRUCTION ON KNOWLEDGE REGARDING MYOCARDIAL INFARACTION AND ITS MANAGEMENT AMONG MYOCARDIAL INFARCTION PATIENTS IN SLECTED HOSPITAL, KOLAR ''

By

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Project Report Submitted To

Sri Devaraj Urs College of Nursing, Tamaka, Kolar as a part of

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In

MEDICAL SURGICAL NURSING

Under the guidance of,

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HOD OF Med Surg Nsg Dept.

&

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SRI DEVARAJ URS COLLEGE OF NURSING

TAMAKA, KOLAR

2014

DECLARACTION BY THE CANDIDATE

We hereby declare that this research project work entitled **"A Study to assess the Effectiveness of Programmed Instruction on Knowledge regarding Myocardial Infarction and its Management among Myocardial Infarction patients in Selected Hospital, Kolar"** is a bonafide research work carried out by is under the guidance of **Prof. Mrs. Zeanath Cariena Joseph**, HOD of Medical Surgical Nursing, Sri Devaraj Urs College of Nursing, Tamaka, Kolar.

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CERTIFICATE BY THE GUIDE

This is to certify that research project work entitled **"A Study to assess the effectiveness of programmed instruction on knowledge regarding myocardial infarction and its management among myocardial infarction patients in selected hospital, Kolar."** is a bonafide research work done by Ms. Asha Monica N, Ms. Ashlymol James, Ms. Feba Elizabeth Jose, Ms. Jyothi Mary Kurian, Ms. Kusuma S.K, Ms. Nivya Varghese, Ms. Sumitha B. In partial fulfillment of the requirement for the degree of Basic B.SC (N) in Medical Surgical Nursing.

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ENDORSEMENT BY THE HOD AND PRINCIPAL

This is to certify that the project work entitled

"A study to assess the effectiveness of programmed instruction on knowledge regarding Myocardial Infarction and its management among Myocardial Infarction patients Admitted in selected Hospital, Kolar." is a bonafide research work done by **Ms. Asha. Monica. N, Ms. Ashlymol James, Ms. Feba Elizabeth Jose, Ms. Jyothi Mary Kurian. Ms. Nivya Varghese, Ms. Kusuma S.K, Ms. Sumitha .B** under the Guidance of **Prof Mrs. Zeanath Cariena Joseph, HOD Of Department of Medical Surgical Nursing**, Sri Devaraj Urs College of Nursing, Tamaka, Kolar in partial fulfillment of the requirement for the degree of Basic B.Sc(N) In Medical Surgical Nursing.

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ABSTRACT

Heart disease is the number one killer all over the world. The most common cause of heart disease is narrowing or blockage of the coronary arteries, the blood vessels that supplies blood to the heart itself. It has been estimated that every patients die after getting attack, mostly within one hour before medical aid can reach them.

Although risk of myocardial infarction are well published , the people do not consider it as a threat , even when symptoms indicate. Unfortunately this lack of knowledge probably contributes to their delaying care even patients with continous attack.

STATEMENT OF THE PROBLEM

"A Study to assess the effectiveness of Programmed Instruction on knowledge regarding myocardial infarction and its management among myocardial infarction patients in selected hospital , Kolar ."

THE OBJECTIVENESS OF THE STUDY

1. To assess the knowledge regarding myocardial infarction and its management among myocardial infarction patients admitted in selected hospital by using Structured Knowledge Questionnaire.
2. To evaluate the effectiveness of programmed instruction on knowledge regarding myocardial infarction and its management among myocardial infarction patients admitted in selected hospital , Kolar
3. To find association between post test knowledge with selected socio-demographic variables like, age, sex, marital status, type of occupation, body mass index , family history of heart disorders, pre-existing history of hypertension, exposure to information on myocardial infarction within six month of period.

HYPOTHESIS

H1: There will be significant association between knowledge of patient regarding myocardial infarction and its management with selected socio-demographic variables like age, sex, previous exposure to condition.

METHOD

The research design selected for the study was descriptive study. The study sample consisted of patients who are admitted with myocardial Infarction in Narayana Hrudyalaya hospital, Kolar. The data was collected on 30 patients who are having myocardial infarction by using knowledge questionnaire.

RESULT

The study findings revealed that the knowledge level of study participants was moderate 73.3% and 23.3% of them have adequate knowledge and only 3.3% of them have inadequate knowledge.

The association between the knowledge scores and selected socio-demographic variables like age, gender ,marital status, educational status, place of residents, pre existing history of hypertension, exposure to MI with in 6 month of period were analyzed. The findings revealed that there is no significant association between the knowledge and socio-demographic variables like age, gender, education, pre existing history of hypertension , and exposure to MI within 6 month of period. The obtained x^2 value were less than the table value $p < 0.05$ level of significance.

Chapter–I

Chapter –I

<u>INTRODUCTION</u>

<u>I.Introduction</u>

"Udayannadya mithramaha

Arohannutharam divam

Hrdrogam mama surya

Harimanam cha nasaya"

-Let the rays of the rising sun destroy my heart diseases and pallor"

(R.V 1-50-11)

Traditionally, the heart is considered to be the seat of soul, centre of courage, treasure of love and affection, abode for soul and refuge for hatred too. All these are nearly literacy expressions and not far away from the physiologic truth.

The heart is one of the most important organ in the entire human body. It is really nothing more than a pump, composed of muscles which pump blood throughout the body, beating approximately 72 beats per minutes of our lives. The heart pumps the blood which carries all the vital materials which helps in our bodies function and removes the waste products that we do not need. For e.g.:- the brain requires oxygen and glucose, which if not received continuously, will cause lose consciousness. Muscles needs oxygen, glucose and amino acids as well as the proper ratio of sodium, calcium and potassium salts in order to contract normally. The glands need sufficient supply of raw materials to manufacture of specific secretions. If the heart ever ceases to pump blood, the body begins to shut down and after a very short period of time it will die. Heart beats represents the life and lack of it, pronounces death.

With the vast changes in the life styles of people, heart disease has become a major killer of man-kind. Cardio-vascular disease is the primary cause of mortality and morbidity all over the world. In the United States, it affects more than one in five people. Recent studies have shown a high prevalence

of cardio-vascular death among developing countries. Almost 700,000 people die of heart diseases annually all over the world. That is one death in every 44 seconds.

Many people assume that heart attack is just the pain in the heart and chest but it is the fat deposition which results in decreased supply of blood to heart muscles and therefore they die. The patient feels pain because our brain gives us a signal that our body has been damaged or something is wrong therefore, we should stop working what we are doing and do alternative action. Not all people who have heart attack experiences the same symptoms or at the same degree. Some people have no symptoms at all. So it is necessary to aware people about the symptoms of heart attack.

The ability to diagnose an imminent heart attack has long been considered the holy grail of cardio-vascular medicine. Being at the heart of the health care delivery is an enormous challenge for nurses, but it is also a golden opportunity to save the life of the patient.

Nursing staff are vital in delivering integrated care. As care coordinators they often work at the interface of health and social care systems and services. Combined with their clinical expertise, they have a unique insight into a patients holistic needs and can be adept at anticipating potential gaps between the needs of those they care for and the systems commissioned to deliver services. This places them in a key position, ensuring that effective systems and services are in place throughout the patient journey.

II. Need for the study

"He who cures a disease may be the skillfull, but he who prevents the disease is the safest Physician"

-Thomas Fuller

Heart disease is the number one killer all over the world. The most common cause of Heart disease is narrowing or blockage of the Coronary arteries, the blood vessels that supplies blood to the Heart itself. Myocardial Infarction is the leading killer of people all over the world. It has been estimated that every 10 patients die after getting Heart attack**,** mostly within 1 hour before medical aid can reach them.

Although risk for Myocardial Infarction are well published ,the people do not consider it as a threat, even when symptoms indicate, unfortunately this lack of knowledge probably contributes to their delaying care even patients with continuous attacks.

Myocardial Infarction is also known as "Heart attack". It happens when blood stops to flowing properly to part of the heart and the heart muscle is injured due to not receiving enough oxygen. Average incidence of Myocardial Infarction for those aged between 30 and 69 years is about 600 per 100,000 for men and 200 per 100,000 for women mortality rates after ST elevation ,Myocardial Infarction are equal at 30 days. If both sexes revice equivalent care mortality rates become significantly higher for women. Incidences increases with age and elderly people also tend to have higher rates of morbidity and mortality.

Yehetal identified 46,086 patients of 30 years of age or older who over hospitalized for myocardial Infarction between 1999 and 2008. Among new predictions for the new millaenium, the most alarming is heart disease and stroke in which coronary artery disease is becoming one of the leading causes of morbidity and mortality in developed countries.

Cardio –Vascular diseases remains a major health care problems and consumer of public health resources. over the past decades ,cardiologist have developed better treatment options and stratergies for cardiac patients ,thereby improving their patients future perspectives and prolonging survival.

Now a days the medical situation of the hospitalized cardiac patients is stable at a much point of time and may lead to earlier discharge.

Several studies have claimed that patient have unmet information, needs after discharge following acute myocardial infarction, this is the main reason for the   re- admission of the patients.

In this changing world ,the nurse practioner may be the ideal health care worker to create such a new environment and may facilitate improved awareness programme regarding heart attacks and thereby she can improve the patients safety.Nurse practioner can play an intermediate role between the attending Consultants and patients with this intermediatory role ,they will be able to combine the two aspects of care (nursing) and cure (physician).

The Hospital selected for the present study RL. Jalappa Narayana Hrudhayalaya is a seventy five bedded heart centre, which have the most modern cath lab, fully equipped operation theatre and an array of post intensive care units. Census shows that around 40% to 60% of patients are admitted here monthly and within this 50% of people are admitted with Myocardial Infarction, most of the patients are unaware about the importance of survival skills, the causes, risk factors, and also the management of Myocardial Infarction . The main objective for selecting this Hospital is, health education   and awareness programme can be conducted to the people coming from the neighboring villages of districts.(mainly from the Kolar and the Chickballapur district)

Based on the review of literature and in the light of above findings and the personal experience of the investigators in cardiac wards, many of the clients were unaware of the causes, risk factors and the management of Myocardial Infarction. Thus the investigators strongly felt that the need to explore the knowledge in preventing the further complications and the immediate management of clients with Myocardial Infarction to improve the quality of Life of the clients.

III.   Statement of Problem

"A study to assess the Effectiveness of Programmed Instruction on Knowledge regarding Myocardial Infarction and its Management among Myocardial Infarction Patients admitted in Selected Hospital, Kolar."

IV. Objectives

1. To assess the Knowledge regarding Myocardial Infarction and its Management among Myocardial Infarction Patients admitted in Selected Hospital by using Structured Knowledge Questionnaire.

2. To Evaluate the Effectiveness of programmed instruction on knowledge regarding Myocardial Infarction and its Management among Myocardial Infarction patients admitted in selected hospital, Kolar.

3. To find the association between post test knowledge with selected socio demographic variables like, age, sex, marital status, educational status, type of occupation, body mass index, family history of heart disorders, pre – existing history of hypertension, exposure to information on Myocardial Infarction within six month of period.

V. Assumption

1. The newly diagnosed MI patients will have some knowledge about the disease condition and its management.
2. A Programmed Instruction increases the level of knowledge about myocardial infarction and its management.
3. The socio demographic variables of MI patients will influence knowledge level.

VI. Hypothesis

H_1: There will be significant association between knowledge of patients regarding myocardial infarction and its management with selected socio demographic variables like age, sex, previous exposure to condition.

VII. Operational Definitions

1. **Knowledge:** It refers to the level of understanding of patients regarding myocardial infarction and its management as measured by the structured knowledge questionnaire.

2. **Effectiveness:** It refers to the improved knowledge score of patients regarding myocardial infarction and its management among MI Patients admitted in selected hospital as measured by structured knowledge questionnaire in post test.

3. **Programmed Instruction:** It refers to the process of systematically gathering, organizing the content for teaching programme on myocardial infarction and its management. The programmed instruction highlights on meaning, incidence, definition, risk factors, clinical features, medical and surgical management and its related complications.

4. **Patients:** In this study, patients refers to the individuals who are diagnosed and admitted with myocardial infarction in selected cardiac hospital, Kolar.

5. **Myocardial Infarction:** The term used to denote heart attack which is caused due to the lack of oxygen to the myocardium as result of decreased blood flow.

SUMMARY

This chapter explained on introduction about myocardial Infarction ,need for the study, statement of problem, objectives, assumption, hypotheses, and operational definitions, which helped the researcher to gain insight in to the depth of the research study.

Chapter–II

Review of literature
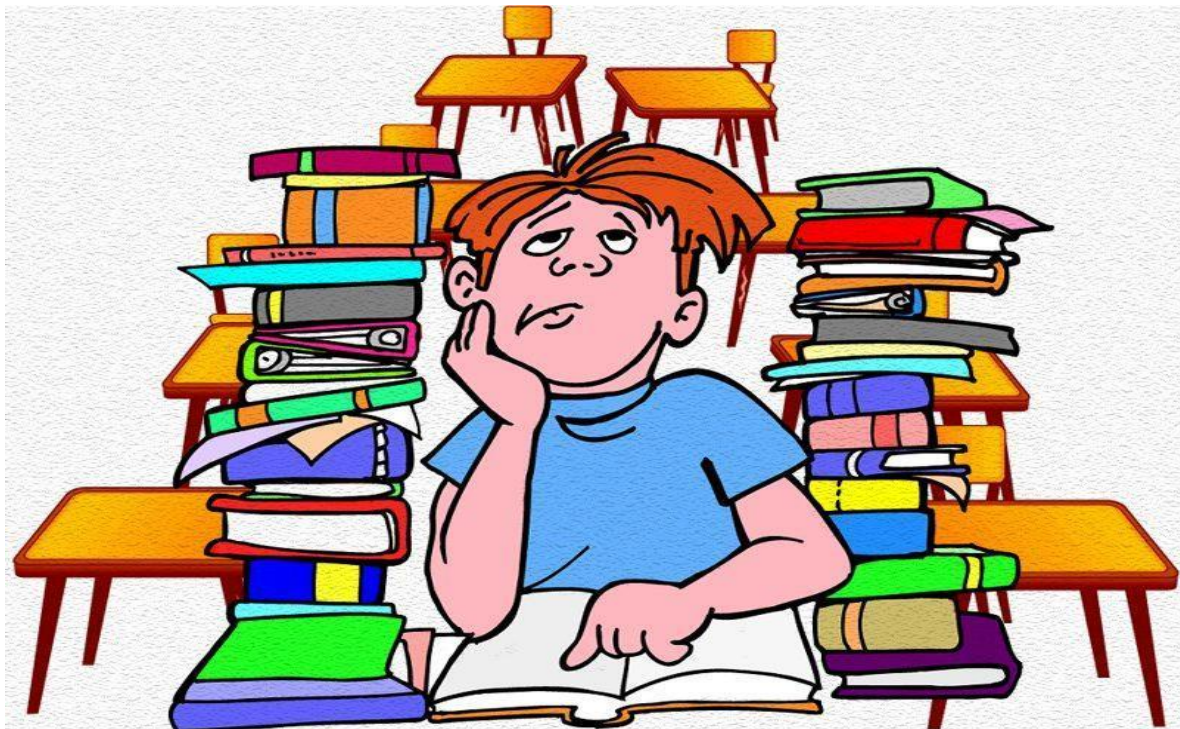
REVIEW OF LITERATURE

This chapter deals with selected studies which are related to the objectives of the proposed study. A review of research and non research literature relevant to the study was under taken which held the investigator to develop deeper insight into the problem and gain information on what have been done in the past.

The review of related literature is considered essential to all steps of the research process. The review of literature is a systematic and critical review of most important published scholarly literature as well as unpublished scholarly print materials and individual materials.

The literature was bring reviewed from text book, journals, electronic sources and articles for the present study were organized under the following headings.

Studies related to:-

1. **Studies related to Programmed Instruction**
2. **Studies related to assessment of knowledge of Myocardial Infarction patients.**

1. Studies related to programmed instruction

An experimental study was conducted to evaluate the effectiveness of programmed instruction on nursing management of patient having chest tube drainage among staff nurses working in Nehru Hospital, Chandigarh. Through random sampling technique 100 samples were selected. The findings showed that 76% of subject attained most satisfactory scores (17-26) post test, against 6% subject in the pre test attained this level. This relevant that the programmed instruction is highly effective in improving knowledge of staff nurses on nursing management of the patients having chest tube drainage.

A quasi experimental study was conducted to assess the effectiveness of programmed instruction on 12 leads ECG among staff nurses 6 wailer. Sixty staff nurse were randomly selected and a self administer questionnaire was given before and after the teaching programmed. Experimental group which received teaching showed the mean score from 41.60 to 79.91 and the control group which did not received the teaching scored from 39.71to 44.03.The study results showed that the teaching programme was effective in improving knowledge of staff nurse.

A randomized and quasi experimental study conducted in US in 2009 to determine the effect of brief programmed instruction on risk factor modification on diet modification on 7 on smoking cessation and 7 on multiple risk factors the result showed that there is suggestive but inconclusive evidence from the trial in the use of brief introduction for risk factor modification in patients with coronary heart disease.

The study was conducted to assess the effectiveness of teaching programme on osteoporosis among hospital aids. An evaluative approach was employed with pre- experimental one group pre- test, post-test design. The sample consist of 80 hospital aids selected using purposive sampling technique. The mean post test knowledge score $(x_1 = 31.19)$ was higher than the mean pre test knowledge score $(x_1 = 17.15)$. The pre test and post test score ranged from 24 to 37and that of the pre test ranged from 7 to 23 the mean difference between post test and pre knowledge score was highly significant $(t_{79} = 30.43)$ $(t_{79} = 1.66$ at 0.05 level). There was no significant association between pre test knowledge score and selected variables like age$(x^2_{(2)}=1.384)$, family income $(x^2_{(2)}= 2.043)$years of experience$(x^2_{(1)}=3.152)$ and education $(x^2_{(1)}=0.075)$ at p>0.05.

The study was conducted at the new building of Bangalore Institute of oncology. Staff nurse had the highest mean percentage (70%) in complication and it management concept and lowest (66%) in the area of concept with standard deviation of 1.1 and 1.5 respectively. The overall pre test knowledge mean percentage was 67%. Staff nurses had the highest mean percentage (91%) in the complication and its management and lowest

(85%) in the area of concept with slandered deviation of 1.2 and 1.6 respectively. The overall post test knowledge score was 87%. The data further supports that post test knowledge score. So there was 20%enchancement in the overall knowledge after the structural teaching programme. The statistical paired 't'test for overall knowledge was found as 8.5(p-value =0.0001) which emphasis that difference in pre test and post test knowledge score was found to be statistically significant at 0.0001 level. This implies that the teaching programme on care of patient with central venous access device among staff nurse is effective.

2. Studies related to assessment of knowledge regarding myocardial Infarction

A qualitative study at university in Philadelphia was conducted to determine the knowledge of patients regarding Myocardial Infarction total 30 patients particapted and questionnaire were use to determine the knowledge about patient with Myocardial Infarction . The finding reveals that practices that were not appropriate to their knowledge level also significant relationship was found between the selections of MI patients.

An experimental study was conducted in selected college in Punjab on I^{ts} year Bsc.nursing students to assess the knowledge the regarding MI on 48 students. The pre and post test were conducted using knowledge questionnaire. Thus research found that overall knowledge score of Ist Bsc. (N) students on MI shows that 82% of the student had adequate knowledge 10 of students had moderate knowledge and 8% of student had inadequate knowledge.

A quasi experimental study to assess the knowledge on MI among the patients in selected hospitals Andhra Pradesh. The pre- post tests were conducted using knowledge questionnaire. There research found that overall knowledge score in patients with selected hospital Andhra Pradesh show that maximum 28(80%) students had moderate knowledge 14% that is 5 patients have adequate knowledge after post test.

summary

This chapter explained on studies related to assessment on knowledge regarding Myocardial Infarction patients, and studies related to programmed instruction .Which helped the researcher to conducted the study easily.

Chapter –III

RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

Methodology of research organizes all the components of the study in a way that is most likely to valid answers to the sub problem that have been posed (Burns and grove,2002).Research methodology is the most important part in research . It is the frame work for conducting the study .This chapter deals with the description of the methods and different steps used for setting and organizing the data. It includes research approach and design, setting of the study, population, sample and sample technique, sample size criteria for sample selection, Data collection instrument, development of the tool

The present study aimed at assessing the effectiveness of programmed instruction on knowledge regarding the myocardial infarction and its management

RESEACH APPROACH AND DESIGN

The research approach for the study is one group pre- test and post test .It is more appropriated to measure the effectiveness of a programmed instruction on knowledge regarding myocardial infarction and its management. It was more suitable to achieve the objectives because the study is Non-experimental one.

SETTING OF THE STUDY

The setting is the location where a study conducted (Burns and Groove, 2002). The present study setting in the selected hospital of Narayana Hrudayalaya because of availability, feasibility and geographical proximity of the study participants

POPULATION

The population refers to the target, population which represents the entire group or all the elements like individuals or objects that meet certain for inclusion in the study. (Acc. To Burns and Groove)

The population in the study comprised of all patients with myocardial infarction and with the symptoms or diagnoses of myocardial Infarction who are admitted in Narayana Hrudyalaya hospital, kolar.

SAMPLE AND SAMPLING TECHNIQUE

Convenient sampling technique was used to select the sample.

SAMPLE SIZE

Sample refers to a portion of the population which represents the entire population. In this study the sample composed of 30 patients with myocardial infarction who admitted Narayana Hrudyalaya hospital kolar, were taken as sample for this study.

CRITERIA FOR SAMPLE SELECTION

The following were the inclusive and exclusive criteria for selection of the samples.

INCLUTION CRITERIA.

1. Patients who are newly diagnosed as myocardial infarction of selected hospital (Narayana Hrudyalaya, Kolar)
2. Patients who are willing to participate
3. Patients who are age between 25-above 50years
4. Patients who know Kannada or English.

EXCLUTION CRITERIA

1. Patients who are not willing to participate
2. Patients who are admitted in the selected hospital
3. Patients who are developed complication like mental disorientation , age above 80 yrs
4. Patients who are below 25 yrs

DATA COLLECTION INSTRUMENT

A Structured Knowledge Questionnaire is a method of gathering self report information from patients through the self administration of questionnaire in a paper and pencil format.

In this study, a Structured Knowledge Questionnaire used for data collection on knowledge of diagnosed and newly diagnosed myocardial infarction patients regarding the myocardial infarction and its management, in selected hospital, kolar and a planned teaching programme was administered to increase the knowledge regarding the myocardial infarction and its management.

VARIBLES

Variables are qualities properties or characteristics of persons things or situation that change or vary.

INDEPENDENT VARIABLES

Independent variable is the variables that stand does not depend on any other in this study the independent variables refers to programmed instruction. The independent variable used in this study is programmed instruction and its management.

DEPENDENT VARIABLES

The dependent variablesis the variables is interested in understanding. Explaining or predicting the dependent variable under study is knowledge of patients about myocardial infarction and its management.

DEVELOPMENT OF THE TOOL

Treece and Treece stated, the instrument selected in the research must he the vehicle that stins the best data for drawing conclution to the study.

A structured questionnaire was to be the appropriate technique for assessing the knowledge regarding myocardial infarction and its management of the diagnosed and newly diagnosed myocardial infarction patients. Based on the assumption they will have less knowledge regarding the myocardial infarction and its management.

DESCRIPTION OF THE STUDY

The adopted tool consists of the following sections

SECTION   A

Socio-demographic data; It include age, sex , gender, general education status and previous exposure to diagnosis of myocardial infarction

SECTION   B

Structured Knowledge Questionnaire to assess the knowledge regarding myocardial infarction and management.

Questionnaire consists of 30 statements on knowledge of patients with myocardial infarction and its management.

SCORE

Total number of Structured Knowledge Questionnaire -30

Each item had four potion, the score for correct response to each item was one, thus for 30 items maximum obtainable score 30 and minimum 0 grading score was done

KNOWLEDGE SCORE

Inadequate knowledge   -below 49%   (0-14)

Moderate knowledge   -50-75 %   (15-22)

Adequate knowledge   -above 75%   (>23)

PILOT   STUDY;-

   Pilot study was conducted on 30 samples, and it was found that study sample, setting and the tool was found to be feasible and reliable.

DATA COLLECTION PROCEDURE

   The data was collected from 10/07/2014 to 19/07/2014

1. Pre –preparatory phase : A formal written permission as obtained from the head of the institution , Sri Devaraj Urs College of Nursing, Tamaka, Kolar by using   simple random technique 30 clients diagnosed and admitted with myocardial Infarction were selected who fulfilled the inclusion criteria .

2. Data collection phase: The data was collected using the structured interview schedule which was developed by the investigators. 20 minutes spent with each client for collecting the data.

PLAN FOR DATA ANALYSIS

The analysis of data requires a number of closely operations such as establishment of categories, the application of these categories to raw data through coding, tabulation.

The data obtained was analyzed by descriptive and statistics in achieving the objectives of the study.

The data analysis was done by the following steps.

1. Organization of data in master sheet.
2. Socio- demographic data were analyzed in form of frequency and mean percentage.
3. Calculation of mean and standard deviation of knowledge score inferential statistics.

ETHICAL CLEARANCE

Ethical clearance was obtained from the institution ethical committee, Sri Devaraj Urs College of Nursing; to conduct the study permission was obtained from the Nursing Supreintendent and Administrative officer of Narayana Hrudyalaya heart center. Informed consent is taken from the objects before the study.

SUMMARY

This chapter of methodology has dealt on research approach ,research design , setting , population, sample and sampling technique ,development and description of the tool and plan for data analysis.

Chapter –IV

DATA ANALYSIS AND INTERPRETATION

Data Interpretation

CHAPTER –IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data gathered to assess the knowledge regarding the pre and post test myocardial infarction and its management among myocardial infarction Patients admitted in selected hospital, Kolar.

The data was obtained from 30 study participants of Narayana Hruydhalaya hospital, Kolar. The data was processed and analyzed using descriptive and inferential statistics on the basis of the objectives of the study and hypotheses formulated for the present study.

Data analysis is defined as the systematic organization and synthesis of research data and the testing of research hypothesis using the data.

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding myocardial infarction and its management among myocardial infarction patients admitted in selected hospital, Kolar by using Structured Knowledge Questionnaire.
2. To evaluate the effectiveness of programmed instruction on knowledge myocardial infarction and its management among myocardial infarction patients admitted in selected hospital, Kolar.
3. To find out the association between post test knowledge with selected socio demographic variables like, age, sex, marital status, educational status, type of occupation, body mass index, family history of heart disease, pre-existing history of hypertension, exposure to information on myocardial infarction within six month of period.

HYPOTHESES

H1: There will be significant association between knowledge of patient regarding myocardial Infarction and it management with selected socio-demographic variables like, age, sex, previous exposure to condition.

ORGANIZATION OF STUDY FINDINGS

The analyzed data is organized and presented under the following sections

Section- 1

This section deals with the data pertaining to socio-demographic characteristics of study participants

Section II

This section deals with the data pertaining to knowledge level of study samples regarding the pre and post test on myocardial Infarction and its management

Section-III

This section deals with the association between pre and post test knowledge score and selected socio-demographic variables.

SECTION –I

Socio- Demographic Variables of Study Sample

This section deals with the data pertaining to socio-demographic characteristics of study participants.

Table –I

Frequency and percentage distribution of study participants according to their socio-demographic variables.

N=30

SI No.	Variables	Frequency	Percentage
1.	Age in years a) 20-29 yrs b) 30-39 yrs c) 40-49 yrs d) 50 and above	- 2 9 19	- 7 13 63
2.	Sex a) Male b) Female	20 10	67 33
3.	Marital status a)Married b)Unmarried	27 3	90 10
4.	Educational status a)Literate b)Illiterate	12 18	40 60
5.	Place of residence a)Urban b)Rural	15 15	50 50
6.	Type of occupation a)Heavy work b)Moderate work c)Industrial work	8 20 2	26 67 7
7.	Body mass index a)Normal b)Under weight c)Over weight d)Very obese	25 0 3 2	83 0 10 7
8.	Family history of heart disease a)Yes b)No	10 20	33 67

9.	Any pre-existing history of hypertension a)Yes b)No Exposure to information on MI within 6 months a)Yes b)No	11 19	37 63

Data presented in table-1 describes the following socio-demographic variables:-

1. **Age**

    Majority 63% of the study participants were under the age group of 50 and above and 30%of them under 40-49 yrs and only 7% of them were belongs to the age group of 30-39.

2. **Sex**

    Majority 67% of myocardial patients were males and 33%of myocardial patients were females.

3. **Marital status**

    Majority 90% of the myocardial patients were married and only 10% of them are unmarried.

4. **Educational status**

    Majorities 60% of myocardial patients were illiterate and 40% of them are to literate.

5. **Place of residence**

    This study consisted of participants in which 50% of patients were from rural area and 50% of them were from urban area.

6. **Type of occupation**

    Majority 67% of myocardial patients doing moderate work and 26% of them were doing heavy work and only 7% of them are doing industrial work.

7. Body mass index

Majority 83% of myocardial patients belongs to normal body weight and 10% of them are having over weight and only 7% of them are very obese.

8. Family history of heart disease.

Majority 67% myocardial patients are not having family history of heart disease. Only 33% of them are having family history of heart disease.

9. Pre-existing history of Hypertension.

Majority 64% myocardial patients are not having history of hypertension and only 36% of them are having previous history of hypertension.

10. Exposure to MI with in 6 month of period.

The majority 80% of them are not having history of previous MI within 6 month of period. And Only 20% of them are having history of MI within last 6 months.

Table II: Distribution of study participants according to level of knowledge

Aspect	Grade	Respondents			
		Pre- test		Post- test	
		Frequency	%	Frequency	%
Knowledge score	Inadequate (<49%)	30	100%	1	3.3%
	Moderate (50-75%)	0	0	22	73.3%
	Adequate (>75%)	0	0	7	23.33
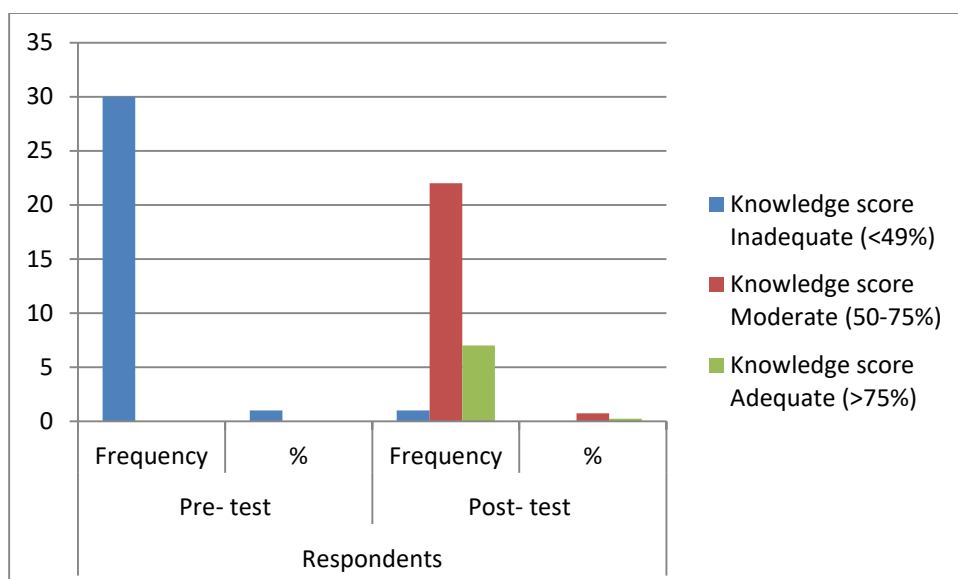
Fig 1 : Distribution of study participants according to level of knowledge

Table II, Majority 100% of study participants were having inadequate knowledge, none of them having moderate or adequate knowledge in pre test

Note: Key for grade of knowledge assessment

a) Adequate knowledge (23 and above score)-above 75%
b) Moderate knowledge (15-22 scores) -50-75%
c) Inadequate knowledge (0-14 scores)-below 49%

SECTION II

Table 3: Area wise pre test mean percentage knowledge score of study participants.

SI NO	Area wise knowledge	No. of items	Max. score	Range	Mean	Mean %	Standard Deviation
1	Anatomy and physiology of heart	4	4	1-3	1.4	35%	0.71
2	Meaning of MI	2	2	1-2	0.5	25%	0.55

3	Causes of MI	2	2	1-2	0.63	31.5%	0.59
4	Risk-factors of MI	3	3	1-3	1.16	**38.6%**	0.63
5	Pathophysiology of MI	2	2	1-2	0.53	26.5%	0.61
6	Signs and symptoms of MI	6	6	1-4	1.96	32.6%	**0.89**
7	Assessment and diagnosis of MI	3	3	1-2	0.76	25.3%	0.66
8	Management of MI	4	4	1-3	1.43	7.15%	0.80
9	Home care management of MI	4	4	1-3	1.26	31.5%	0.76

Table3: Reveals that the highest mean percentage (38.6%) of knowledge was in the area of risk factors of MI. The lowest mean percentage (7.15%) was in the area of knowledge score on question related management of Myocardial infarction.
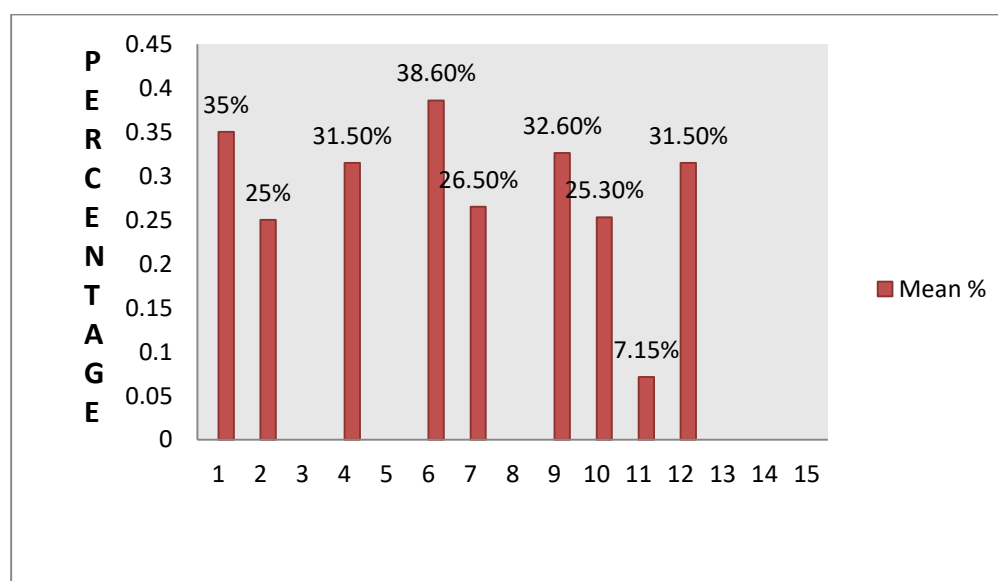
FIGURE 1:

TABLE –IV

Area wise analysis of pre test and post test knowledge score

SI NO	Area wise knowledge	Pre test	knowledge	Post test	knowledge	
		Mean	SD	Mean	SD	t Value
1.	Anatomy & physiology of heart	1.4	0.71	2.8	0.99	1.77
2.	Meaning of MI	O.5	0.55	1.5	0.61	0.05
3.	Causes of MI	0.63	0.59	1.3	0.66	3.34
4.	Risk factors of MI	1.16	0.63	1.5	0.61	2.4
5.	Pathophysiology of MI	0.53	0.61	0.4	0.75	3021
6.	Signs and symptoms of MI	1.96	0.89	4.1	1.21	3.05
7.	Assessment and diagnosis	0.76	0.66	2.4	0.49	3.34
8.	Management of MI	1.43	0.80	2.8	0.00	2.94
9.	Home care management of MI	1.26	0.76	3.4	0.76	3.31

Chi-square test showing association of post-test level of knowledge score with selected Socio-demographic variables.

Sl no	Demographic variables	Response	Overall knowledge		Df	Chi-Square value	Inference
			Above median ≥22	Below median ≤22			
1	Gender	Male	13	7	1	0.62	**p>0.05 NS**
		Female	5	5			
2	Educational status	Literate	7	5	1	0.02	**p>0.05NS**
		Illiterate	11	7			
3	Place of residence	Urban	9	8	1	1.06	**p>0.05 NS**
		Rural	6	7			
4	Family history of health disease	Yes	5	5	1	1.15	**p>0.05 NS**
		No	6	14			
5	History of Hypertension	Yes	6	5	1	0.57	**p>0.05 NS**
		No	13	6			

NOTE: -

P-Value (0.05), S.S - Statistically significant, N.S- Non Significant Table value - 3.84 (df-1)

Association of demographic variables with knowledge score

a) <u>Gender</u>

The obtainedx2 value (0.62) which is lesser the table value (3.84) at p>0.05 level of significance. Hence there is no significant association between and gender with knowledge scores. Thus the alternate hypothesis was rejected.

b) **Educational status**

      The obtained X2 value (0.02) which lesser the table value (3.84)at p>0.05level of significance ,hence there is no significant association

between educational status and knowledge score .Thus the alternate hypothesis was rejected

C) Place of residence

The obtained x^2 value (1.06) which is lesser the table value (3.84) at p>0.05 level of significance. Hence there is no association between the place of residence and knowledge score thus the alternate hypothesis was rejected.

d) Family history of heart disease

The obtained x^2 Value (1.15) which lesser the table value (3.84) at p>0.05 level of significance. Hence there is no significant association between the family histories of heart disease. Thus the alternate hypothesis was rejected.

e) History of hypertension

The obtained x^2 Value (0.57) which is lesser than the table value (3.84) at 0.05 level of significance. Hence there is no association between the history of hypertension with knowledge score. Thus the alternate hypothesis was rejected.

SUMMARY

This chapter deals with statistical analysis regarding demographic variables, the association between the knowledge on myocardial Infarction and its management The study findings shows that knowledge score is ( ). There is no association between the level of knowledge score with selected demographic variables like gender, educational status, place of residence, family history of heart disease, history of hypertension. Thus the alternate hypothesis was rejected.

Chapter –V

CONCLUSION

CHAPTER- V

CONCLUSION

This chapter deals presents the major findings of the study, the conclusion drawn, implication, suggestion and recommendations.

This study was aimed at assessing the knowledge regarding Effective teaching programme among Myocardial Infarction patients in Narayana Hrudhyalaya hospital. A descriptive design is used for the study. The data was collected from 30 patients regarding effectiveness use of teaching programme.

The major findings of the study are:

1. In term of socio-demographic variables, majority 19(63%) of study participants belongs to the age group of 50 and above and 9(30%) belongs to the age group of 40-49 years. Only 2(7%) belongs the age group of 30-39 years.
2. In this study, 20(67%) were males and only 10(33%) were females.
3. Majority 27(90%) of them married and 3(10%) of them unmarried.
4. In this study 18(60%) were illiterate and only 12(40%) were literate.
5. In this study 50% of them from urban area and 50% of them from rural area.
6. Majority 20(67%) of them doing moderate work 8(26%) of them doing heavy work only 2(7%) of them doing industrial work.
7. In this study 25(83%) of them have normal body weight, 3(10%) of have over weight and 2(7%) of very obese, none of them are in underweight.
8. In this study, 20(67%) of them not have any family history of heart disease, only 10(33%) of having family history of heart disease.
9. Majority 19(63%) are not having any pre-existing history of hypertension. Only 11 (37%) of them having pre-existing hypertension.
10. In this study, 24(80%) 0f study participants not exposed to MI with in 6 month of period, only 6(20%) of them expose to MI with in 6 month of period.

The overall knowledge scores reveals that majority of patients were having inadequate knowledge on Myocardial Infarction and its

management, thus it lead to fail identify the problem, diagnosis, and inappropriate care which endangers the life of the client.

The association between the knowledge scores and demographic variables like gender, educational status, place of residence, pre-existing history of hypertension and exposure to MI with in 6 month of period. The findings revealed that there is no significant association between the knowledge and socio-demographic variables like gender, the obtained value $x^2(0.62)$ was less than the table value (3.84) at 0.05 level of significant. There was no significant association between previous history of hypertension. There was no significant association between the history of heart disease, the obtained x^2 value is 1.15 was less than the value (3.84) at 0.05 level of significant. There was no significant association between educational status and place of residence.

Implication of the study

The study findings has implication in the following area of nursing profession

Nursing Implication

The Medical Surgical Nursing curriculum needs to be recognized to enable nursing personnel to identify the Myocardial Infarction patients so as to provide improved awareness programme to explore the knowledge in preventing the further complications and the immediate management of clients with Myocardial Infarction.

As a nurse educator, there is opportunity, in ample measure ,for the nursing personnel to educate the Myocardial Infarction patients and to provide care in the clinical setting.

The study emphasizes the significance of the short term course for in service education for nurses in advanced knowledge on care of Myocardial Infarction patients and in making use of facilities available in the management of Myocardial Infarction.

Nursing Practice

Nursing professionals working in the hospital setting will be able to find oppurtunities to teach and improve the knowledge of the patients regarding the selected aspects of Myocardial Infarction during their working hours.

Nurses should place health in the hands of the patients as they are in need of immediate and long term care. The programmed instruction developed by the Nurses to educate the Myocardial Infarction patients to improve the quality of the life of clients.

Nursing Administration

The Nursing Administrator should take part in the making of health policy, development of protocols and standing orders with respect to Myocardial Infarction.

The Nursing administrator should concentrate on the proper selection, placement and effective utilization of the nurse in all areas giving opportunity for creativity ,creating interest and enhance ability in educating the Myocardial Infarction patients.

Nursing Research

The study helps the nurse researchers to develop insight into the development of teaching module and material for Myocardial Infarction patients towards promotion of quality of life and the selected aspects of Myocardial Infarction.

Limitations

:-The study findings cannot be generalized as the sample size was only 30.

:-The study was limited to Myocardial Infarction patients who were admitted at R.L.J. Narayana Hrudayalaya .

:-The study did not use any control groups.

Recommendations
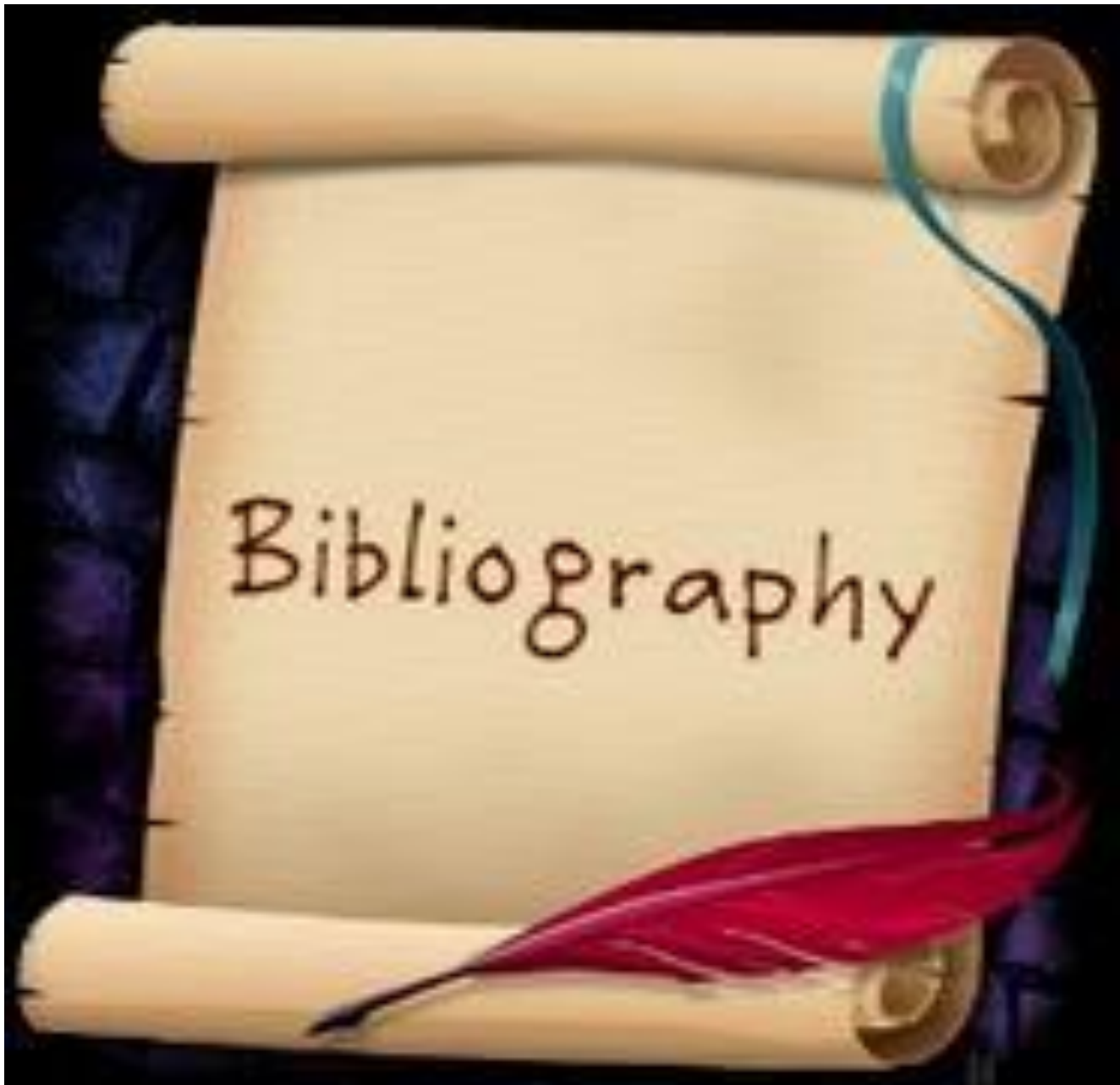
On the basis of findings of the study , the following recommendations are being made.

- ❖ A similar study can be replicated on a large sample to generalize the findings.
- ❖ An experimental study can be undertaken with control group for effective complication.

A comparative study can be undertaken to compare the findings from the rural and urban area.

Conclusion

Every client had the eageraers to have the clear explanation about their diseases .Nurses are primary care givers and educators .Adequate information, motivbation and counseling are essential to impart knowledge, to practice disseminate that knowledge to needed ones. The present study mainly emphasis on the knowledge of Myocardial Infarction patients regarding Myocardial Infarction and its management in maintaining quality of life

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APPENDICES

LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH TOOL

From,
IV th year BSc (N) Students
Sri Devaraj Urs College of Nursing
Tamaka, Kolar.

To,
The principal
Sri Devaraj Urs College Of Nursing
Tamaka, Kolar

Respected Sir/ Madam,

Sub: Requesting for opinions and suggestions of experts for establishing content validity of research tool with Programmed Instruction.

We the IVth year BSc (N) Students of Sri DEVARAJ Urs College of Nursing Tamaka, Kolar has selected below mentioned topic for research project to be submitted to Sri Devaraj Urs of Nursing, Tamaka, Kolar as a fulfillment of Bachelor of Science in Nursing Degree.
Title of the topic:

   "A Study to assess the Effectiveness of Programmed Instruction on Knowledge regarding Myocardial Infarction and its Management among Myocardial Infarction Patients in Selected hospital, Kolar."

With regards to the above matter we kindly request you to validate our tool for its appropriateness and relevancy; we are enclosing the objectives of the study, structured knowledge questionnaire, criteria rating scale, programmed instruction material for your kind consideration.

We would be highly obliged and remain thankful for your help preferable if you validate as early as possible.

  Thanking you   yours sincerely,
                                                                    Ms. Asha Monica
                                                                    Ms. Ashlymol James
Enclosures;   Ms. Feba Elizabeth Jose
  Objectives of the study   Ms. Jyothi Mary Kurian
  Structured Knowledge Questionnaire   Ms. Kusuma S K
                                                                    Ms. Nivya Varghese
                                                                    Ms. Sumitha B

CRITERIA RATING SCALE FOR VALIDATING THE STRUCTERED KNOWLEDGE QUESTIONNAIRE ON MYOCARDIAL INFARCTION AND ITS MANAGEMENT AMONG CARDIAC PATIENTS.

Dear Madam/Sir,

Kindly go through the tool content; give your opinion in this column given in the criteria table against to each question, please give your valuable suggestions.

SECTION-A   SOCIO DEMOGRAPHIC DATA

Sl. No	Item	Very Relevant	Relevant	Need Modification	Not Relevant	Remarks
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
1.10						

SECTION-B STRUCTURED KNOWLEDGE QUESTIONNAIRE

Sl. No	Item	Very Relevant	Relevant	Need Modification	Not Relevant	Remarks
A.	**General questions related to anatomy and physiology of heart.**					
2.1						
2.2						

2.3					
2.4					
B	**Questions related to meaning of MI**				
2.5					
2.6					
C	**Questions related to causes of MI**				
2.7					
2.8					
D	**Questions related to risk factors**				
2.9					
2.10					
2.11					
E	**Questions related to pathophysiology of MI**				
2.12					
2.13					
F	**Questions related to signs and symptoms of MI**				
2.14					
2.15					
2.16					
2.17					
2.18					
2.19					

G	**Questions related to assessment and diagnosis**				
2.20					
2.21					
2.22					
H	**Questions related to management of MI**				
2.23					
2.24					
2.25					
2.26					
I	**Questions related to homecare management**				
2.27					
2.28					
2.29					
2.30					

GENERAL COMMENTS:

Date:

Place:

Signature of expert with Designation

ANNEXURE

Structured Knowledge Questionnaire on Myocardial Infarction and its Management

Instructions

Dear participants

we kindly request you to answer the questions regarding Myocardial Infarction and its management with the most appropriate answer, Each correct answer for the following questions except section A carries (1) mark, The Wrong Answers carried (0) mark. The information that you have given us will be kept confidential.

The knowledge questionnaire consist of two sections

Section A: consist of socio demographic data.

Section B: consist of structured knowledge questionnaire

<u>SECTION – A: Socio-Demographic Data</u>

1. Age in years

        a) 20 -29 years   { }

        b) 30 -39 years   { }

        c) 40 -49 years   { }

        d) 50 and above   { }

2. Sex

        a) Male   { }

        b) Female   { }

3. Marital status

     a) Married   { }

     b) Unmarried   { }

4. Educational status

     a) Literate   { }

     b) Illiterate   { }

5. Place of residence

     a) Urban   { }

     b) Rural   { }

6. Type of occupation

     a) Heavy work   { }

     b) Moderate work   { }

     c) Industrial work   { }

7. Body mass index

     a) Normal   { }

     b) Underweight   { }

     c) Over weight   { }

     d) Very obese   { }

8) Family history of heart disease

     a) Yes   { }

     b) No   { }

If yes specify………….

9) Any pre-existing history of hypertension

    a) Yes   { }

    b) No   { }

10) Exposure to information on myocardial infarction within 6 months period

    a) Yes   { }

    b) No   { }

A. General questions related to anatomy and physiology of heart

1. Heart is situated in……………

    a) Thoracic cavity   { }

    b) Abdominal cavity   { }

    c) Pelvic cavity   { }

    d) Cranial cavity   { }

2. Heart gets its blood supply through,

    a) Carotid arteries   { }

    b) Pulmonary arteries   { }

    c) Thoracic arteries   { }

    d) Coronary arteries   , { }

3. High blood pressure can be considerd as,

    a) Above 110/70 mm of hg   { }

    b) Above 120/80 mm of hg   { }

    c) Above 140/90 mm of hg   { }

    d) Above 150/110 mm of hg   { }

4. Covering of the heart chamber is called,

     a) Myocardium   { }

     b) Pericardium   { }

     c) Endocardium   { }

     d) All of the above   { }

B. Questions related to meaning of myocardial infarction

5. Myocardial infarction is commonly known as,

     a) Heart attack   { }

     b) Chest Pain   { }

     c) Narrowing of the Heart   { }

     d) Infection of inner covering of Heart   { }

6) Myocardial infarction is the result of,

     a) Decreased oxygen and blood supply to the heart   { }

     b) Decreased oxygen supply   { }

     c) Decreased blood supply   { }

     d) Decreased electrolytes   { }

C. Causes and risk factors of myocardial infarction

7. Increased demand for………. Leads to myocardial infarction

     a) Oxygen and blood   { }

     b) Lipids   { }

     c) Electrolytes   { }

     d) Vitamins   { }

8. Myocardial infarction is caused by,

     a) Thickening of arteries   { }

     b) Clot formation   { }

     c) Stress and Anxiety   { }

     d) All of the above   { }

9. The risk factors in development of Myocardial Infarction which we can't be modify is,

     a) Hypertension   { }

     b) Obesity   { }

     c) Family history   { }

     d) Diabetic mellitus   { }

10. The risk factors in development of myocardial infarction which can be modify is,

     a) Family history   { }

     b) Obesity   { }

     c) Male gender   { }

     d) All of the above   { }

11. Myocardial infarction can be commonly seen in person who has

     a) Normal weight   { }

     b) Under weight   { }

     c) Obese person   { }

     d) All of the above   { }

D. Questions related to pathophysiology of myocardial nfarction

12.Myocardial infarction is caused mainly due to permanent destruction of………… layer

      a) Outer layer   { }

      b) Middle layer   { }

      c) Inner layer   { }

      d) All of the above   { }

13. Decreased blood flow to heart leads to ………………..

      a) Decreased oxygen supply   { }

      b) Decreased blood supply   { }

      c) Decreased electrolytes   { }

      d) Decreased nutrients   { }

E. Questions related to signs and symptoms of myocardial infarction

14. First symptoms of myocardial infarction is …………………….

      a) Headache   { }

      b) Chest pain   { }

      c) Fever   { }

      d) Septic shock   { }

15. Inadequate Blood Flow to the Brain leads to …………………

      a) Loss of Consciousness   { }

      b) Head Injury   { }

      c) Impaired Vision   { }

      d) All of the above   { }

16. Among this the symptoms seen during myocardial infarction is……….

    a) Nausea and vomiting   { }

    b) Gastritis   { }

    c) Abdominal pain   { }

    d) Abdominal cramps   { }

17. During myocardial infarction the breathing pattern of the person will be,

    a)Very fast   { }

    b)Very slow   { }

    c)Stopped   { }

    d)Normal   { }

18. During myocardial infarction urinary output will be,

    a)Increased   { }

    b)Decreased   { }

    c)Stopped   { }

    d)Irregular   { }

19. At the time of myocardial infarction your skin will be,

    a)Very cold   { }

    b)Very hot   { }

    c)Sweating   { }

    d)Blue colored   { }

G. Questions related to assessment and diagnosis

20. Diagnosis of the Myocardial Infarction is based on,

  (a)Presenting symptoms and laboratory test result   { }

  (b)Patients and relatives information   { }

  (c) Physical examination   { }

  (d) All of the above   { }

21. In Myocardial Infarction ECG is done to evaluate,

  (a) Increased Blood pressure   { }

  (b) Shortness of Breath   { }

  (c) Heart function   { }

  (d) Increased sugar level   { }

22. After Myocardial Infarction ECG should be obtained with in…………..

  (a) 10 minutes   { }

  (b) 20 minutes   { }

  (c) 60 minutes   { }

  (d) After 1 hour   { }

H. Questions related to management of Myocardial Infarction

Medical management

23. In Myocardial Infarction medications are mainly given to,

  (a) To treat the symptoms e.g. Chest pain   { }

  (b) To decrease the blood pressure   { }

  (c) To enhance the blood supply   { }

  (d) All of the above   { }

24. In Myocardial Infarction medication should be taken ………….

      (a) Regularly   { }

      (b)Whenever needed   { }

      (c)At the time of attack   { }

      (d)None of the above   { }

I. Surgical Management of Myocardial Infarction

25. The purpose of surgery in Myocardial Infarction is to,

      (a) Medical management is not effective   { }

      (b) Removal of block is required immediately   { }

      (c) As a life-saving therapy   { }

      (d) All of the above   { }

26. The common surgical procedure done for myocardial patients is to,

      (a) To remove the block   { }

      (b) To increase blood flow   { }

      (c) To increase oxygen supply   { }

      (d) All of the above   { }

I. Questions related to Home management

27. After discharge you are allowed to do,

      (a) Simple work   { }

      (b) Heavy work   { }

      (c)Industrial work   { }

      (d) All of the above   { }

28. After discharge the food that you should avoid is,

   a) Sodium   { }
   b) Vitamin   { }
   c) Calcium   { }
   d) None of the above   { }

29.You should avoid the habit of----------

   a) Smoking and alcoholism   { }
   b) Morning walk   { }
   c) Meditation and yoga   { }
   d) All of the above

30. You should avoid hard stools as it causes pressure over

     (a) Stomach   { }

     (b) Liver   { }

     (c) Surgical site   { }

     (d) Kidney   { }

ANSWER KEY

1. a	11. c	21. c
2. d	12. b	22. a
3. c	13. a	23. d
4. a	14. b	24. a
5. a	15. a	25. d
6. a	16. a	26. a
7. a	17. b	27. a
8. b	18. b	28. a
9. c	19. a	29. a
10.b	20. a	30. c

ANNEXURE

EXPERTS ADDRESS

1. **Dr. G.Vijayalakshmi**
   Principal
   SDUCON
   Tamaka, Kolar.

2. **Prof. M.S. Radha**
   Vice. Principal and HOD of
   CHN department
   SDUCON
   Tamaka, Kolar.

3. **Prof. Silvia Surekha**
   HOD of OBG department
   SDUCON
   Tamaka, Kolar.

4. **Prof. Mary Minerva**
   HOD of CHN department
   SDUCON
   Tamaka, Kolar.

5. **Mrs. Jairakini Aruna**
   HOD of MHN department
   SDUCON
   Tamaka, Kolar.

6. **Mrs. Malathi K. V**
   Lecture
   SDUCON
   Tamaka, Kolar.

ANNEXURE

FORMULA USED FOR THE ANALYSIS OF DATA

1. **Mean=** $\dfrac{\sum X}{N}$

2. **Standard Deviation=** $\dfrac{\sum d^2}{N}$

3. **Chi-square** $x^2 = \dfrac{\sum (O-E)^2}{E}$

ANNEXURE

LESSON PLAN

Specific objectives	Time	Content matter	Teachers and learners activity	Visual aids	Evaluation

		INTRODUCTION
		    You can feel your heart thudding away every time you put your hands to your chest, but you have any idea what's really going on in there or what keeps your heart ticking as it's should?
		        Every day, your heart beats about 100,000 times sending 2,000 gallons of blood surging through the body. All the its not bigger than your fist, your hearts has the mighty job of keeping blood flowing through the 60,000 miles of blood vessels that feed your organs and tissues. Any damage to the heart or its valves can reduces that pumping power, forcing the heart to work harder just to keep up with body demands for blood.
		        If you are like most people, you think that heart disease is a problem for others. But heart disease is the number one killer allows the world. The most common cause of heart diseases is narrowing or blockage of the coronary arteries, the			

| | | blood vessels that supply blood to the heart itself. | | | |

blood vessels that supply blood to the heart itself.

Myocardial Infarction is the leading killer of people all over the world. It has been estimated that every two patients die after getting heart attack, mostly within one hour before medical aid reach them.

Although risk for myocardial infarction are well published, the people do not consider as a threaten when symptoms indicate unfortunately, this lack of knowledge probably contributes to their delaying seeking care even patients with consecutive attack.

ANATOMY AND PHYSIOLOGY OF THE HEART

1. Heart is situated in thoracic cavity and gets its blood supply through coronary arteries, which arises from the aorta.
2. The coronary circulation depends upon the internal diameter of coronary arteries, volume of the blood and the diastolic phase of the Heart.
3. The vasomotor centre is situated in the Medulla oblongata.
4. The left coronary artery supplies to all left chambers of the Heart except Right atrium and divides into left anterior descending branch and circumflex branch.
5. The Coronary artery supplies blood to all the chambers of the Heart except Left atrium and it divides into posterior inter ventricular branch and marginal

		branch. 6. For adequate blood flow through the coronary arteries, the diastolic pressure, must be atleast 60mm of Hg **MEANING OF MYOCARDIAL INFARCTION** Myocardial infarction(from Latin:-Infarctus Myocardii,MI)or acute myocardial infarction(AMI) is the medical term for an event commonly known as a Heart Attack. It happens when blood stops flowing properly to part of the heart and the heart muscle is injured due to not receiving enough oxygen. **DEFINITION OF MYOCARDIAL INFARCTION** The term Myocardial Infarction focus on the myocardium and the changes that occurs in it due to the sudden deprivation of circulating blood. (Medical dictionary.com) **RISKFACTORS** Non –Modifiable Risk factors:- -Family history -Increasing age -Race -Male gender Modifiable Risk factors:- -Blood Lipid level abnormalities -Diabetes mellitus -Hypertension -Physical inactivity -Obesity			

| | | -Cigarette smoking
-Alcohol consumption.

PATHOPHYSIOLOGY
    In an myocardial infarction, an area of myocardium is permanently destroyed.
    Myocardium Infarction is usually caused by reduced blood flow in a coronary artery due to rupture of Atherosclerotic plague and subsequent occlusion of artery by the Thrombus. other causes of myocardium infarction are vasospasm of coronary artery, decreased oxygen supply and increased demand for oxygen. In each case a profound imbalance exists between myocardial supply and demand. The area of infarction develops over minutes to hours. as the cells depreved of oxygen, ischemia develops and cellular injury occurs and lack of oxygen result in infarction.

CLINICAL MANIFESTATION

CARDIOVASCULAR
:- Chest pain or Discomfort, Palpitation
:- Increased Blood pressure
:- Pulse deficit
:- ST segment and T wave changes

RESPIRATORY
:- Shortness of breath
:- Tachyponea
:- Crackles | | | |

		:- Pulmonary edema			
		GASTRO INTESTINAL :-Nausea and vomiting			
		GENITO URINARY :-Decreased urinary output indicates cardiogenic shock			
		SKIN :-Cool, clamy, Diaphoretic and pale appearance due to sympathetic stimulation may indicate cardiogenic shock.			
		NEUROLOGIC :- Anxiety, restlessness, light headedness			
		PSYCHOLOGICAL :- Fear with feeling of impending doom			
		ASSESSMENT AND DIAGNOSTIC FINDINGS The diagnosis of Myocardial Infarction is based on the presenting symptoms and laboratory test results. The prognoses depend on the severity of coronary artery obstruction and extend of Myocardial damage. Physical examination is always conducted but the examination alone does not confirm the diagnosis. PATIENT HISTORY:-			

The patient history has two parts:-The description of presenting symptoms and the history of previous illness and family history of heart disease. Previous history also included the risk factors of heart disease.

ELECTROCARDIOGRAM:-

The ECG provides the information that assist in diagnosing acute Myocardial Infarction .It should be obtained within 10minutes time from the time the patient reports the pain or arrival the emergency department. By monitoring ECG changes overtime, the location, evolution, resolution, of an Myocardial Infarction can be identified and monitored.

ECHOCARDIOGRAM:-
The echocardiogram is used to evaluate ventricular function. It may be used to assist in diagnosing an Myocardial Infarction especially when ECG is not diagnostic. The ECG can deviate hypokynetic and akinetic wall motion and can determine the ejection fraction.

LABORTARY TEST

:- Creatinine kinase and its isoenzymes
:- Myoglobin

:- Troponin

COMPLICATION

* Acute pulmonary edema
* Heart Failure
* Cardiogenic Shock
* Dysrhythmias
* Pericardial effusion
* Myocardial Rupture

MEDICAL AND SURGICAL MANAGEMENT

It focuses on reducing the workload of heart, relieving pain, improving tissue perfusion, preventing complications and further tissue damage. Immediately after Myocardial Infarction, a client is admitted to a coronary unit .The client heart is constantly monitored for dysarrhythmias. The clients vital signs are monitored by arterial line for Hemodynamic monitoring or non – invasive BP monitoring system.

PHARMACOLOGICAL THERAPY

The patient with Myocardial infarction is given Aspirin, Nitroglycerin, Morphine, and Beta –blockers initially throughout the hospitalization and after discharge. This medications decreases the incidence of future cardiac events.

THROMBOLYTICS

The medications are administer IV, can be given directly into coronary artery in cardiac catherization lab. The purpose of thrombolytics is to dissolve luse The thrombus in a coronary artery, causing reperfusion and minimize the size of infarction.

ANALGESICS:-

The analgesics of choice for acute Myocardial Infarction is Morphine sulphate administered in IV bolus to decrease pain and anxiety .it decreases the preload and the after load thus decreasing the workload of heart. It also relax the Bronchioles to enhance the oxygenation. The Cardiovascular response to Morphine is monitored closely; particularly BP which can decrease and respiratory rate can be depressed.

ACE INHIBITORS:-

ACE inhibitors prevent the conversion of angiotensin I to angiotensin II. In the absence of angiotensin II, BP will decrease and kidney excretes sodium and fluid which further decreases the oxygen demand of the heart.

ANTIDYSRHYTHMIC AGENTS:-
This includes Defibrillation, Atropine,
Digoxine or Amiodrone, Lidocaine. If the dysarhthmias are continous them

| | | Mg Sulphate can be given. If needed A Temporary pacemaker may be inserted for Bradycardias.

MEDICAL TREATMENT GUIDELINES FOR ACUTE MYOCARDIAL INFARCTION

- Use rapid transit to the hospital
- Obtain 12 lead ECG to read within 10 minutes.
- Obtain laboratory blood specimen of cardiac biomarkers including troop's.
- Obtain other diagnostics to clarify the diagnosis.
- Begin routine medical investigation.
  - Supplimental oxygen
  - Nitroglycerin
  - Morphine
  - Aspirin (162-325 mg)
  - Beta-blockers
  - Angiotensin countering enzyme inhibitors within 24 hrs
- Evaluate for indications for reperfusion therapy.
- -Percutaneous coronary intercession -Thrombolytic therapy
- Continue therapy as indicated;
  - IV heparin /low molecular weight heparin
  - Clopidogerl or oclopridiae
  - Glycoprotein II b/ III a inhibitors.
  - Bed rest (12-24 hrs). | | | |

		NURSING MANAGEMENT
		    The nursing priorities are,
		1. To relieve pain, anxiety.
		2. To reduce myocardial workload.
		3. To prevent and assist in treatment of life-threating dysarrythmias
		4. To promote self – care
		NURSING INTERVENTIONS FOR MYOCARDIAL INFARCTION PATIENT
		• Obtain a full description of pain from patients including location, intensity, duration, quality and radiation.
		• Provide calm and quite environment and others comfort measures.
		• Administer supplementary oxygen.
		• Note the presences of hosolity withdrawl or deaniel.
		• Encourage the patients to communicate with one others, sharing questions.
		• Inspect for cyanosis, cold and clamy skin.
		   OTHER NURSING MANAGEMENT
		     ❖ Provide semi-fowlers position to promote chest expansion and comfort.
		     ❖ Oxygen administration to treat tissue hypoxia.
		     ❖ Check vital signs every 15 minutes.
		     ❖ Watch for PCV		

		(premature ventricular contraction the ECG).			
		❖ Assess the loss of consciousness.			
		❖ Strict intake output chart maintaiance.			
		❖ Bed rest.			
		❖ Clear liquid diet for 48 hrs and therapeutic soft bland diet.			
		❖ Cardiac enzyme should be repeated,			
		❖ Educate the patient to control diet high in fats and cholesterol.			
		❖ Assess for human's sign, erythematic and edema.			
		❖ Monitor laboratory details e.g. ABG'S, BUN indicators of organ perfusion. Prepare the patients for thrombolytic therapy.			
		❖ Measure intake – output to detect whether there is decrease in output.			
		❖ Weigh daily.			
		❖ Provide low sodium diet.			
		❖ Note the development of dependent edema.			
		❖ Administer diuretics as prescribed.			
		❖ Educate the patients about basic information regarding myocardial infarction, its causes, prevention and management.			
		❖ Emphasis on the importance of avoiding			

the risk factors of myocardial infarction.

CONCLUSION

Myocardial infarction is a life threatening disease caused by many factors. Health education must be given to the patients with pre-disposing or risk factors to prevent it. Early diagnosis is also very important for saving the life of the patient.

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