



## FUNCTIONAL CAPACITY AND QUALITY OF LIFE IN POST MYOCARDIAL INFARCTION PATIENTS-AN OBSERVATIONAL STUDY.

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### ABSTRACT

**Background :** Objectives: Objectives of the study were to find the functional capacity and quality of life in post myocardial infarction-an observational study.

**Material and methods:** In this observational study, 110 subjects were assessed for quality of life by using questionnaire and for functional capacity using duke activity status index scale.

**Results:** Statistical analysis of functional capacity and quality of life were found to be extremely significant with a p value of <0.0001.

**Conclusion:** The study concluded that functional capacity and quality of life were significantly reduce in post myocardial infarction patients.

**KEYWORDS :** myocardial infarction, quality of life, PTCA, functional capacity.

### INTRODUCTION

Myocardial infarction is a clinical syndrome that results from sudden occlusion of coronary artery with resultant infarction and death of cardiac myocytes in the region supplied by that artery. The incidence rates for myocardial infarction and sudden death for adults between the ages of 35 and 74 years for Indian population was 3.42 and that for sudden death, 1.55 per 1,000 population. The male to female ratio for Indian population for myocardial infarction was 3:1.

Cardiovascular Diseases are among the most common causes of morbidity and mortality worldwide that account for 35% of global deaths. According to World Health Organization, 12 million people die annually of cardiovascular diseases. In the state of Maharashtra the incidence of cardiovascular disease is increasing among the men between age group of 30-40 years and in women in the age group of 40-60 years.

After myocardial infarction the complications in first few weeks include 1. Decreased contractility-because after myocardial infarction it sustained some damage to heart muscles so that it can contract very well. 2. electrical instability because all ions move back in front and cross over heart muscles and membrane to maintain the electric gradients so heart beats properly and then it progress with tissue necrosis resulting in cell death.

Bed rest is advised post myocardial treatment and one of the complications related to bed rest is restriction of mobility. The persistence of immobility will entail clinical complications such as decreased functional capacity leading to sequelae and physical limitations to the patients if treatment and care are not performed since early and late movements are recommended.

Functional capacity is the extent to which a person can increase exercise intensity and maintain increased levels, dependent largely on cardiovascular disease. Functional capacity evaluation is a set tests, practices and observations that are combined to determine the ability of the evaluated person to function in a variety of circumstances, most often employment, in an objective manner.

Quality of life : world health organization(WHO) defines as the individual's perception of their position in life in the context of the culture and value system in which they live in relation to their goals, expectations, standards and concerns. It is a subjective multidimensional concept that defines a standard

level of emotional, physical, material and social well being. Duke activity status index(DASI) is a self administered questionnaires' designed to measure functional capacity of cardiovascular patients, based on the patient's ability to perform a set of common activities of daily living<sup>8</sup>It is a measure of functional capacity developed by Hlatky et al. The reduced DASI is reliable, valid and responsive to clinical changes.

The MAC new QLMI questionnaires designed to measure quality of life of cardiovascular patients, which address 3 major health related quality of life domains, the emotional, physical and social domains. The questions were asked to individual according to that score was taken. It presents a final score of 0-7, 0 represent all of the time and 7 represent none of the time. Health-related quality of life measures may be useful in monitoring coronary patients. It has been shown to be valid by a high correlation ranging from 0.81-0.58.

In this study the MAC new QoL and Duke Activity scale questionnaire were explained and then asked them and they answered it. Each individual should answer the full questions and the study was done from 10-5 time and the score was taken.

### AIM AND OBJECTIVES

**Aim:** To study the functional capacity and quality of life on post myocardial infarction patients

#### Objectives:

1. To determine the functional capacity in post myocardial infarction patients
2. To determine the quality of life in post myocardial infarction patients

### MATERIALS AND METHODOLOGY:

Study Type- observational Sample Size- 110 Sampling - Simple random sampling Study Duration- 6 months Study setting - Cardio physiotherapy dept, Krishna hospital, karad

#### Inclusion criteria

- Age between 40-65yrs
- Both sex
- Participants with LVEF 45% before surgery
- Remain asymptomatic following percutaneous coronary intervention
- Inability to provide informed consent .

**Exclusion criteria**

- Cardiac arrhythmia
- Exercise induced angina
- Part of any other cardiac rehabilitation program
- Inability to provide informed consent

**Outcome parameters:**

- Functional capacity
- Quality of life

**Outcome measurement tools:**

- Duke's activity scale index-functional capacity
- Quality of life questionnaire-quality of life

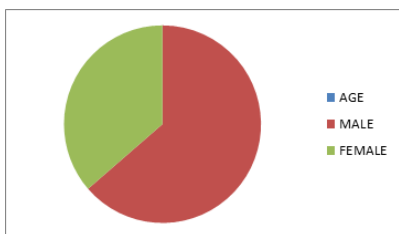
**Procedure :**

In this study the result was drawn by using the MAC new QLMI and Duke Activity Scale Index questionnaires as the outcome measures. Patients undergone PTCA were selected according to inclusion criteria 110 who completed 3 months post patients (70 male and 40 females) were undertaken for the study. The nature of study is explained to the patients and informed consent is taken. Functional capacity is assessed by using Duke Activity Status Index and Quality of Life is assessed by using MAC new QLMI questionnaire. Thus the study will be concluded.

**STATISTICAL ANALYSIS:**

**DATA PRESENTATION**

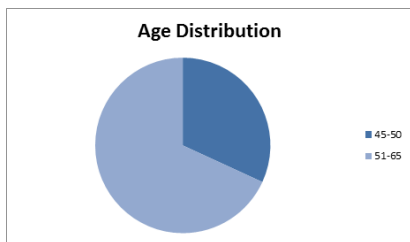
**GENDER DISTRIBUTION IN THE STUDY**



**Graph no.7.1 Gender distribution in the study**

The diagram shows that 70 male and 40 female subjects participated in the study.

**2.AGE DISTRIBUTION:**



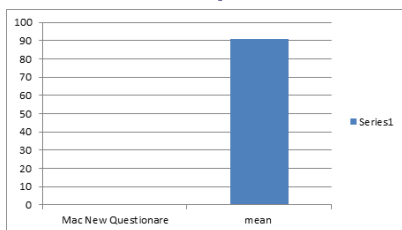
**Graph no. 7.2 Age Distribution**

The diagram shows that out of 70 males & 40 females, decrease in FC and QOL in the age group between 45-50 yrs. and the remaining lie in the age group 51-65 yrs.

**Data Analysis**

**Mac new QLMI**

**Table no.7.1 Mean of Mac new QLMI**



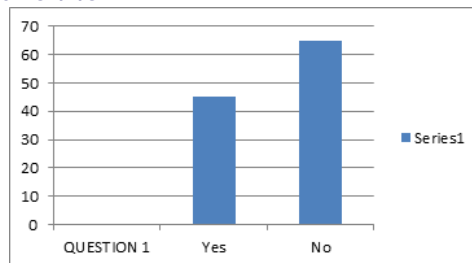
**Graph no.7.3 Mean of Mac new QLMI**

The Mac new QLMI is  $90.99 \pm 4.138$ . P value of Mac new QLMI is  $<0.0001$  which is statistically extremely significant. The T value of Mac new QLMI is 81.504.

Mean	90.99±4.138
SD	11.583
P value	<0.0001 (ES)
t value	81.504

**Duke Activity Status Index**

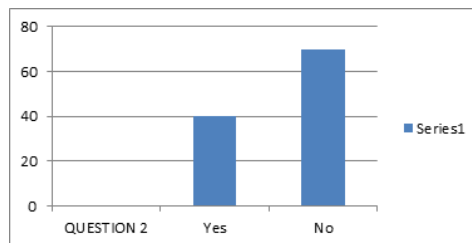
**QUESTION NO-1**



**Graph no.7.4 Answer of question no 1.**

Interpretation: The above graph shows answer of duke activity status index there was 45 patient gives answer YES and 65 patients gives answer NO for the question

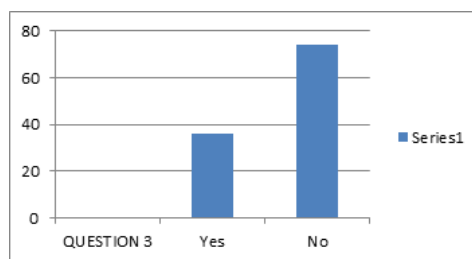
**QUESTION NO-2**



**Graph no.7.5 Answer of question no 2**

Interpretation: The above graph shows answer of duke activity status index there was 40 patient gives answer YES and 70 patients gives answer NO for the question 2.

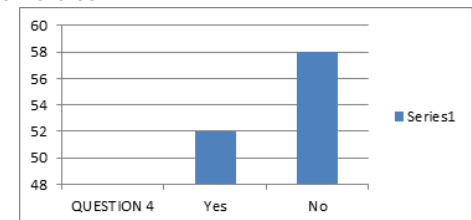
**QUESTION NO-3**



**Graph no.7.6 Answer of question no.3**

Interpretation: The above graph shows answer of duke activity status index there was 36 patient gives answer YES and 74patients gives answer NO for the question 3.

**QUESTION NO-4**

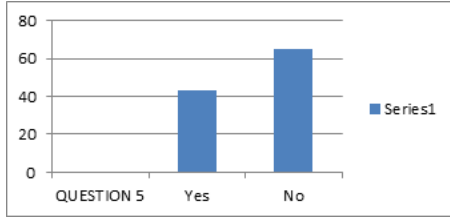


**Graph no.7.7 Answer of question no.4**

Interpretation: The above graph shows answer of duke

activity status index there was 52 patient gives answer YES and 58 patients gives answer NO for the question 4.

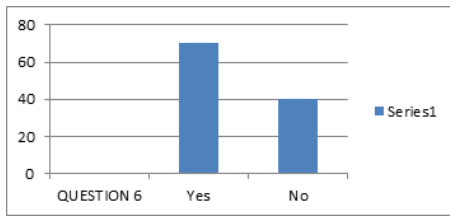
**QUESTION NO-5**



**Graph no.7.8 Answer of question no.5**

Interpretation: The above graph shows answer of duke activity status index there was 14 patient gives answer YES and 21 patients gives answer NO for the question 5.

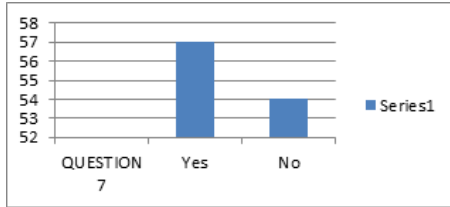
**QUESTION NO-6**



**Graph no.7.9 Answer of question no.6**

Interpretation: The above graph shows answer of duke activity status index there was 40 patient gives answer YES and 70 patients gives answer NO for the question 6.

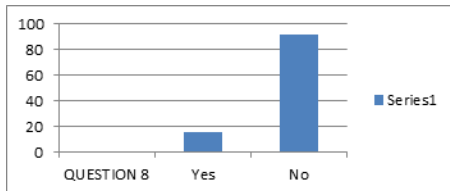
**QUESTION NO-7**



**Graph no.7.10 Answer of question no.7**

Interpretation: The above graph shows answer of duke activity status index there was 57 patient gives answer YES and 54 patients gives answer NO for the question .7

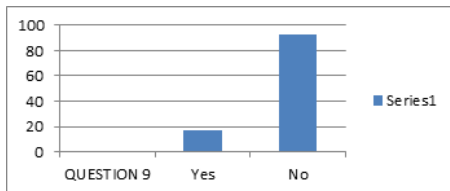
**QUESTION NO-8**



**Graph no.7.11 Answer of question no.8**

Interpretation: The above graph shows answer of duke activity status index there was 16 patient gives answer YES and 92 patients gives answer NO for the question 8.

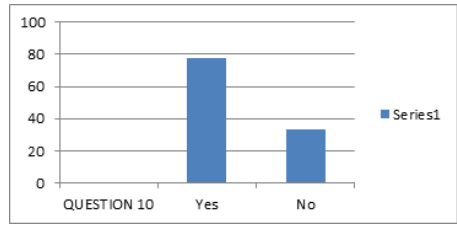
**QUESTION NO-9**



**Graph no.7.12 Answer of question no.9**

Interpretation: The above graph shows answer of duke activity status index there was 17 patient gives answer YES and 93 patients gives answer NO for the question 9.

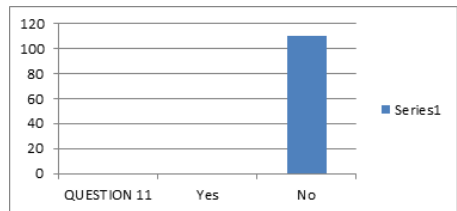
**QUESTION NO-10**



**Graph no.7.13 Answer of question no.10**

Interpretation: The above graph shows answer of duke activity status index there was 75 patient gives answer YES and 33 patients gives answer NO for the question 10.

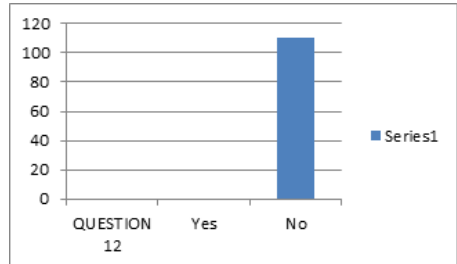
**QUESTION NO - 11**



**Graph no.7.14 Answer of question no.11**

Interpretation: The above graph shows answer of duke activity status index there was 0 patient gives answer YES and 108 patients gives answer NO for the question 11.

**QUESTION NO-12**



**Graph no.7.15 Answer of question no.12**

Interpretation: The above graph shows answer of duke activity status index there was 0 patient gives answer YES and 107 patients gives answer NO for the question 12.

**RESULTS:**

The result concluded that the functional capacity and quality of life is reduced in post myocardial infarction patients.

**DISCUSSION**

The study was done in 3 months with sample size 110 and age group of 40-65years. The subjects were randomly taken from Krishna hospital karad. This study was undertaken with aim to find out functional capacity and quality of life in post myocardial infarction patients.

The number of patients participated in this study was 110 in that 70 males and 40 females were included as the incidence of myocardial infarction is greater in males than females. The assessment for functional capacity was done by using DUKE ACTIVITY STATUS INDEX scale and quality of life is being assessed by using MAC NEW QLMI questionnaire. The Mac new QLMI is  $90.99 \pm 4.138$ . P value of Mac new QLMI is  $< 0.0001$  which is statistically extremely significant. The T value of Mac new QLMI is 81.504.

The study shows that the functional capacity in the age group of 40-50 years is partially decreased that is 29.92% and at age group of 50-65 years it is decreased by 64.01%. Also the quality of life is assessed in 3 major groups that is social which decreases 11.11%, emotional it decreases 29.62% and physical aspects 59.25%. The study shows the resultant decrease in functional capacity and quality of life in post myocardial infarction patients.

#### CONCLUSION:

The current study concluded that functional capacity and quality of life is reduced in post myocardial infarction patients..

**CONFLICT OF INTEREST:** There is no conflict of interest concerning the content of the study.

**SOURCE OF FUNDING:** This study was self funded.

**ETHICAL CLEARANCE:** The study was approved by the institutional ethics committee of KIMSDU.

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