Novelty Journals

ISSN 2394-7330

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Effect of Adherence and Compliance to Therapy on Quality of Life among Myocardial Infarction Patients

[1]Alaa Ali Alabdulaal, [2]Dr. Essmat Abdelhady Mansour

[1]MSN, BSN, RN. Prince Sultan Cardiac Center Riyadh-KSA.

[2]Assistant prof. in Medical-Surgical Nursing. KSU. Riyadh-KSA.

DOI: https://doi.org/10.5281/zenodo.11546692

Published Date: 10-June-2024

Abstract: **Background: Myocardial infarction (MI) is considered as one of the leading causes of morbidity and mortality worldwide. Management of MI include long-term therapy and lifestyle modification. Adherence and compliance to therapy require a great deal of commitment and lifestyle changes that are important for improving the quality life and living with less complications. The aim of the current study was to assess the effect of adherence and compliance to therapy on the quality of life among MI patients. Results from the current study would shed the light on a serious health problem that affect Saudi population and would serve as a basic for further assessment and evaluation to improve patients‟ QOL and overall outcomes.**

Methods: A descriptive correlational cross-sectional design was used to answer the research questions. A convenient sample of 95 patients who were diagnosed with MI were recruited from Prince Sultan Cardiac Center, Riyadh city, KSA. Data were collected using a semi-structured interview using Hill-Bone Compliance questionnaires, WHO-QOL questionnaire along with demographic and disease related data.

Results: Majority of the participants were males, 40 years and old, married, holding primary, secondary and university degrees, and were either retired or housewives. A considerable percentage diagnosed with MI within a year at the age of 40 years and older, and had some chronic illnesses mainly DM and hypertension. Hundred percent reported good adherence and compliance to medication, while majority reported good adherence to appointments keeping and diet. On the other hand, majority reported just fair physical QOL, while majority reported good psychological, social and environmental QOL. In addition, majority rated their QOL as good and were satisfied with their health. Education reported significance association with medication adherence and appointment keeping and when they were diagnosed with MI significantly associated with medication adherence. Further, marital status and occupation significantly associated with psychological QOL, while age associated with social QOL and gender associated with environmental QOL. Presence of chronic illness associated with physical QOL.

Conclusion and Recommendations: The current study reported association between adherence and compliance with therapy and QOL among patients with MI. Demographic and disease related factors also impacted adherence and QOL. Assessing patients at risk for low adherence and low QOL are crucial. Further research is required to explore more about physical quality of life outcomes among Saudi population.

Keywords: **Myocardial Infarction, Adherence and compliance, Quality of life.**

I. INTRODUCTION

This chapter presents the introduction of Myocardial infarction (MI) and the impact of patient‟s adherence & compliance to therapy on the quality of life (QOL) of those patients. It also includes the problem statement, significant of the study, aim, research questions, and conceptual framework of the study and definitions of terms.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Myocardial infarction is a serious condition and is considered as one of the leading causes of death in the world, it is known as cessation of blood flow in the myocardium that leads to heart attack, it has been affected over than three million people worldwide, (Mechanic, 2021).

Cardiovascular diseases, heart cardiomyopathy, heart arrhythmia, congenital heart diseases caused by heart infection and heart valve disease are all under the umbrella term called heart disease. (Cardiovascular diseases - ministry of health Saudi Arabia 2022). Cardiac muscle (Myocardium) is one of three major muscles in the human body which plays an important role for the human body life by pumping the blood to all body organs and more important is nourishing the heart muscle itself for its own health to maintain the heart dynamic work in sufficient manner. (Physiology, cardiac muscle - stat pearls - NCBI bookshelf 2022). Coronary artery disease is the disease that affect the blood vessels (coronary arteries) which are the major blood vessels that supplies the heart muscles with blood and nutrients. (Cardiovascular diseases - ministry of health Saudi Arabia 2022)

Heart attack is caused by decreased and cessation of blood flow to the myocardium that will lead to Myocardial infarction in which the heart muscle cells died partially or completely.

There are many risk factors that will lead to Myocardial infarction such as Smoking, dyslipidemia, hypertension, diabetes mellitus, lack of physical activity and alcohol consumption. The most common cause of death and disability worldwide is coronary artery disease, and the prevalence of male is higher than female for all ages (Myocardial infarction - stat pearls - NCBI bookshelf 2022).

However ,treatment and lifestyle modification are the priority and best management for MI patients , however maintaining to comply and adhere for both of these management options is important for improving the quality life and living more with less complications .Lipid lowering treatment , ACE inhibitors, Beta blockers , antithrombotic therapy and antihypertensive therapy are the medications that most of the MI patients are taking , moreover modifying the lifestyle like , smoking cessation , diet, alcohol , weight control is not lesser importance as well. (Myocardial infarction - stat pearls - NCBI bookshelf 2022).

Taking the primary intervention and compliance to lifestyle modifications for MI patients has a very effective treatment and improving the quality of life and health for the patients comparing to whom receiving the thrombolytic treatment only. Quality of life and health are affected by the type of intervention and the continuous care that received through the treatment plan. (Rančić et al., 2013).

Indeed, quality of life outcomes in post MI patients is an important report for evaluation of treatment received and the dedicated follow to the medication and lifestyle modification to get the better results for evaluation of the quality of care and health however, people with previous self-reported MI they have worse health status and quality of life. (Timóteo et al., 2020)

Overall prognosis of MI depends on the level of heart muscle damage and the ejection fraction; however, majority of deaths occur prior arriving to hospitals, moreover 5% to 12% mortality rate of MI patients after one year of MI occurrence. There is big chance to decrease.

this rate while adhere to the treatment and improve their quality life. (Myocardial infarction - stat pearls - NCBI bookshelf 2022).

There is no cure of Ischemic heart disease but the key to protect heart muscle is improve outcomes to prevent coronary artery disease which is mainly over the care provider responsibility and the nurse educator , explaining the importance of taking the medications and modify the lifestyle to live longer with less complications .It's important to highlight that the effort of the care provider is crucial for both educated and non-educated patients by make sure that the patient needs to consult the doctor for his\her health status immediately to ensure that gets treated within the timeframe recommendation . (Myocardial infarction - stat pearls - NCBI bookshelf 2022).

Most MI patients who had poor quality of life refers to MI complications which are, ischemia, arrhythmia, embolic, myocardial dysfunction and inflammatory disorders, while going to the reasons of that is mainly ignoring medications or

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

harming themselves by bad life habits for example: smoking, high fat diet, stop taking medications. (Myocardial infarction - stat pearls - NCBI bookshelf 2022).

Quality of life is a concept used to measure the level of living good life in different domains regarding both positive and negative elements aim to implement wellbeing for individuals and population. (Bhardwaj, 2022).

WHO defines Quality of Life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. QOL includes different 8 domains which are (Physical, psychological, level of independent, social relations, environment and spiritual). The importance of QOL is concentrated in collecting information's related to the condition of health life and its obstacles that affecting the organs to decrease or increase life wellness. (WHO,2022)

The quality of life is a multidimensional concept that can be assessed in many ways. Some of the most common methods used to measure quality of life include surveys, questionnaires, and interviews that ask individuals about their overall life satisfaction, physical and mental health, social relationships, and financial status. In addition, objective measures such as life expectancy, infant mortality rates, and access to healthcare and education can also be used to gauge quality of life. Other indicators. The WHOQOL-100 produces a quality-of-life profile.

It is possible to derive six domain scores, 24 specific facet scores, and one general facet score that measures overall quality of life and general health. The six domain scores denote an individual's perception of quality of life in the following domains: Physical, Psychological, Level of Independence, Social Relationships, Environment, and Spirituality(WHO,2022).

Psychological consequences as a component of QOL is one of the factors that affect the health wellbeing for the patients post MI. Medication adherence and compliance to lifestyle modifications will help the patients to be rehabbed easily in a short time period including ,enhance the patient to set personal goals to recovery , helping the patient to observe his\her unhealthy behaviors to change it and get over it for better quality life and teach the patient how to control the mood for better results to attain the good health and quality of life post MI.(Boersma & Maes, 2006).So this study will be conducted to assess the effect of both medication adherence and compliance to life style modifications on the patient's QOL.

II. BODY OF ARTICLE

Methodology:

This chapter is describing the study design, the study setting, sample and sampling techniques and instruments used for data collection. It also includes the ethical approval and consideration, explanation of the procedure of data collection, and statistical analysis and data management.

Research design:

A descriptive correlational cross-sectional design was used in this study. Descriptive design was chosen due to many reasons. First, it is considered as precursor to future.

research because it helpful in identifying the variable under study. Second, it allows for-in depth gathering of information, which facilitate the multidimensional approach to data collection and analysis. Also, the correlational design is employed to figure out what kind of relationship naturally occurring among the variable and in what way (fox & Bayat,2007)

Setting:

Data were conducted from Prince Sultan Cardiac Center for admitted and outpatients MI patients. Prince Sultan Cardiac Center located in Riyadh city, it is one of the advanced cardiac centers in Saudi Arabia and providing a high quality comprehensive cardiovascular treatment to all armed forces personnel and other eligible patients. In addition, Prince Sultan Cardiac Center is providing educational programs, organizing symposium and scientific research for cardiovascular diseases and cardiac surgeries. It consists of 174 beds for adult and pediatric patients, that includes 4 operating rooms, 8 medical and surgical cardiac wards, ACICU, CCU, Catheterization lab, OR and 12 beds cardiac in recovery room, and also has around 31 rooms for cardiac outpatient department. As this center is promoting and peruses scientific research relative to cardiovascular diseases m that is make it suitable setting for data collection for the current research.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Study population and sampling:

The study population are patients who were admitted to Prince Sultan Cardiac Center diagnosed with MI. A convenient sample was utilized to recruit 95 patients from different units (inpatient and outpatient units) at the above-mentioned setting. Sample size was estimated by using Raosoft website for sample calculation (http://www.raosoft.com/samplesize.html). Using a margin of error of 5%, 95% confidence level, population size of 112 patients (according to the hospital census of total 112 patients admitted in 2021), and a response distribution of 50%, the calculated sample size was 87 patients. Data collection was continued until reached 95 patients.

Inclusion Criteria:

- Adult patients who diagnosed with MI
- In patients and outpatients
- Saudi and Non-Saudi
- Male Female

Exclusion criteria

- **Patient who has psychological disorders**

Study Measurements:

Tool I:

Tool 1 is the sociodemographic characteristics of the participants; it was developed by the researcher and included, age, gender, marital status, education, and occupation. This tool also included disease related factors such as, age on diagnosis with MI, when the patient was diagnosed, presence of chronic illness, and number of unplanned readmissions.

Tool II:

Hill-Bone Compliance to High Blood Pressure Therapy Scale (HBHBP). The scales were developed with National Institutes of Health (NIH) funds; therefore, they are available 21 for use at no cost; the scales are free after taking an official use permission. It was developed in English and other 9 languages. HB-HBP is a 14-item scale measured on 4-points Likert scale where (1) All the time, (2) Most of the time, (3) Some of the Time and (4) None of the Time. The scale assesses patient behaviors for three important behavioral domains (subscales) of high blood pressure treatment as follow:

- Medication Adherence (9-items)
- Appointment Keeping (3-items)
- Diet adherence (2-items)

This brief instrument provides a simple method for clinicians in various settings to assess patients‟ self-reported adherence and to plan appropriate interventions. According to the author this tool is valid for any chronic disease just replace the High Blood Pressure by the selected disorder. For the current study, the survey was used to assess adherence for MI therapy. The score of the total HBHBP Scale ranges from 14 to 56, the higher the score the higher the level of adherence to therapy. The scores for the subscales are considered as follow:

• Medication Adherence (9-items), ranges from 9 to 36, the higher the score the higher the adherence to medication

• Appointment Keeping (3-items), ranges from 3 to 12, the higher the score the higher the adherence to appointment keeping

• Diet adherence (2-items), ranges from 2 to 8, the higher the score the better the adherence to diet.

Tool III:

Health Related Quality of Life (HRQOL) This scale is a quality-of-life assessment scale which is initiated in 2012 at mental health evidence and research, department of mental health and substance dependence in 22 WHO. It was developed by

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

WHOQOL group affiliated by fifteen international centers for HIV disease, that‟s for developing the quality-of-life assessment to be applicable cross-culturally. It has been translated into many languages including the English language, and they are available for use at no cost and it is free to use after taking an official use permission. WHOQOL scale contains 4 domains with a total of 26 items. One item asks “How would you rate your quality of life?” This item is answered on a 5-points Likert scale where (1) is very poor, (2) poor, (3) neither poor nor good, (4) good, and (5) very good. Another item asks “How satisfied are you with your health.?” The answer for this item is 5-points Likert scale where (1) very dissatisfied, (2) dissatisfied, (3) neither satisfied nor dissatisfied, (4) satisfied and (5) very satisfied.

The rest of the 24 items of the WHO- QOL scale brief includes 4 subscales as follow:

1- Physical QOL (7 items) on a 5-points Likert scale as follow:

1. To what extent do you feel that physical pain prevents you from doing what you need to do?
2. How much do you need any medical treatment to function in your daily life?
3. Do you have enough energy for everyday life?
4. How well are you able to get around?
5. How satisfied are you with your sleep?
6. How satisfied are you with your ability to perform your daily living activity?
7. How satisfied are you with your capacity for work?

The first 3 questions were measured as not at all (1), a little (2), moderately (3), mostly (4) and completely (5). Question number 4 is measured as (1) very poor, (2) poor, (3) neither poor nor well, (4), well, and (5) very well. Questions 5, 6, and 7 measured as (1) very dissatisfied, (2), dissatisfied, (3) neither satisfied nor dissatisfied, (4) satisfied and (5) very satisfied.

The scores for physical QOL subscale ranges from 7 to 28, with the higher score indicates good physical QOL.

2. Psychological QOL (6 items) on a 5-points Likert scale as follow:

1. How much do you enjoy life?
2. To what extent do you feel your life to be meaningful?
3. How well are you able to concentrate?
4. Are you able to accept your bodily appearance?
5. How satisfied are you with yourself?
6. How often do you have negative feelings such as blue mood, despair, anxiety, depression?

Questions 1, 2, 3, and 4 are measures as not at all (1), a little (2), moderately (3), mostly (4) and completely (5). Question 5 is measured as (1) very dissatisfied, (2), dissatisfied, (3) neither satisfied nor dissatisfied, (4) satisfied and (5) very satisfied. Question 6 was measured as (1) never, (2) seldom, (3) quite often, (4) very often and (5) always. The scores range from 6 to 24 with higher score indicates better psychological QOL.

3. Social QOL (3 items), measured on 5-points Likert scale as follow:

1. How satisfied are you with your personal relationships?
2. How satisfied are you with your sex life?
3. How satisfied are you with the support you get from your friends?

The 3 questions are measured as (1) very dissatisfied, (2), dissatisfied, (3) neither satisfied nor dissatisfied, (4) satisfied and (5) very satisfied. The score for this subscale ranges from 3 to 12 with higher scores indicates better social QOL.

4. Environmental QOL (8 items) measured on 5-points Likert scale as follow:

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

1. How safe do you feel in your daily life?
2. How healthy is your physical environment?
3. Have you enough money to meet your needs?
4. How available to you is the information that you need in your daily-to-day life?
5. To what extent do you have the opportunity for leisure activities?
6. How satisfied are you with the condition of your living place?
7. How satisfied are you with your access to health services?
8. How satisfied are you with your transportation?

Questions 1 and 2 are measured as (1) not at all, (2) slightly, (3) a moderate amount, (4) very much and (5) extremely. Questions 3, 4, and 5 are measured as (1) not at all, (2) a little, (3) moderately, (4) mostly and (5) completely. Questions 6, 7 and 8 are measured as (1) very dissatisfied, (2), dissatisfied, (3) neither satisfied nor dissatisfied, (4) satisfied and (5) very satisfied. The score for environmental QOL ranges from 8 to 32 with higher score indicates better environmental QOL.

The WHO- QOL scale brief also includes sociodemographic data in the beginning and questions regarding help needed to complete it, time required to fill out the survey and any comments at the end of the questionnaire. Appendix (D)

Reliability of the study questionnaire

The reliability of the questionnaire used in the current study was tested before the main data analysis. Results revealed that the adherence/compliance questionnaire that includes 14 items reported a Cronbach‟s alpha of .74.

The WHO-QOL scale brief with the 26 items reported a Cronbach‟s alpha of .81 and the scale with 24 items reported a Cronbach‟s alpha of .77. This is considered an acceptable level of reliability that means that 74%, 77% and 81% of the items are consistence in measuring what is supposed to be measured. The reliability coefficient depends on the sample size used for testing the reliability of an instruments. The sample size in the current study was 25 relatively small, with larger sample size reliability would be higher as reported in previous research used the same questionnaire.

Pilot study:

A pilot study was conducted on 9 participants prior to the actual data collection to check for the feasibility of the study and the clarity of the survey. Few editing and modifications were required and this 9 participants included for pilot study were not included in the main data analysis.

Procedure of Data Collection:

● Approval to conduct the study was obtained from the college of nursing, King Saud University.

● Official approval was obtained from the identified setting to collect the necessary data.

● Official approval was obtained from the authors to use the mentioned tools.

● Pilot study for the questionnaire on 9 patients was carried out in order to ensure the questionnaire clarity, and identify obstacles that may encounter during the data collection. The necessary modification was performed based on the pilot study.

● The researcher communicated with concerned people in the above mentioned setting and explained about the study aim, procedure of data collection and stressed that data collection will not interfere with the health care providers work.

● Eligible patients were recruited by the researcher and those who agree to participate in the study were asked to sign a consent form.

● Data were collected using a semi structured interview. For each eligible participant, the researcher explains the study aims and ask the patients each question and highlight the corresponding number on the survey based on the participants‟ answer.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

● Data were collected based on the patients‟ convenience and after making sure that each participant is ready and willing to set for the interview. The interview lasted from 15 to 20 minutes.

● Data collection started at 07\12\2022 till 28\02\2023.

Ethical Consideration:

Before starting the study, the proposal was submitted to the IRB at king Saud University to get the Ethical approval. Approval was also obtained from the Prince Sultan Cardiac Center IRB Ethical Committee.

- After obtaining the ethical approval, the researcher communicated with the director of nursing services at Prince Sultan Cardiac Center to gain their support for data collection.
- For each eligible participant, the researcher explains aim the study and get their permission and consent to answer the questionnaire at their convenience time.
- Participants were notified that their participation is voluntary and they have the right to withdraw from the study any time without any penalty, or interference with their care and treatment. They also notified that they have the right to ask questions at any time during the conduction of the study.
- Participants were notified that their anonymity will be maintained through using codes and numbers instead of names and their data will be kept confidential and data will not be used to judge their health practice, instead collected data will be used for the purpose of the study. They were also notified that the obtained data will be kept in a lucked cabinet for a specific period of time and then it will be destroyed. Only the researcher and the IRB personnel would have an access to the data if required.

1. Participants were also notified that there is no anticipated harm for their participation and there are no incentives for participation. Benefits would be that the results from 27 the current study will help health care providers to provide better care and management plans to enhance the adherence to MI therapy and improve the quality of patient.

Chapter Summary:

The intention of this chapter was to draw the method of this study, as population characteristics, study setting, sample selection criteria, and data collection method.

SPSS, software version 21 was used in analysis of the current data.

III. DATA ANALYSIS

Data were validated and cleaned before data entry and analysis. Data were analyzed using SPSS version 21, while descriptive statistics that included number and percentages were used to describe demographic characteristics of the study sample and disease related factors. Pearson product-moment correlation coefficient (PPMCC) test was used to detect any association between the adherence and compliance and QOL and to detect association between selected demographic characteristics of the study sample and disease related factors. A p-value of 0.05 or less was set as a significance level.

IV. RESULTS

This chapter presents the results of the statistical analysis of the named variables also focus on the discussion and analysis of each question. the main variables that were measured in this study included adherence and compliance to therapy and the quality of life of the patients The aim of the current study was to assess the relationship between adherence and compliance to therapy on the quality of life among patients with acute myocardial infarction. To achieve the study aim, 7 research questions were asked as follow:

1. What is the level of adherence and compliance to therapy among patients with MI?

2. What is the level of QOL among patients with MI?

3. Is there a relationship between adherence and compliance to therapy and QOL among patients with MI?

4. Does adherence and compliance to therapy differ by MI patients demographic characteristics?

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

5. Does adherence and compliance to therapy differ by selected disease related factors among MI patients?

6. Does QOL of MI patients differ by their demographic characteristics?

7. Does QOL of MI patients differ by selected disease related factors?

To answer these research questions, descriptive statistics in terms of number and frequency in addition to Pearson Product Moment correlation analysis were used.

Demographic characteristics of the study sample:

As shown in table 1: the demographic characteristics of the study participants showed that 62.1% were males and 37.9% were females. Regarding age, 48.4% were in the age group above 61 years old, 42.1% were in the age group of 41-60 years old and the rest (9.5%) were in the age group of 20 to 40 years old. The majority (90.5%) of the participants were married while 9.5% were singles. As for educational level, 35.8% reported having secondary school education, 30.5% were holding a primary school education, 20% were university graduates, while 9.5% were able to read and write. In addition, only 3.2% were illiterate and 1% had postgraduate degree. Regarding occupation, 38.9% were retired, 31.9% were housewives, 18.9% were working in governmental sectors while 10.5% were working in non-governmental sectors.

Table 1: Demographic characteristics of the study sample

Variables	Number Percentage N= 95	
Gender		
Male	59	62.1
Female	36	37.9
Age group		
20 to 40	9	9.5
41-60	40	42.1
61 and above	46	48.4
Marital Status		
Single	9	9.5
Married	86	90.5
Education		
Illiterate	3	3.2
Read and Write	9	9.5
Primary school	29	30.5
Secondary school	34	35.8
University	19	20
Post graduate education	1	1.1
Occupation		
Housewife	30	31.6
Retired	37	38.9
Governmental work	18	18.9
Non-governmental work	10	10.5

Selected disease-related factors among the study sample:

Table 2 presents the selected disease related factors such as age on diagnosis of MI, when the patients were diagnosed with MI, presence of chronic illnesses, and number of unplanned admissions. Results indicated that 60% of the participants were in the age group of 41 to 60 years old when they first diagnosed with myocardial infarction (MI), while 31,.6% were older than 60 years old when they were diagnosed with MI. Sixty-three percent of the participants were diagnosed with MI within a year, 24.2% diagnosed within 2 to 5 years and 10.5% diagnosed with MI from 5 to 10 years ago, while only 2.1% diagnosed with MI for more than 10 years ago. Further, regarding having chronic health conditions, almost similar percentages (42.1%) reported having diabetes mellitus and hypertension, and (41%) reported having diabetes mellitus, 7.4% having hypertension, diabetes, and other chronic conditions. In addition, 5.3% reported having chronic health conditions

other than hypertension and diabetes while only 4.2% reported having only hypertension. As for number of unplanned admission, 46.3% reported that they had unplanned admission once, 21% had no unplanned admission, about 19% admitted twice and about 14% admitted 3 or more times.

Table 2: Disease related factors of the studies sample

Variable in	Number Percentage N = 95		Total
Age on diagnosis			95
20-40 years	8	8.4	
41- 60 years	57	60	
60 and above	30	31.6	
When diagnosed with MI			95
Within a year	60	63.2	
From 2 to 5 years	23	24.2	
From 5 to 10 years	10	10.5	
More than 10 years	2	2.1	
Presence of chronic illness			95
HTN	4	4.2	
DM	39	41.1	
HTN and DM	40	42.1	
HTN, DM and others	7	7.4	
Others	5	5.3	
Number of unplanned admissions			95
None	20	21.1	
Once	44	46.3	
Twice	18	18.9	
3 and more	13	13.7	

Research question 1: What is the level of adherence and compliance to therapy among patients with MI?

Descriptive statistics were used to answer this research question. As presented in table 3,4 and 5, adherence and compliance to therapy include 3 subscales: adherence to medication, appointment keeping and adherence to diet. Regarding adherence to medications, majority of the participants ranging from 78.9% to 91.6% adhere to medication by selected none of the time for all the items on the medication adherence subscale as follow: 78.9% reported none of the time when they asked how often do you forget to take your cardiac medicine? 87.4% reported none of the time for the questions; how often you skip your cardiac medicine before you go to the doctor and how often do you miss taking your cardiac pills when you feel sick respectively. In addition, 91.6% reported none of the time for the questions; "How often do you take someone else's Cardiac pills"? and "How often do you miss taking your Cardiac pills when you are careless"? respectively. To provide a wider 32 picture for adherence to medications, a total score was calculated, and results showed that 100% of the participants reported good adherence to medication as shown in table 3.

Table 3: Saudi MI patient level of Adherence/Compliance to MI medication therapy

Medication adherence	All the time		Most of the time		Sometimes		None of the time	
	#	%	#	%	#	%	#	%
How often do you forget to take your Cardiac medicine?	0	0	5	5.3	15	15.8	75	78.9
How often do you decide NOT to take your Cardiac medicine?	2	2.1	3	3.2	6	6.3	84	88.4
How often do you skip your Cardiac medicine before you go to the doctor?	0	0	2	2.1	10	10.5	83	87.4

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

How often do you miss taking your Cardiac pills when you feel better?	2	2.1	0	0	7	7.4	86	90.5
How often do you miss taking your Cardiac pills when you feel sick?	0	0	0	0	12	12.6	83	87.4
How often do you take someone else's Cardiac pills?	0	0	0	0	8	8.4	87	91.6
How often do you miss taking your Cardiac pills when you are careless?	0	0	2	2.1	6	6.3	87	91.6
Total Compliance to medication	**Good**			**Fair**			**Poor**	
	95	**100**		**0**	**0**		**0**	**0**

Regarding appointment keeping subscale, results showed that 80 % of the participants indicated that they often make their next appointment before they leave the doctor"s office all the time. While the majority (90.5%) reported none of the time when they asked "How often do you miss scheduled appointments? How often do you forget to get prescriptions filled? (88.4%), and how often do you run out of Cardiac pills? (86.3%) respectively. A total score on appointment keeping was calculated and showed that 89.5% reported good and 10.5% reported fair appointment keeping. Results are shown in table 4.

Table 4: MI patients level of Adherence/Compliance to appointment keeping.

Appointment keeping	All the time		Most of the time		Sometimes		None of the time	
	#	%	#	%	#	%	#	%
How often do you make the next appointment before you leave the doctor"s office?	76	80	0	0	3	3.2	16	16.8
How often do you miss scheduled appointments?	0	0	0	0	9	9.5	86	90.5
How often do you forget to get prescriptions filled?	2	2.1	0	0	9	9.5	84	88.4
How often do you run out of Cardiac pills?	0	0	0	0	13	13.7	82	86.3
Total								
Good	**85 (89.5)**							
Fair	**10 (10.5)**							
Poor	**0 (0)**							

Concerning adherence to diet subscale, results showed that 53.7% indicated that they eat fast food sometimes, and 52.6% eat salty food sometimes. In addition, 70.5% indicated that they shake salt on their food before they eat none of the time. A total score of adherence to diet showed that 75.8% reported good and 24.6% reported fair adherence to diet as shown in table 5.

Table 5: MI patients level of Adherence/Compliance to diet

Diet adherence	All the time		Most of the time		Sometimes		None of the time	
	#	%	#	%	#	%	#	%
How often do you eat salty food?	17	17.9	6	6.3	50	52.6	22	23.3
How often do you shake salt on your food before you eat it?	3	3.2	3	3.2	22	23.2	67	70.5
How often do you eat fast food?	12	12.6	5	5.3	51	53.7	27	28.4
Total								
Good	**72 (75.8)**							
Fair	**23 (24.2)**							
Poor	**0 (0)**							

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Research question 2: What is the level of QOL among patients with MI?

Quality of life in this study was measured using the WHO-QOL questionnaire. The questionnaire includes 4 subscales mainly: physical, psychological, social, and environmental QOL. As shown in table 6, Physical quality of life indicated that for the item "to what extent do you feel that physical pain prevents you from doing what you need to do"? 26.3% reported not at all, 33.7% reported a little, and 22.1% reported a moderate amount respectively. On the other hand, 11.6% reported very much and 6.3% to extreme amount to the same item.

For the item asking, "How much do you need any medical treatment to function in your life?", 33.7% of the participants reported a little, 17.9% reported not at all while 28.4% reported very much and 10.5% reported extreme amount. Further, 67.4% indicated that they have enough energy for everyday life very much, and 17.9% to extreme amount.

Two thirds (65.3%) displayed that they can get around well, while one quarter (25.3%) were able to get around very well.

The majority (70.5%) were satisfied with their capacity to work, 58.9% were satisfied with their ability to perform their daily living activities and 48.4% were satisfied with their sleep. Moreover, 29.5%, 24.2%, and 17.9% reported that they were neither satisfied nor dissatisfied with their sleep, their ability to perform their daily living activity and their capacity for work respectively. The total score on physical QOL specified that 70.5% had fair and 29.5% had good physical QOL.

Table 6: Physical Quality of life among patients with AMI

Physical QOL items	Not at all (1)	A little (2)	A moderate amount (3)	Very much (4)	Extreme amount (5)
1. To what extent do you 25 (26.3) feel that physical pain prevents you from doing what you need to do?	25 (26.3)	32 (33.7)	21 (22.1)	11 (11.6)	6 (6.3)
2. How much do you need 17 (17.9) any medical treatment to function in your life?	17 (17.9)	32 (33.7)	9 (9.5)	27 (28.4)	10 (10.5)
3. Do you have enough 0 (0) energy for everyday life?	0 (0)	2 (2.1)	12 (12.6)	64 (67.4)	17 (17.9)
	Very poor (1)	**Poor (2)**	**Neither nor (3)**	**Well (4)**	**Very well (5)**
4. How well are you able to get around?	0 (0)	1 (1.1)	8 (8.4)	62 (65.3)	24 (25.3)
	Very Dissatisfied (1)	**Dissatisfied (2)**	**Neither nor (3)**	**Satisfied (4)**	**Very Dissatisfied (5)**
5. How satisfied are you with your sleep?	5 (5.3)	10 (10.5)	28 (29.5)	46 (48.4)	6 (6.3)
6. How satisfied are you with your ability to perform your daily living activities?	1 (1.1)	8 (8.4)	23 (24.2)	56 (58.9)	7 (704)
7. How satisfied are you with your capacity for work?	1 (1.1)	4 (4.2)	17 (17.9)	67 (70.5)	6 (603)
Total Physical QOL					
Good	**28 (29.5)**				
Fair	**67 (70.5)**				
Poor	**0 (0)**				

Psychological QOL portrayed that 78.9%, 68.4% and 67.4% feels that their life is meaningful, were able to concentrate, accept their bodily appearance, and enjoyed their live very much respectively. The majority (89.5%) reported that they are very satisfied with themselves very much. On the other hand, 40% of the participants reported either never experienced negative feeling such as blue mood, despair, anxiety, or depression or seldom (36.8%) for the same item.

The total score on psychological QOL showed that the majority (89.5%) have good and 10.5% have fair psychological QOL. Results of psychological QOL are shown in table 7.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Table 7: Psychological Quality of Life

		Not at all (1)	A little (2)	A moderate (3)	Very much (4)	An extreme amount (5)
1	How much do you enjoy life?	0 (0)	2 (2.1)	12 (12.6)	64 (67.4)	17 (17.9)
2	To what extent do you feel your life to be meaningful?	1 (1.1)	0 (0)	2 (2.1)	75 (78.9)	17 (17.9)
3	How well are you able to concentrate?	1 (1.1)	5 (5.3)	19 (20)	65 (68.4)	**5 (5.3)**
4	Are you able to accept your bodily appearance?	1 (1.1)	0 (0)	11 (11.6)	65 (68.4)	18 (18.9)
		Very dissatisfied (1)	**Dissatisfied (2)**	**Neither nor (3)**	**Satisfied (4)**	**Very satisfied (5)**
5	How satisfied are you 0 (0) with yourself?		1 (1.1)	2 (2.1)	85 (89.5)	7 (7.4)
		Never (1)	**Seldom (2)**	**Quite often (3)**	**Very often (4)**	**Always (5)**
6	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	38 (40)	35 (36.8)	8 (8.4)	8 (8.4)	6 (6.3)
	Total					
	Good	**85 (89.5)**				
	Fair	**10 (10.5)**				
	Poor	**0 (0)**				

As for social QOL, 90.5% of the participants reported that they are satisfied with their personal relationships and with the support they receive from their friends and 82.1% were satisfied with their sexual life.

The total score on social QOL indicated that 93.7% reported good and 5.3% reported fair social QOL. Results of social QOL are presented in table 8.

Table 8: Social Quality of Life

		Very Dissatisfied (1)	Dissatisfied (2)	Neither nor (3)	Satisfied (4)	Very satisfied (5)
1	How satisfied are you 0 (0) with your personal relationships?		1 (1.1)	1 (1.1)	86 (90.5)	7 (7.4)
2	How satisfied are you 2 (2.1) with your sexual life?		2 (2.1)	6 (6.3)	78 (82).1	7 (7.6)
3	How satisfied are you 0 (0) with the support you get from your friends?		0 (0)	1 (1.1)	86 (90.5)	8 (8.4)
	Total					
	Good	**89 (93.7)**				
	Fair	**5 (5.3)**				
	Poor	**0 (0)**				

Concerning environmental QOL, the majority of the participants specified that their physical environment is very healthy (82.1%), and they feel their daily life is very much safe (76.8%). More than 2 quarters (63.2%) of the participants showed that they mostly have enough money to meet their needs and one more than a quarter (26.3%) reported moderately for the same item. Almost 78% reported they have opportunities for leisure activities mostly and 71.6% reported that the information they need for day-to-day life is mostly available. Majority of the participants were satisfied with the condition of their living place (91.6%), satisfied with their access to health services (87.4%), and satisfied with their transportation

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

(88.4%) respectively. The total score on environmental QOL indicated that 95.8% had good and 4.2% had fair environmental QOL as shown in table 9.

Table 9: Environmental Quality of Life

	(1)	Not at all	Slightly (2)	A moderate amount (3)	Very much (4)	Extremely (5)
1	How safe do you feel in your daily life?	0 (0)	2 (2.1)	7 (7.4)	73 (76.8)	13 (13.7)
2	How healthy is your physical environment?	0 (0)	0 (0)	6 (6.3)	78 (82.1)	11 (11.6)
		Not at all	**A little**	**Moderately**	**Mostly**	**Completely**
3	Have you enough money to meet your needs?	1 (1.1)	1 (1.1)	25 (26.3)	60 (63.2)	8 (8.4)
4	How available to you is the information that you need in your daily-to-day life?	1 (1.1)	1 (1.1)	8 (8.4)	68 (71.6)	16 (17)
5	To what extent do you have the opportunity for leisure activities?	0 (0)	0 (0)	4 (4.2)	74 (77.9)	17 (17.9)
		Very dissatisfied (1)	**Dissatisfied (2)**	**Neither nor (3)**	**Satisfied (4)**	**Very satisfied (5)**
6	How satisfied are you with the condition of your living place?	0 (0)	0 (0)	3 (3.2)	87 (91.6)	5 (5.3)
7	How satisfied are you with your access to health services?	0 (0)	5 (5.3)	5 (5.3)	83 (87.4)	2 (2.1)
8	How satisfied are you with your transportation?	0 (0)	3 93.2)	2 (2.1)	84 (88.4)	6 (6.3)
Total						
	Good	**91 (95.8)**				
	Fair	**4 (4.2)**				
	Poor	**0 (0)**				

Participants in the current study were asked to rate their quality of life and indicate how satisfied they are with their health on a 5-points Likert scale. As shown in table 10, results indicated that 74.7% reported good, 20% reported very good, and 4.2% reported neither good nor poor.

In addition, 68.4% were satisfied and 9.5% were very satisfied with their health, while 10.5% reported neither satisfied nor dissatisfied with their health as presented in table 10.

Table 10: Participant rating of their QOL and their satisfaction with their health

	Very poor		Poor		Neither poor nor good		Good		Very good	
	#	%	#	%	#	%	#	%	#	%
How would you rate your quality of life	0	0	1	1.1	4	4.2	71	74.7	19	20
	Very dissatisfied		**Dissatisfied**		**Neither dissatisfied nor satisfied**		**Satisfied**		**Very satisfied**	
	#	%	#	%	#	%	#	%	#	%
How satisfied are you with your health	2	2.1	9	9.5	10	10.5	65	68.4	9	9.5

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Research question 3: Is there a relationship between adherence and compliance to therapy and QOL among MI patients?

As presented in table 11, Correlation analysis showed that there was a statistically significance strong positive association between medication adherence and appointment keeping (r= .66**, p = .000) and diet adherence (r = .34*, p = .001) indicating that those who were adhering to their medication were more likely to keep their appointments and adhere to their diets.

Adherence to medication reported significant association with physical quality of life (r = .39**, p = .005) meaning that patients who showed compliance to medication were more likely to show better physical quality of life.

On the other hand, social quality of life showed significance association with environmental quality of life (r = .38*, p = .000) which mean that those who were satisfied with their social QOL were more likely to be satisfied with the environment they live in and vice versa.

Table 11: Correlation between adherence and quality of life among the study participants

	Medication adherence		**Appointment keeping**		**Diet adherence**	
	R	**p**	**r**	**p**	**r**	**p**
Medication adherence	-	-	**.66****	**.000**	**.34***	**.001**
Physical QOL	.39**	.005	.13	.15	.12	.90
Psychological QOL	-.04	.65	-.006	.95	-.11	..27
Social QOL	.04	.18	.13	.21	-.11	.31
Environmental QOL	-.11	.91	-.05	.62	-.08	.43

	Physical QOL		**Psychological QOL**		**Social QOL**		**Environmental QOL**	
	r	**P**	**r**	**p**	**r**	**p**	**r**	**p**
Physical QOL	-	-	.07	.49	.11	.27	.09	.25
Psychological QOL	-	-	-	-	-.06	.54	-.05	.62
Social QOL	-	-	-	-	-	-	.38**	.000
Environmental QOL -		-	-	-	-	-	-	-

Significance level was set as p = .05 or less

Research question 4: Does adherence and compliance to therapy differ by MI patient's demographic characteristics?

As for the association between selected demographic factors and adherence and compliance, results showed that only education reported significant association with adherence to medication (r = .23*, p = .02) and with appointment keeping (r =.21*, p = .04). This means that highly educated patients were more likely to adhere to their medications and keep their appointments. Results are presented in table 12.

Table 12: Correlation between selected demographic characteristics of the study participants and adherence and compliance

	Age	**Gender Marital Status**					**Education**		**Occupation**	
	r	**p**	**R**	**p**	**r**	**p**	**r**	**p**	**r**	**P**
Adherence to	-.14	.15	.02	.86	-.14	.16	**.23***	**.02**	.12	.23
medication										
Appointment keeping	.006	.95	-.08	.42	-.11	.28	**.21***	**.04**	.13	.18
Adherence to diet	-.03	.71	.13	.18	-.6	.51	.10	.30	-.13	.21

Significance level was set as p = .05 or less

Research question 5: Does adherence and compliance to therapy differ by MI patient's selected disease related variables?

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

As presented in table 13, adherence to medication reported significant negative association with when diagnosed with MI (r = -.24*, p .01). This explains that those who were recently diagnosed with MI, were more likely to show good adherence to their medication. By other words, the longer time diagnosed with MI, the less likely to adhere to medication.

Table 13: Correlation between selected disease related variables and adherence and compliance among study participants

	Age on When diagnosis		diagnosed with AMI		Chronic diseases		# of unplanned admission	
	r	p	R	p	r	p	R	p
Adherence to medication	**-.17**	**.09**	**-.24***	**.01**	**.007**	**.94**	**-.05**	**.56**
Appointment keeping	-.09	.34	-.08	.42	-.007	.94	-.05	.56
Adherence to diet	.01	.89	-.06	.51	.16	.11	.07	.47

Significance level was set as p = .05 or less

42 Research question 6: Does QOL of MI patients differ by their demographic characteristics?

Among all the demographic variables, age reported significant negative association with social QOL (r= -.22*, p =. 03) indicating that older patients were more likely to have better social QOL.

Gender reported statistically significant negative association with environmental quality of life (r = -.19*, p = .04). This indicates that males were less likely to show environmental quality of life than females.

Marital status showed statistically significant association with psychological QOL (r=.29**, p = .01) meaning that married patients were more likely to have better psychological QOL.

In addition, occupations showed statistically significant negative association with psychological QOL (r =-.30**, p = .001) indicating that those who were not working or who were retired were more likely to have a better psychological QOL. Furthermore, education did not show any statistically significant association with any of the QOL subscales as shown in table 14

Table 14: Correlation between demographic characteristic of the study sample and QOL

	Age		Gender		Marital Status		Education		Occupation	
	R	p	R	p	r	p	r	p	r	P
Physical QOL	.03	.71	.07	.46	.13	,21	-.015	.88	.06	.54
Psychological QOL	-.006	.95	-.01	.86	.29*	.01	.14	.16	-.30**	.001
Social QOL	.22*	.03	-.11	.26	-.05	.54	.12	.24	.11	.13
Environmental QOL	-.02	.81	-.19*	.04	-.04	.66	.16	.11	.16	.11

Significance level was set as p = .05 or less

Research question 7: Does QOL of MI patients differ by selected disease related variables?

As designated in table 15, correlation analysis reported that only chronic disease showed statistically significant association with physical QOL (r= .21*, p = .02) meaning that with the presence of chronic illnesses, patients were more likely to have poorer physical QOL. There was no statistical significance association between any of the other disease related variables and the QOL subscales.

Table 15: Correlation between selected disease related factors of the study sample and QOL

	Age on diagnosis		When diagnosed with AMI		Chronic diseases		# of unplanned admission	
	r	p	R	p	r	p	R	p
Physical QOL	-.01	.85	.017	.87	.21*	.02	.07	.48
Psychological QOL	-.09	.34	.12	,21	-.16	.11	-.05	.61
Social QOL	.07	.50	.07	.50	.002	.98	.18	.68
Environmental QOL	-.06	.51	-.09	.35	-.05	.61	.04	.71

Significance level was set as p = .05 or less

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

Chapter Summary

This chapter presents the result of the descriptive statistics and statistical analysis of the study variables, also focused on the discussion and analysis of each question.

A. Page Layout and Font Face

TABLE: I

	Specification	Applicable
Font Face	Times New Roman/ Calibri	1 Column and 2 Column Word File
Top Margin	0.8”	1 Column and 2 Column Word File
Bottom Margin	0.6”	1 Column and 2 Column Word File
Left Margin	0.8”	1 Column and 2 Column Word File
Right Margin	0.6”	1 Column and 2 Column Word File
Space Between Column	0.3”	2 Column Word Document

B. Table, Figures, Headings and Equations

You can write table by using Roman numeral while figure is written like Fig. 1. Authors are advised to use Microsoft Equation Editor for entering equations.

TABLE: II

	Font	Alignment
Heading	**10, Bold**	**Centre and Use uppercase Roman Numeral (preferred)**
Subheading (Level I)	**10, Bold**	**Left and use Uppercase character (preferred)**
Subheading (Level II)	**10, Bold**	**Left and Use lowercase (Roman Numeral, Character)**

V. CONCLUSION

The current study investigated the relationship between adherence and compliance to therapy on the quality of life among patients with acute myocardial infarction. The study used a descriptive correlational cross-sectional design and a convenience sample to answer the research questions. Results showed a good level of adherence to MI medication, appointment keeping and diet among patients. Demographic factors such as education reported a significant association with medication adherence and appointment keeping. When MI was diagnosed reported associated with adherence to medication. Physical quality of life was the lowest among participants in this study. Age, gender, marital status, and occupation reported statistically significance associated with quality of life. In addition, Chronic illness showed association with physical quality of life. Results from the current study were consistent with previous research and reasons of inconsistency were related to demographic characteristics. Results from the current study would serve as a basis for identifying important factors that would predict adherence and good quality of life. Future intervention based on these predictors is recommended for enhancing the overall MI patients‟ outcomes and improving the overall health of the Saudi population.

REFERENCES

[1] Akesson A, Larsson SC, Discacciati A, Wolk A. (2014). Low-risk diet and lifestyle habits in the primary prevention of myocardial infarction in men: a population-based prospective cohort study. Journal of American college of cardiology, 64:1299–306.

[2] Aljabri, M., Al-Raddadi, R., Bahijri, S., Al Ahmadi, J., Ghada Ajabnoo, G., Jambi, H. (2019). Factors associated with adherence to Mediterranean diet among Saudi non-diabetic patients attending primary health care centers: A cross-sectional study. Journal of Taibah University of Medical Science, 14 (2), 139-148.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

[3] AlQarni, K., AlQarni, E., Naqvi, A., AlShayban, D., Azizullah, S., Abdul Haseeb, G., Raafat, M., Jamshed, S. (2019). Assessment of Medication Adherence in Saudi Patients with Type II Diabetes Mellitus in Khobar City, Saudi Arabia. Frontiers in Pharmacology, doi: 10.3389/fphar.2019.01306.

[4] Attarchi, M.; Rigi, A.A.; Mirzamohammadi, E.; Mohammadi, S. (2012). Assessment of the main factors influencing return to work following myocardial infarction: A longitudinal study. Int. J. Collab. Res. Intern. Med. Public Health, 4, 1305–1314.

[5] Bahall, M. and Khan, K. (2018). Quality of life of patients with first-time AMI: a descriptive study. Health quality of life outcomes, 16 (1)):32. doi: 10.1186/s12955-018-0860-8.

[6] Bellmann, B., Lin, T., Greissinger, K., Rottner, L., Rillig, A., & Zimmerling, S. (2020). The beneficial effects of cardiac rehabilitation. Cardiology and Therapy, 9(1), 35–44.

[7] Bhardwaj, A. (2022). Quality of life - statpearls - NCBI bookshelf. Retrieved May 1, 2023, from https://www.ncbi.nlm.nih.gov/books/NBK536962/

[8] Boersma, S. N., & Maes, S. (2006, October). Psychological consequences of myocardial infarction: A self-regulation perspective on health-related quality of life and cardiac rehabilitation. Netherlands heart journal, from https://www.moh.gov.sa/en/awarenessplateform/ChronicDisease/Pages/CardiovascularDiseases.aspx

[9] Chen, C., Du, R., Wang, P., Wang, T., Ma, L., & Larcher, L. (2020). Health-related quality of life and associated factors in patients with myocardial infarction after returning to work: A cross-sectional study. https://doi.org/10.21203/rs.2.23225/v3

[10] Chomistek AK, Chiuve SE, Eliassen AH, Mukamal KJ, Willett WC, Rimm EB (2015). Healthy lifestyle in the primordial prevention of cardiovascular disease among young women, Journal of American college of cardiology, 65:43–51.

[11] Conradie, A., Atherton, J., Chowdhury, E., Duong, M., Schwarz, S., and Ecclestom, D. (2022).

[12] Crowley MJ, et al. (2015). Medication non-adherence after myocardial infarction: An exploration of modifying factors. Journal of General Internal Medicine, 30:83–90. doi: 10.1007/s11606-014-3072.

[13] Crowley, M. J., Zullig, L. L., Shah, B. R., Shaw, R. J., Lindquist, J. H., Peterson, E. D., & Bosworth, H. B. (2014). Medication non-adherence after myocardial infarction: An exploration of modifying factors. Journal of General Internal Medicine, 30(1), 83-90. https://doi.org/10.1007/s11606-014-3072-x

[14] Das, B., Neupane, D., Gill, S., Singh, G. (2021). Factors affecting non-adherence to medical appointments among patients with hypertension at public health facilities in Punjab, India. The journal of Clinical Hypertension, 23, 713-719.

[15] De Jonge, P.; Zuidersma, M.; Bültmann, U. (2014). The presence of a depressive episode predicts lower return to work rate after myocardial infarction. Gen. Hosp. Psychiatry, 36, 363–367.

[16] Dias, A, Carlos Pereira a, Maria João Monteiro b, Célia Santos c. (2014). Patients‟ beliefs about medicines and adherence to medication in ischemic heart disease. Atención Primaria, 46 (5), 101-10.

[17] Doris S, Thompson DR, Yu CM, Oldridge NB. (2009). Assessing HRQL among Chinese patients with coronary heart disease: angina, myocardial infarction and heart failure. International Journal of Cardiology, 131 (3):384–394.

[18] Endalew, H.L., Liyew, B., Kassew, T., Ewnetu, G., Tilahun, A., and Alamneh, T. (2021). Health-Related Quality of Life Among Myocardial Infarction Survivors: Structural Equation Modeling Approach. Journal of Multidiscipline Healthcare, 14, 1543-1552.

[19] Han, K., Park,E., K, J., Kim, S., and Park, S. (2014). Is marital status associated with quality of life?, Health and Quality of Life Outcomes, 12, (109).

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

[20] Health-Related Quality of Life (HRQoL) and the Effect on Outcome in Patients Presenting with Coronary Artery Disease and Treated with Percutaneous Coronary Intervention (PCI): Differences Noted by Sex and Age. Journal of Clinical Medicine. 11,(14), 70074-70075.

[21] Ho PM, et al. (2006). Impact of medication therapy discontinuation on mortality after myocardial infarction. Archive of Internal Medicine, 166:1842–1847. doi: 10.1001/archinte.166.17.1842.

[22] Höfer, S. (2020). Health-related quality of life in heart disease. Revista Portuguesa de Cardiologia, 39(7), 375-376. https://doi.org/10.1016/j.repc.2020.06.007Mechanic, O. J. (2021, August 11). Acute myocardial infarction. StatPearls [Internet]. Retrieved February 1, 2022, from https://www.ncbi.nlm.nih.gov/books/NBK459269/

[23] Horvat, N., Locatelli, I., Kos, M., & Janežič, A. (2018). Medication adherence and health-related quality of life among patients with chronic obstructive pulmonary disease. Acta Pharmaceutica, 68(1), 117-125.

[24] Huffman, M. D., Mohanan, P. P., Devarajan, R., Baldridge, A. S., Kondal, D., Zhao, L., Ali, M., Spertus, J. A., Chan, P. S., Natesan, S., Abdullakutty, J., Krishnan, M. N., TP, A., Renga, S., Punnoose, E., Unni, G., Prabhakaran, D., & Lloyd-Jones, D. M. (2019). Health-related quality of life at 30 days among Indian patients with acute myocardial infarction. Circulation: Cardiovascular Quality and Outcomes, 12(2).

[25] Jane Wang, Shannon Wongvibulsin, B. S., Katharine Henry,, B. S., Saki Fujita, B. S., 1Johns Hopkins University School of Medicine,, M. D., Baltimore, M. D., & 2Johns Hopkins University,, M. D. (2017). Quantifying and Visualizing Medication Adherence in Patients Following Acute Myocardial Infarction. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5977657/

[26] Jin, H., Kim, Y., and Rhie, S.J. (2022). Factors affecting medication adherence in elderly people. Patients preference and adherence, 10, 2117-2125.

[27] Jungst, J., Graber, S., Simons, S. Wedemeyer, H., and Lammert, F. (2019). Medication adherence among Patients with Chronic Disease: Survey-Based Study in Pharmacies. QJM, 1;112 (7): 505-512.

[28] Kalyango, J.N., Hall, M. and Karamagi, C. (2014). Appointment keeping for medical review among patients with selected chronic diseases in an urban area of Uganda. The Pan African Medical Journal, 19 (229), PMC4377094.

[29] Kang, K.; Gholizadeh, L.; Inglis, S.C.; Han, H.R. (2017). Correlates of health-related quality of life in patients with myocardial infarction: A literature review. Int. J. Nursing Studies, 73, 1–16.

[30] Kayhan, S.A. and Nural, N. (2022). Factors associated with adherence to medication, diet and self-monitoring in patients with heart failure. Pak Heart Journal, 55 (2), 134-139.

[31] Khambati, A., Dowell, L., Tairan, J., Juzych, D., Syeda, S. Wilson, M.R., Juzych, M.S. and Kumar, A. (2021). Comprehensive Analysis to Uncover Determinants of Patient Appointment Compliance in Ophthalmology at the Kresge Eye Institute, USA. Patient Preference and Adherence, 15, 589-600.

[32] Khowaja, S., Karim, M., Zahid, M., Zahid, A., Ahmed, S., Kazmi, K., & Jamal, S. Z. (2019). Impact of temperature variation on acute myocardial infarction in Karachi, Pakistan. Cureus.

[33] Kim HM, Kim J, Hwang SY. (2015). Health-related quality of life in symptomatic postmyocardial infarction patients with left ventricular dysfunction. Asian Nurses Research, 9 (1):47–52. doi: 10.1016/j.anr.2014.11.004.

[34] Kitakata, H., Kohno, T., Kohsaka, S., Fujino, J., Nakano, N., Fukuoka, R., Yuasa, S., Maekawa, Y., & Fukuda, K. (2018). Patient confidence regarding secondary lifestyle modification and knowledge of „heart attack" symptoms following percutaneous revascularisation in Japan: A cross-sectional study. BMJ Open, 8(3), e019119. https://doi.org/10.1136/bmjopen-2017-019119

[35] Ko, K. M., Moon, S., Koh, J. H., Pae, C., & Min, J. (2020). Contribution of personality traits, psychological factors, and health-related quality of life to medication adherence in patients with rheumatoid arthritis. Yonsei Medical Journal, 61(5), 406.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

[36] Kosobucka A , Michalski P , Pietrzykowski Ł , Kasprzak M , Obońska K, Fabiszak T, Felsmann M, and Kubica A. (2018). Adherence to treatment assessed with the Adherence in Chronic Diseases Scale in patients after myocardial infarction. Patients‟ preference and adherence, 12, 333-340.

[37] Krack, G., Holle, R., Kirchberger, I., Kuch, B., Amann, U., & Seidl, H. (2018). Determinants of adherence and effects on health-related quality of life after myocardial infarction: a prospective cohort study. BMC Geriatrics, 18 (1).

[38] Lee, Y., Kim, R. B., Lee, H. J., Kim, K., Shin, M., Park, H., Ahn, S., Kim, S. Y., Lee, Y., Kim, B., Lee, H., Lee, W. K., Lee, K. S., Kim, M., & Park, K. (2018). Relationships among medication adherence, lifestyle modification, and health-related quality of life in patients with acute myocardial infarction: A cross-sectional study. Health and Quality of Life Outcomes, 16(1). https://doi.org/10.1186/s12955-018-0921-z

[39] Lee, Y., Kim, R., Lee, H., Kim, K., Shin, M., Park, H., Ahn, S., et al., (2018). Relationships among medication adherence, lifestyle modification, and health-related quality of life in patients with acute myocardial infarction: a cross-sectional study. Health Quality of life outcomes, 16 (10), 100.

[40] Ling, R., Jiao, N., Hassan, N., He, H., and Wang, W., (2019). Adherence to diet and medication and the associated factors among patients with chronic heart failure in a multi-ethnic society. Heart and Lung, 49 (2), 144-150.

[41] Luanaigh, C., and Lawlor, B. (2008). Loneliness and the health of older people. International Journal of Geriatric Psychiatry, 23(12),1213-1221.

[42] Lv J, Yu C, Guo Y, Bian Z, Yang L, Chen Y, et al. (2017). Adherence to healthy lifestyle and cardiovascular diseases in the Chinese population. Journal of American college of cardiology, 69:1116–25.

[43] Megari, K. (2013). Quality of life in chronic disease patients. Health psychology research, 1 (3), e27.

[44] Mirahmadizadeh, A., Khorshidsavar, H., Sief, M., Sharifi, M. (2020). Adherence to medication, diet and physical activity and the associated factors amongst patients with type 2 diabetes. Diabetes therapy, 11. 479-494.

[45] Mongkhon, P., Ashcroft, D.M., Scholfield, N., Kongkaew, C. (2018). Hospital Admission Associated with Medication Non-Adherance: A systematic Review of Prospective Observational Studies. British Journal of Medicine; 27 (11): 902-914.

[46] Morys, J., Bellwon, J., Hofer, S. Rynkiewicz, A. and Gruchata, M. (2016). Quality of life in patients with coronary heart disease after myocardial infarction and with ischemic heart failure. Archive of Medical Science, 12 (2), 326-333.

[47] Myocardial infarction - statpearls - NCBI bookshelf. (n.d.). Retrieved September 8, 2022, https://www.ncbi.nlm.nih.gov/books/NBK537076/

[48] Niteesh K. Choudhry, Soko Setoguchi, Raisa Levin MS, Wolfgang C. Winkelmayer, William H. Shrank. (2008). Trends in adherence to secondary prevention medications in elderly post-myocardial infarction patients. PDS pharmacoepidemiology and drug safety. https://doi.org/10.1002/pds.1671.

[49] Nwabou, C., Morss, S., Weeks, K., and Young, H. (2014). Factors Associated with Appointment Non-Adherence among African-Americans with Severe, Poorly Controlled Hypertension. POLS ONE, https://doi.org/10.1371/journal.pone.0103090.

[50] Ogedegbe, G., Schoenthaler, A., and Fernandez, S. (2007). Appointment-Keeping Behavior is Not Related to Medication Adherence in Hypertensive African Americans. Journal of General Internal Medicine, 22(8), 1176-1179.

[51] Ogińska-Bulik N. (2014). Type D personality and quality of life in subjects after myocardial infarction. Cardiologic Polsky, 72(7):624–630.

[52] Park S-K, Kim H-S, Cho I-S, Ham O-K. (2009). Gender differences in factors influencing quality of life among patients with coronary artery disease. Journal of Korean Academic Fundamentals of Nursing, 16(4), 497.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

[53] Peterson, P.N.; ASpertus, J.; Magid, D.J.; AMasoudi, F.; Reid, K.; Hamman, R.F.; Rumsfeld, J.S. (2006). The impact of diabetes on one-year health status outcomes following acute coronary syndromes. BMC Cardiovascular Disorders, 6, 41.

[54] Physiology, cardiac muscle - statpearls - NCBI bookshelf. (n.d.). Retrieved September 8, 2022, from https://www.ncbi.nlm.nih.gov/books/NBK572070/

[55] Pietrzykowski, L., Michalski, P., Kosobucka, A., Kasprzak, M., Fabiszak, T., Stolarek, Siller-Matula,W., Kubica, A. (2020). Medication adherence and its determinants in patients after myocardial infarction. Scientific Report, 10.1038/s41598-020-68915-1.

[56] Pietrzykowski, Ł., Michalski, P., Kosobucka, A., Kasprzak, M., Fabiszak, T., Stolarek, W., Siller-Matula, J. M., & Kubica, A. (2020). Medication adherence and its determinants in patients after myocardial infarction. Scientific Reports, 10(1). https://doi.org/10.1038/s41598-020-68915-1

[57] Pocock, S.J.; Henderson, R.A.; Clayton, T.; Lyman, G.H.; Chamberlain, D.A. (2000). Quality of life after coronary angioplasty or continued medical treatment for angina: Three-year follow-up in the RITA-2 trial‡‡Participants of the second Randomized Intervention Treatment of Angina (RITA-2) trial are listed in the Appendix. Journal of American College of Cardiology, 35, 907–914.

[58] Primary prevention of cardiovascular disease with a Mediterranean diet supplemented with extra-virgin olive oil or nuts. (2018). New England Journal of Medicine, 379(14), 1387–1389.

[59] Rančić, N., Petrović, B., Apostolović, S., Kocić, B., & Ilić, M. (2013). Health-related quality of life in patients after the acute myocardial infarction. Open Medicine, 8(2), 266–272.

[60] Rojas-Reyes, J. (2018). Adherence to Treatment and Quality of Life in People with Acute Myocardial Infarction. Aquichan [online], 16 (3), 328-339.

[61] Rosoff, D. B., Davey Smith, G., Mehta, N., Clarke, T.-K., & Lohoff, F. W. (2020). Evaluating the relationship between alcohol consumption, tobacco use, and cardiovascular disease: A multivariable mendelian randomization study. PLOS Medicine, 17(12). https://doi.org/10.1371/journal.pmed.1003410

[62] Silavanich, V., Nathisuwan, S., Phrommintikul, A., and Permsuwan, U. (2019). Relationship of medication adherence and quality of life among heart failure patients. Heart & Lung, 48 (2), 105-110.

[63] Souza, A. C., Borges, J. W., & Moreira, T. M. (2016). Quality of life and treatment adherence in hypertensive patients: Systematic review with meta-analysis. Revista De Saúde Pública, 50. https://doi.org/10.1590/s1518-8787.2016050006415

[64] Sun, W.,Gholizaseh, L., Perry, L. and Kang, K. (2022). Predicting Return to Work Following Myocardial Infarction: A Prospective Longitudinal Cohort Study. International Journal of Environmental Research in Public Health, 19, 8032, 1-18.

[65] Taibanguay, N., Chaiamnuay, S., Asvatanabodee, P. and Narongroeknawin, P. (2019). Effect of patient education on medication adherence of patients with rheumatoid artheritis: A randomized controlled trial. Patient Preference and Adherence, 13, 119-129.

[66] Timóteo, A. T., Dias, S. S., Rodrigues, A. M., Gregório, M. J., Sousa, R. D., & Canhão, H. (2020). Quality of life in adults living in the community with previous self-reported myocardial infarction. Revista Portuguesa De Cardiologia, 39(7), 367–373.

[67] Uchmanowicz, I.; Loboz-Grudzien, K.; Jankowska-Polanska, B.; Sokalski, L. (2013). Influence of diabetes on health-related quality of life results in patients with acute coronary syndrome treated with coronary angioplasty. Acta Diabetol. 50, 217–225.

International Journal of Novel Research in Healthcare and Nursing
Vol. 11, Issue 2, pp: (118-138), Month: May - August 2024, Available at: www.noveltyjournals.com

[68] Vega,, M., Villar, O., Carrillo-Saucedo, I., Montañez-Alvarado, P. (2018). Community Mental Health Journal, 54(4), 480–484.

[69] Wang W, Thompson DR, Ski CF, Liu M. (2014). Health-related quality of life and its associated factors in Chinese myocardial infarction patients. European Journal of Preview in Cardiology, 21(3):321–329.

[70] Warraich, H., Kalttenbach, L., Fonarow, G., Peterson, E., and Wang, T. (2018). Adverse Change in Employment Status After Acute Myocardial Infarction. Circulation: cardiovascular Quality and Outcomes, 11(6), e004528.

[71] World Health Organization. (2022). The World Health Organization Quality of Life (WHOQOL). World Health Organization. Retrieved May 1, 2023, from https://www.who.int/publications/i/item/WHO-HIS-HSI-Rev.2012.03

[72] Zullig, L.L., Drake, C., Shahsahebi, M. et al. (2022). Adherence to cardiovascular disease risk factor medications among patients with cancer: a systematic review. Journal of Cancer Survive. https://doi.org/10.1007/s11764-022-01212-0.