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Adherence of Patients with Myocardial Infarctions toward Self-Management in Hillah Teaching Hospitals.

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Abstract : Aim of study: Aim of the study assessing the adherence of self-care management among patients with myocardial infarction.

Methodology: Descriptive cross-sectional design study was conducted atin the coronary care unit and medical wards in Marjan teaching hospital andAL-Hillah teaching hospital,data was gathered by using prepared form which consist tool forassessing the adherence of self-care management among patients with myocardial infarctionfrom the period between 27 October 2015 to 20 August 2016. The selected sample was (100) patients.

Results:The findings of the study indicate that the highest percentage (43%) of the study sample were between (65-76) age group, related to gender this highest percentage (64%)were male (64%) were married, with respect to the educational status the highest percentage (22%)from the study sample were illiterate, (33%) were retired ,and (66%) were rural residency, *the highest percentage (74%) of the study sample smokers, were while (89%) of the study sample were non –alcohol abusers.*The highest percentage (40%) of the convenient study sample were 6 months tolyears related to the duration of myocardial infarction,*shows that the highest percentage (47%) of the study sample were with diabetes mellitus as chronic diseases,*the highest percentage (54%) of the study sample were overweight*.*In general out of 100 participants, (54) show low adherence toward self – management, with regard to diet scale (70%)*.*The relations between demographical and clinical characteristics and the overall assessment for self-management Scales the contingency coefficient between data presented 0.189 and 0.408 indicating a high association degree between demographical and clinical characteristics and the overall assessment for adherence toward self-management Scales. In other word, the self-management of patientswas influenced by their age, Socio-Economic Status, Gender, Residency, Smoking, BMI, Duration of attack and No. of Chronic Diseases.

Conclusion: The majority of the patients who participate in the study were with moderate adherence relation to self –care management.

Recommendation:Establishment of well-equipped rehabilitation center specialized to improve patient's knowledge and practice related to their conditions, and teaching them how to live with their condition, the services of this center may be extended to serve patient's family. **Keywords:** Adherence,myocardial infarction,self-management.

Introduction

Cardiovascular disease is a major health problem and consumer of the community resources; it remains a global problem which affects millions of peoples over the word ¹.

The beginning of patients hospitalization contributes a lot in the coming future since the patients is able to cope and adjust his or her lifestyle².

High prevalence and incidence of myocardial infarction (MI) are as the most important cardiovascular disease and the reason for death has no geographical, spatial, gender, and social limit³.

Acute myocardial infarction (AMI) started when there is poor blood supply to the heart which leads the myocardium fall to maintain normal function and which disturbed the internal body balance (homeostasis), ischemia for an extended period result in irreversible cell damage or death⁴.

Physical inactivity and rapid socioeconomic changes would have major contribution to this condition⁵.

World health organization (WHO) emphasis on the fact that the medical treatment is not always enough to keep positive outcomes, they believe that in addition to the efficacious treatment, the patient adherence is an important issue that will keep an successful outcome⁶.

There are many strategies and recommendations, if the patients adhere to them, they will be on the safe side from any advance deterioration in their health status, and these strategies can be used by healthy and a diseased persons⁷.

Healthy lifestyles which consist of consumption of healthy dietary change with low saturated fat, regular exercises program to maintain the function of the cardiovascular system and smoking cessation will decrease premature death expose to ischemic heart disease(IHD) and all coronary intervention⁸.

Self-care theory which was formulated by Dorothy Orem is used as a nursing from work to cover the needs of the patient who diagnosed with myocardial infarction (MI), in order to regulate the human functions to maintain his quality of life. The theory is an important method to understand the basic condition of the patient and the factors which influence upon his life and the power component, need and abilities of the person for performing self – care. Nurses need special knowledge and skill to distinguish individual characteristics of person so that they are able to help and collaborate with meeting and achieving therapeutic self-care⁹.

Objectives of study:

- 1. To assess the adherence of self-management for patient withmyocardial infraction.
- 2. Identify the demographical characteristics of the study sample such as (age, gender, marital status, educational status, addressing, economic status).
- 3. To find out the relationship between patient adherence of self- management and demographic data (age, gender, marital status, educational status, addressing, economic status) and clinical characteristics.

Methodology:

Design of the Study:

Quantitative - descriptive cross-sectional design is selected to study the carried out to study adherence of patient 's with myocardial infarctions toward self-management in Hillah teaching hospitals to Hillah city achieve the early stated objectives the study started from the period from 27/ Dec / 2015 to 20/August/2016.

Sample of the Study:

Non-Probability (purposive) sample of (100) patients with myocardial infarctions (63)male ,(37) female, who readmitted to the coronary care units or discharged to the medical wards in Hillah Teaching Hospital and Marjan teaching hospital were selected.

Setting of the Study:

The study was conducted in the coronary care unit and medical wards in Marjan teaching hospital which established at (1957), the capacity of coronary care unit is (12) beds, female medical wards (58) beds and male medical wards (43) beds, while the capacity of the coronary care unit in AL-Hillah teaching hospital which established in (1972) is (6) beds and (24) beds related to medical wards for male and female.

The Study Instrument:

Special questionnaire was constructed after intensive review of related literatures, Morisky scales to measure medication adherence were used after modification ⁽¹⁰⁾. This questionnaire consists of three parts:

Part 1: Demographic Data: first part consist of (7) items related to the socio-demographic characteristics such as (age, gender, area of residency, marital status, educational levels, occupation, and socioeconomic status).

Part 2: Clinical Data: the contents of the second part includes (5) items which related to patients clinical data (smoking, alcohols consumption, Duration of disease, chronic diseases such as (hypertension, diabetes mellitus, atherosclerotic and other diseases).also including body mass index (BMI).

Part 3: Patients' Adherence to self -management: the third part extended to (4) domains related to the adherence of myocardial infractions patients toward self-management divided as: nutritional domain consist of (27) items, healthy behaviors (7) items, medications (8) items, medical follow up which extended to (9) items.All the studied domains, except the

Medication are adopted and developed with the aid of guideline which constructed by the National Institute for Health and Clinical Excellence, 2007.

Results:

Table (1).Distribution of the demographical characteristics of the study sample.

Items	F	%	items	
Age Groups	41-52yrs	18	18	
	53-64yrs	39	39	
	65-76yrs	43	43	
	total	100	100	
Gender	Male	64	64.0	
	Female	36	36.0	
Marital Status	Single	4	4.0	
	Married	64	64.0	
	Widow	27	27.0	
	Divorced	5	5.0	
	total	100	100	
Residency	Urban	66	66.0	
	Rural	34	34.0	
Occupation	Employee	18	18.0	
	Private	18	18.0	
	Unemployed	2	2.0	
	Housewife	29	29.0	
	Retired	33	33.0	
	total	100	100	
Educational Levels	Illiterate	22	22.0	
	Read and Write	16	16.0	
	Primary School	13	13.0	
	Intermediate School	16	16.0	
	Secondary School	20	20.0	
	Institute or College	13	13.0	
	total	100	100	

Table (1) presented that the highest percentage (43%) of the study sample were between (65-76) age group, related to gender this highest percentage (64%) were male (64%) were married, with respect to the educational status the highest percentage (22%) from the study sample were illiterate, (33%) were retired, and (66%) were rural residency.

Table (2).Distribution of the clinical information of the study sample related to smoking and alcohol consumption.

items	F		%		
	Yes	No	Yes	No	
Smoking	74	26	74%	26%	
Alcohol conception	11	89	11%	89%	

Table (2) this table shows that the highest percentage74 (74%) of the study sample smokers, were while 89(89%) of the study sample were non –alcohol abusers.

Duration of disease (years)	F	%
6 month to 1 year	40	40%
2 years	13	13%
3 years	16	16%
4 year	7	7%
5 year	10	10%
6 year	6	6%
7 year	1	1%
10year	7	

Table (3).Distribution of clinical information of the study sample related to duration of design:

Table (3) presented that the highest percentage 40(40%) of the convenient study sample were 6 months to 1 years related to the duration of myocardial infarction.

 Table (4) Distribution of clinical information of the study sample related to chronic diseases.

Items	F	%
Hypertension	25	25%
Diabetes mellitus	47	47%
Atherotheclerosis	25	25%
Others	3	3%

Shows that the highest percentage 47(47%) of the study sample were with diabetes mellitus as chronic diseases.

Table (5) Distribution of the study sample related to the body mass index categories.

Items	F	%
Underweight (less than 18.5)	0	0
Normal weight (18.5 to 24.9)	10	10
Overweight (25 to29.9)	54	54
Obese(30 or more)	36	36

The results in table (5) show that the highest percentage 54(54%) of the study sample were overweight.

Items	adherence	F	%	Mean(M.S)	±SD	Relative Sufficient (R.S)
	Low adherence	70	70	1.781	0.112	59.37
Diet	Moderate adherence	13	13	2.00	0.000	66.67
	High adherence	17	17	2.137	0.068	71.23
	Low adherence	50	50	1.51	0.118	50.33
Health Behavior	Moderate adherence	24	26	2.00	0.000	66.67
	High adherence	24	24	2.125	0.192	70.83
Medication	Low adherence	38	38	1.830	0.077	61.00
	Moderate adherence	27	27	2.000	0.000	66.67
	High adherence	35	35	2.288	0.199	76.27
	Low adherence	58	58	1.695	0.112	56.50
Medical follow-up	Moderate adherence	22	22	2.000	0.000	66.67
	High adherence	20	20	2.113	0.16	70.43
All	Low adherence	54	54	1.704	0.104	56.80
	Moderate adherence	22	22	2.000	0.000	66.67
	High adherence	24	24	2.166	0.154	72.20

Table (6) level of adherence of self-management for study sample.

The results in table (6) indicated that, in general out of 100 participants (54) show low adherence toward self – management, with regard to diet scale (70%).

Table	(7).	Causes	correlation	between	Demographical	and	Clinical	Characteristics	and	the	overall
assessi	ment	for self-	managemen	t Scales.							

Demographical & Clinical characteristics	Contingency Coefficient	Approx. Sig.	Significance
Age groups	0.241	0.001	HS
Socio-Economic Status	0.408	0.000	HS
Gender	0.328	0.000	HS
Residency	0.380	0.000	HS
Smoking	0.342	0.000	HS
BMI	0.185	0.031	S
Duration of attack	0.261	0.000	HS
No. of Chronic Diseases	0.189	0.026	S

S: significant at P≤0.05, HS=highly significant at p≤0.01

Table (7) shows the relations between demographical and clinical characteristics and the overall assessment for self-management Scales

The contingency coefficient between data presented in this tables, 0.189 and 0.408 indicating a high association degree between demographical and clinical characteristics and the overall assessment for adherence toward self-management Scales. In other word, the self-management of patients influenced by their age, Socio-Economic Status, Gender, Residency, Smoking, BMI, Duration of attack and No. of Chronic Diseases.

Discussion:

Part1: Sociodemograhpic characteristics and Medical information of the sample.

Throughout the course data analysis , (Table 1) shows that, the majority (65%) of the study sample were (More than 60yrs) years old, the mean of age was (61.51) years old, while (9%) were (40-49) years old . This finding comes along with result obtained from study done by $^{(11)}(12)$. Which indicated that majority of the study subjects with myocardial infarctions were (61-71) yearsol $^{(11,12)}$.

Regarding to the study subjects gender, the results indicate that, the higher percentage of the study sample are males. This result comes along with all of them mentioned that the male is the dominant gender for patients with ischemic heart disease ^{13-15.}

Also found that chronic heart diseases such as angina pectoris and myocardial infarctions affected a large percentage of people in the world, the common age group (80%) is characterized as older male than 50 years old, the minority of patients were female(30%), difference between the male and female in regarding to the incidence rate among different kinds of diseases refers to many factors such as physiological, psychological factors that put men more vulnerable to get ischemic heart disease than female. But these differences will decrease as the female age becomes more advanced¹⁶.

Regarding to marital status most of the study sample are married. This result is agreed with study found that the highest percentage is married patients. In addition, it's clear that the patients in the same age are often married when compared with those with early age groups. Also those patients are part of the east population; that population often marries early, as compared with other people from other cultures¹⁷.

Concerning with educational levels, the higher percentage are for those who are graduated from secondary schools. This result agrees with studies, all of them found that the majority of the study subjects are secondary school graduated ¹⁸⁻²⁰.

Concerning the occupation, (Table -1) shows that the greater numbers of patients in this study were retired and Housewifery and they were accounted (29%), (33%) it mean do not work (62%). This result was agreed with study shows that they are (36.6%) housewives²¹.

The results of the present study show that the majority of the sample living at urban residential area. This result comes along with study, whose results indicate that the majority of the study subjects are reside in a big cities rather than the countryside²².

Also study stated that the majority of the study subjects are living in urban residential area and the remaining participant are living in the rural ones. In addition, these results might come because of the myocardial infarction that refers to industrialize modern society. Moreover, the ischemic heart diseases may increase in incidence among those persons in urban residential area related to complex life, than in those from rural. Also those persons in rural residential area often experience a physical exercise every day as compared with those in urban that make them less risky to get ischemic heart diseases. Furthermore, the individuals in rural residential areas are less prone to get ischemic heart diseases¹³.

(Table 2) analysis was conducted 2 items of the questionnaire that assess the adherence with smoking and drinking alcohol, on scale of yes and no. The results indicated (74%) of patients smoker and (26%) no smoker with (11%) drinking and (88%) no drinking. This finding was supported by studies which stated that as a general There is a link between alcohol and tobacco which used and the level of the a fat in the blood(triglycerides) that has with relation with the coronary heart disease²³⁻²⁸.

In addition to the duration of disease, (Table: 3) the higher percentage is for those who are suffering from the disease for one year and less. Concerning the receiving of health education about the therapeutic recommendations, the results show that the majority of the study subjects are received health education. And the physician is the major source of the received health education.

These results come because the patients who are admitted to the hospital are often from those with a new suffering, and the more stable patients are being adapted with their cases, and often depend on the therapeutic regimen without the need to be admitted to the hospital unless it is indicated. In addition, the new suffering patients need to be educating about the disease and the therapeutic regimen.

It is known in Iraqi hospitals and in light of the job prescription published by the ministry of health, that the physician is the person who

Conveys the first meeting with patients, and provides the health education to the patients.

Also study mention that health team members such as workers, physicians, occupy position of a large influence in helping the patient to adept anew positive lifestyle activities to the incidence of CHD, health professional recommended that changing to healthy behaviors such as , healthy diet, medical regimens, stop smoking have an important role to decrease the incidence of disease ²⁹.

In regarding to the diagnosis, the results indicated in table (4) that the higher percentages (47%) are for Diabetes mellitus. This result is supported with the study's results indicated that the higher percentages are for patients those who are suffering from angina and myocardial infarction 18,30 .

In 2001, there were 7.3 million deaths caused by heart disease occur over the word, increase the incidence of heart disease more likely burden up on low- and – middle income people(2001). In developing countries related rapid team over of socio- economical aspects and increase individual needs, will increase socio problem which make the life complex, and make the person more liable to espouse to the coronary heart disease³¹.

Relative to the body mass index in the (table: 5) the normal body weight is accounted 10% while overweight 54%, obese 36% and the remaining 0% were underweight. This finding was supported by study which stated that the obesity raises blood pressure (BP) and makes a risk factor for CVD if left uncontrolled³².

Furthermore, the study results indicate that the majority of the study subjects are present with moderate socio-economic status. This result is supported by study which mentioned that the Majority of the ischemic heart diseases are present with a moderate socio-economic status. Also, these results represent to the fact that the ischemic heart diseases are suffering from an economic problems because they spend a lot of money for treatment and other therapeutic measures⁶.

Part-II:Discussion of the Patients Adherence to Diet Health Behavior, Medication, Medical follow-up and self-Management.

(Tables:7) The study results show that the final assessment of the patient's adherence is low to dietary recommendations, health behaviors, medications, medical follow-up, and even the overall assessment for the patients' adherence the final assessment is low.

These results mean that there is a deficient in the patient's adherence to the diet, Medical follow-up, overall assessment for the patients', Health Behavior and Medication after MI. And this defect present clearly through the patients response to the different studied domains. The major non-adherence presents through the patients responses to the diet, Medical follow-up, overall assessment for the patients', Health Behavior. While the minor non adherence presented through the patients' responses to the Medication.

This result disagree with the study results indicated that the level of patients' adherence to medications and the lifestyle change are only 62.6% and 48% respectively. Also the WHO reports that the patients adherence to therapeutic recommendations is a major and an important issue worldwide, and the problem of non-adherence among patients with chronic diseases is an important thing that all the health staff must be focused in ¹⁸.

The WHO has published that 50% is the average patients' adherence to therapeutic recommendations in developed countries .such as Gambia (27%), Seychelles (26%), and China (43%) of patients with chronic condition shows adherence to their therapeutic regimen. While in the United States of America, (51%) of the patients demonstrate adherence related to their prescribed medication only, and the non-adherence levels in these countries are related to the factors that influence and enhance patients' adherence, such as the personal characteristics, demographic factors, social support and the economic factors³³.

Part-III: Associations between the Patients Adherence with their Demographic and self-management

The study results show that there is a high significant effect of the age, group ,socio-Economic status, gender, residency, smoking ,and duration of attack ,on their adherence to Diet, Health Behavior, Medication, and Medical follow-up with self-management. These study results are supported by the study results of their study indicate that there is a significant effect of the patient's gender on their adherence to the Diet Health Behavior, Medication, Medical follow-up with self-management⁽³⁴⁾. Study found that there is a non-significant effect of the patients age, and the Diet Health Behavior, Medication, Medical follow-up with self-management⁽³⁴⁾. Study found that there is a non-significant effect of the patients age, and the Diet Health Behavior, Medication, Medical follow-up on their adherence of self-management⁽³⁵⁾. Study find that there is a non-significant effect of the patient's gender, and Diet Health Behavior, Medication, Medical follow-up on the patient's adherence of self-management⁽³⁶⁾. Study stated that the age is not a factor for adherence to medication⁽³⁷⁾. While for the effect of the residency on the patient's adherence, the researcher unfortunately dose not found appropriate supportive studies. There are many studied find that the cultural differences between groups will affecting their adherence, actually that there is an observed cultural differences between the rural and the urban residents, as well as there is an effect on their adherence level to therapeutic recommendations.

Conclusion:

The majority of the convenient samples of the study were male between (65-76) age group, married, illiterate with middle socio-economic status and rural residency. Most of the study samples were within 6 months – to 1 year's disease duration, suffering from diabetes mellitus as chronic disease. The majorities of the study sample were smoking, non-alcohol abusers, and categorized under over weight related to the body mass index.. Almost all patient who participates in the study recorded low adherence toward self-management with regard to diet, health behaviors, medication and medical follow up.Significant association founded between low adherence and age, gender, socio-economic status.

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