

# Assessment Of Information Needs For Patients With Coronary Artery Disease

## تقييم المعلومات التي يحتاجها المرضى المصابين بأمراض

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### الخلاصة:-

**الاهداف :** تهدف الدراسة الى تقييم احتياجات المريض للمعلومات حول امراض الشرايين التاجية والعلاقة بين احتياجات المريض والخصائص الاجتماعية و السريرية للمرضى.

**المنهجية :** المرضى المصاب بأمراض الشرايين التاجية بحاجة الى المعلومات ليس فقط فيما يتعلق بالمرض والعلاج، والوقاية من الآثار الجانبية للدواء، ولكن أيضا لغيرها من المشاكل العملية المرتبطة بالأنشطة اليومية أو حتى مع القضايا الاقتصادية. دراسة وصفية أجريت باستعمال نهج التقييم للمدة من ٣ حزيران ٢٠١٢ ولغاية ٢٧ تموز ٢٠١٢ حيث تم اختيار عينة غير احتمالية مكونة من (٣٠) مريض كانوا يراجعون او تم ادخالهم الى مستشفى بعقوبة التعليمي لاصابتهم بأمراض الشرايين التاجية. وقد تم بناء وتطوير الاستمارة الاستبائية من قبل الباحث استنادا الى مراجعة الادبيات والبحوث السابقة لتقييم الحاجة الى المعلومات وتكونت الاستمارة من (٣) اجزاء شمل الجزء الأول الخصائص الديموغرافية وتضمنت معلومات العمر والجنس ومستوى التعليم والحالة الزوجية والمهنة والدخل الشهري وشمل الجزء الثاني البيانات السريرية اما الجزء الثالث احتوى فقرات المعلومات المتعلقة بالحالة المرضية . تم تحديد الثبات من خلال استعمال مقياس ( الاختبار القبلي والبعدي) وتم تحديد مصداقية الاستبانة من خلال عرضها على الخبراء من ذوي الاختصاص وتم تحليل البيانات باستعمال الاحصاء الوصفي (التكرار والنسبة المئوية) والاحصاء الاستدلالي (معامل ارتباط بيرسون واختبار t).

**النتائج:** نتائج الدراسة بينت أن أعلى نسبة (٥٣.٣%) هي من الذكور ضمن الفئات العمرية (٦٤-٥٥) وان (٣٦.٧%) منهم غير قادرين على القراءة والكتابة. واطهرت الدراسة ان (٧٣.٣%) من العينة متزوجون و (٢٦.٧%) من العينة ارامل و (٤٦.٧%) من العينة اناث وربة منزل و (٦٣.٣%) من العينة يسكنون المدينة، وأن (٦٣.٣%) من العينة دخلهم كان يكفي لحد ما و (٢٦.٧%) من العينة كان دخلهم الشهري غير كافي.

**الاستنتاج:** تبين ان المرضى المصابين بأمراض الشرايين التاجية بحاجة الى المعلومات الخاصة بمرضهم والتي تشمل التشريح وعلم وظائف الأعضاء وعلم النفس ونمط الحياة والمعلومات الخاصة بالدواء والمعلومات الغذائية والتعامل مع أعراض المرض .

**التوصيات:** وأوصت الدراسة بضرورة إعداد برنامج تدريبي للفريق الصحي مقدمي الرعاية الصحية للمريض لغرض توجيه وتعريف المريض بمرضه وما يتعلق بذلك.

### Abstract

**Objectives:** The study aims to assess the needs of the patient for information about coronary artery disease and to find out the relationship between patient needs with the social and the clinical characteristics of the patients.

**Methodology:** patient coronary artery disease need information not only with regard to the disease, treatment, and prevention of side effects of the drug, but also for other practical problems associated with daily activities, or even with the economic issues. Descriptive study conducted using the evaluation approach for the duration of June 3, 2012 until July 27, 2012 was chosen as a non-probability sample consisting of (30) patients were reviewed or were admitted to the teaching hospital in Baquba diagnosed coronary artery disease. Have been built and develop questionnaire by the researcher based on review literature and previous research to assess the need for the information and created the form of (3) parts included Part I demographic characteristics and included information age, gender, education level, marital status, occupation, monthly income and included the second part of clinical data and the third part contains clauses information relating to the pathogenicity. Reliability was identified through the use of a scale (pre and post test) were identified validity by offering experts with competence data were analyzed using descriptive statistics (frequency and percentage) and inferential statistical analysis approach (Pearson correlation coefficient and t test).

**Results:** The results of the study showed that the highest percentage ( 53.3) is males under age groups (55-64 ) and (36.7%) of them are unable to read and write. The study showed that (73.3%) of the sample are married (26.7%) sample of widows (46.7%) of the sample of female and housewife (63.3%) of the respondents live in the city, and (63.3%) of the sample income was enough to some extent, and (26.7%) of the sample had a monthly income is not enough.

**Conclusion:** the study show that patients with coronary artery disease need information on their illness, which include anatomy and physiology, psychology and lifestyle information with medicine and nutritional information and deal with the symptoms of the disease.

**Recommendations:** The study recommended the need to set up a training program for health team of health care providers of the patient for the purpose of guiding and definition of patient illness and related.

**Keywords:** Assessment, information needs, patients with coronary artery disease

## **INTRODUCTION:-**

Coronary artery disease results from a complex process known as atherosclerosis (Simon and Zieve, 2009) , Coronary artery disease is "narrowing of the lumen of one or more of the coronary arteries, usually due to atherosclerosis; myocardial ischemia; can cause congestive heart failure, angina pectoris, or myocardial infarction." (Nordqvist, 2010), a waxy substance forms inside the arteries that supply blood to your heart. This substance, called plaque, is made of cholesterol (Texas Heart Institute, 2012). According to WHO estimates, in 2002, 16.7 million people around the globe die of cardiovascular diseases each year. This represents about 1/3 of all deaths globally. Today, men, women, and children are at risk and 80 percent of the burden in low- and middle-income countries. By 2020 heart disease and stroke will become the leading cause of both death and disability worldwide, with the number of fatalities projected to increase to over 20 million a year and by 2030 to over 24 million a year (AHA, 2004). Currently know that information is a real need of patients, as it allows them to construct positive attitudes in relation to the disease, more adequate responses to the situation, and an effective participation in decision-making and future perspectives. Information also has a central role in health education programs. It is also essential because it determines attitudes towards the disease itself, decisions, and future actions of patients and families, which in turn influence their quality of life (Martins, 2009). Patients require information not only regarding the disease and the treatment, the prevention of complications or side effects of medication, but also for other more practical problems associated with everyday activities or even with economic issues. (Maria and Mariana, 2011). Nowadays, it has become evident that the care of hospitalized coronary patients is not only limited to the treatment of the disease and the prevention of complications but also involves assessment of their needs for the provision of high quality of care. According to the literature, there are many definitions proposed for the "need" due to its' inherent complexity. The "patients' need" is a dynamic concept that changes over time and the disease progression. Another commonly held view is that the "patients' need" varies accordingly to the spiritual and cultural traditions of the individuals (Maria et al, 2011). It is known that patients often do not easily perceive information which given during a hospital admission. Nurses may not always take the time needed or present information in a way that patients can understand. Many patients may need several approaches and to be taught by a number of different means if they are to take it in. Thus, even if nurses feel that they have provided information, patients may leave the hospital feeling dissatisfied with the information they have been given about their condition and how to cope with it (Roger, 2003).

## **OBJECTIVES:**

The study aims to assess the needs of the patient for information about coronary artery disease and to find out the relationship between patient needs with the social and the clinical characteristics of the patients.

## MATERIAL AND METHODS

A descriptive design study was carried out to assess the information need for patients with coronary artery disease related to their disease who are treated and to find out the relationship between the need and clinical and sociodemographic characteristic, in Baquba teaching hospital in Diyala governorate. The study was initiated from June 3rd 2012 through July 27<sup>th</sup> 2012. Non-probability sample of (30) patients who were visiting or admitted (inpatient or outpatient) to the hospital with the diagnosis of coronary artery disease or previous history attended the teaching Baquba hospital. Exclusion criteria included patients who were too ill to approach, who had cognitive deficits that would interfere with questionnaire completion. A questionnaire were adapted and developed to measure the need for information scale. The developed questionnaire consists of (3) parts.

**Part I.** Demographic data: It is concerned with demographic characteristics information such as ; age, gender, level of education, marital state, occupation, residence and monthly income.

**Part II** clinical data: It includes information of patient about the disease such as; current diagnosis, duration of disease, the number of admission to hospital, previous disease, the period of hypertension and diabetes mellitus, have information about health state and the source of information .

**Part III-** need of information questionnaires: The presented questionnaires are adopted and modify from a review of previous research (Zar and Englar 1979: Gerard and Peterson 1984). It is composed of (8) domains these are (Anatomy, psychological, lifestyle medication information, nutrition information, physical activity, dealing with the symptom and general information) (Timmins and Kaliszer, 2003). Five point type Likert scale is used as (not important, important, something important, moderately important, very important) for rating the items (polite and hungler, 1999). I scored as 5 for very important, 4 for moderately important, 3 for important, 2 for something important and 1 for not important. The highest score of the questionnaire, the greater need of patient for information. Five rating scale was used.

Data were collected through the utilization of the developed questionnaires and the interview technique as a means of data collection. The Content validity was determined for the instrument through a panel of experts. As a result of conducting a Pilot study, reliability was determined by the test and retest method, and Pearson rank formula. Reliability coefficients were (0.78).

## RESULTS:

**Table ( 1) The socio- demographic characteristic of the study sample Number of the sample =30**

	Sample characteristic	NO.	Percentage
Age	35-44	3	10.0
	45-54	4	13.3
	55-64	15	50.0
	65-74	8	26.7
Gender	Male	16	53.3
	Female	14	46.7
Level of education	Not read and write	11	36.7
	Read and write	10	33.3
	Primary school	2	6.7
	Secondary school	3	10.0
	College	4	13.3

<b>Marital state</b>	<b>Married</b>	<b>22</b>	<b>73.3</b>
	<b>Divorced</b>	<b>8</b>	<b>26.7</b>
<b>Occupational state</b>	<b>Employee</b>	<b>6</b>	<b>20.0</b>
	<b>Earners</b>	<b>4</b>	<b>13.3</b>
	<b>Retired</b>	<b>6</b>	<b>20.0</b>
	<b>Housewife</b>	<b>14</b>	<b>46.7</b>
<b>Residence</b>	<b>Town (Urban)</b>	<b>19</b>	<b>63.3</b>
	<b>Rural</b>	<b>11</b>	<b>36.7</b>
<b>Monthly income</b>	<b>Not Sufficient</b>	<b>8</b>	<b>26.7</b>
	<b>Barely Sufficient</b>	<b>19</b>	<b>63.3</b>
	<b>Sufficient</b>	<b>3</b>	<b>10.0</b>

Table (1) presented that the highest percentage (53.3%) of males at age groups (55-64). In addition, the highest percentage (36.7%) of them is not read and write, 33% who only read and write while (30%) of the CAD who graduate from other levels of education. According to the marital state the table shows that (73.3%) of the sample are married and the (26.7%) of the sample are divorced.

Regarding to the occupational status the majority (46.7%) of the sample are females and housewife, and (63.3%) of sample are live in town.

According to monthly income the table shows that the highest percentage (63.3%) of the study sample was barely sufficient in a monthly income and (26.7%) of sample not sufficient.

**Table (2): Clinical Characteristics of the Study Sample Number of the sample =30**

	<b>Sample characteristic</b>	<b>NO.</b>	<b>Percentage</b>
<b>Current diagnosis</b>	<b>Angina</b>	<b>13</b>	<b>43.3</b>
	<b>Myocardial infarction</b>	<b>17</b>	<b>56.7</b>
<b>Duration of disease</b>	<b>1-5</b>	<b>22</b>	<b>73.3</b>
	<b>6-10 years</b>	<b>6</b>	<b>20.0</b>
	<b>More than 10 years</b>	<b>2</b>	<b>6.7</b>
<b>Previous admission to hospital</b>	<b>Yes</b>	<b>18</b>	<b>60.0</b>
	<b>No</b>	<b>12</b>	<b>40.0</b>
<b>Number of admission to hospital</b>	<b>No admission</b>	<b>12</b>	<b>40.0</b>
	<b>1-2</b>	<b>16</b>	<b>53.3</b>
	<b>3 and more</b>	<b>2</b>	<b>6.7</b>
<b>Previous disease</b>	<b>Hypertension</b>	<b>24</b>	<b>80.0</b>
	<b>Diabetes</b>	<b>2</b>	<b>6.7</b>
	<b>Total</b>	<b>26</b>	<b>86.7</b>
<b>The period of hypertension</b>	<b>Less than 1 years</b>	<b>2</b>	<b>6.7</b>
	<b>1-5 years</b>	<b>8</b>	<b>26.7</b>
	<b>More than 6 years</b>	<b>14</b>	<b>46.6</b>
	<b>Total</b>	<b>24</b>	<b>80.0</b>
<b>The period of diabetes</b>	<b>Less than 1 year</b>	<b>4</b>	<b>13.3</b>
	<b>1-5 years</b>	<b>6</b>	<b>20.0</b>
	<b>More than 6 years</b>	<b>8</b>	<b>26.7</b>
	<b>Total</b>	<b>18</b>	<b>60.0</b>
<b>Smoking</b>	<b>Past</b>	<b>10</b>	<b>33.3</b>
	<b>Now</b>	<b>5</b>	<b>16.7</b>
	<b>Never smoke</b>	<b>15</b>	<b>50.0</b>

Table (2) revealed that the more than half (56.7%) of sample complain with myocardial infarction, with duration of disease was (1-5) years and the rest were complaining with angina.

The majority (60.0%) of the sample admitted to hospital from (1-2) time. The highest percentage (46.6%), (26.7%) of the sample has more than 6 years of incidence of hypertension and diabetes.

**Table ( 3) Distribution of CAD patients according to information status. Number of the sample =30**

	Sample characteristic	NO.	Percentage
Have information about health status	Yes	16	53.3
	No	14	46.7
	Total	30	100.0
Source of information	Doctor	10	33.3
	Nurse	5	16.7
	Total	15	53.3

Table (3) revealed that the (53.3%) of the sample have information about health state and the source of information was the doctors

**Table (4) Distribution of information needs level among CAD patients**

	Information need domains	Mean	RS	Grade
1.	Anatomy and physiology	4.82	96.3	Very high
2.	Psychological factors	4.85	97	Very high
3.	Lifestyle	4.79	95.8	Very high
4.	Medication information	4.90	97.8	Very high
5.	Nutritional information	4.89	97.8	Very high
6.	Physical activity	3.71	74.2	Moderate
7.	Dealing with the symptom	4.94	98.9	Very high
8.	General information	4.58	91.7	Very high

Information need for patients with coronary artery disease, score less than 60 = very low need, (60 -68) = low need for information, (68.1- 76.1) = moderate need, (76.2- 86.. 2) = high need, and (86.3 – 100) = very high need for information . : RS= relative sufficiency

Table (4) presented the total mean score, relative sufficiency and grades, which presented the information need for patients with coronary artery disease. The result shows that the patients need for information was very high related to anatomy and physiology, psychology, lifestyle, medication information factors, nutritional information, and dealing with the symptom domains while the Physical activity domain record moderate need for information.

**Table (5) Association between Soci-demographic Characteristics and needs of information for patients with CAD.**

	Sample characteristic	NO.	Mean± Std. D	Sig
Age	35-44	3	183.0 ±12.1	.F=.955 df=29 p=.429
	45-54	4	175.5 ± 18.3	
	55-64	15	180.4 ± 10.8	
	65-74	8	171.3 ± 16.3	
Gender	Male	16	182.5 ± 9.97	t= 2.252 df=28 p= 0.032*
	Female	14	172.0 ± 15.3	
Level of education	Not read and writ	11	166.8±16.4	F=4.326 df=29 P=0. 009*
	Read and writ	10	185.9±4.4	
	Primary school	2	186.0±5.6	
	Secondary school	3	177.6±8.5	
	Junior high school	4	182.2±6.1	
Marital state	Married	22	181.3±11.1	t=2. 749 df= 28 P=0. 010*
	Divorced	8	167.3±15.1	
Occupational state	Employee	6	188.1±2.99	F=2.824 df= 29 P= 0.058
	Earnar	4	173.5±15.8	
	Retired	6	182.6±5.9	

	Housewife	14	172.0±15.3	
Residence	Town	19	180.7±11.1	t=1.746 df= 28 P= 0.036*
	Rural	11	172.0±16.1	
Monthly income	Not Sufficient	8	169.2±15.4	F= 2.275 df= 29 P=0.122
	Barely Sufficient	19	180.9±12.6	
	Sufficient	3	178.6±4.0	
Smoking	Past	10	183.7 ±8.6	F=4.135 df=27 P=0.027*
	Now	5	184.8±5.2	
	Never smoke	15	171.1 ±15.4	

NO.: number, SD: stander deviation, sig: significant

Table (5) reveals statistical differences between information needs with gender, level of education, marital status, residence, and smoking  $p \leq 0.05$ . While no statistical differences between information need for with age, occupational status, and monthly income.

**Table (6) Association between clinical characteristic and the information need for patients with CAD.**

	Variable	No.	Mean ± Std. D	Sig.
Current diagnosis	Angina	13	181.7±5.8	t=1.499 df=28 p=0.000*
	Myocardial infarction	17	174.4 ±16.8	
Duration of disease	1-5	22	179.4 ±11.6	F=1.130 df=29 P=0.338
	6-10 years	6	174.8 ±17.3	
	More than 10 years	2	165.5 ±24.7	
Admission to hospital	Yes	18	177.2 ±13.1	t= -0.183 df=28 P= 0.606
	No	12	178.1 ±14.8	
Number of admissions	No admission	12	178.1 ±14.8	F=0.920 df=29 P= 0.411
	1-2	16	178.7 ±11.6	
	3 and more	2	165.0 ±24.0	
Previous disease	Hypertension	24	176.9 ±14.7	F=0.031 df=26 P= 0.969
	Diabetes	2	179.5 ±6.3	
Incidence of hypertension	Less than 1 years	2	167.5 ±23.3	F=0.434 df=23 P=0.654
	1-5 years	8	177.1±17.5	
	More than 6 years	14	178.1 ±12.8	
Incidence of diabetes	Less than 1 year	4	170.7 ±19.1	F= 0.333 df=15 P= 0.722
	1-5 years	6	178.3 ±15.2	
	More than 6 years	8	172.1±16.3	
Information about health status	Yes	16	175.7 ± 15.2	t= -0.791 df=28 P= 0.193
	No	14	179.7 ± 11.5	
Source of information	Doctor	10	169.9 ± 16.5	F= 2.340 df=15 P= 0.136
	Nurse	5	186.2 ± 5.2	
	Other Health staff	1	182.0 ±	

Table (6) shows no statistical significant differences between information need with all clinical characteristics variable except the diagnosis there are statistical differences with an information need  $p \leq 0.05$ .

## DISCUSSION:

### Part I-A. Discussion of the demographic characteristics of patient with need for information (Table 1).

Concerning to the gender of the study sample presented the male with high percentage (53.3%) of the sample. Men have a greater risk of heart attack than women do, and men have heart attacks earlier in life than women. However, beginning at Age 70, the risk is equal for men and women. (Simon and Zieve, 2009).

### **Part I-B. Discussion of the clinical characteristics of sample. (Table 2).**

The study presented the (56.7%) of sample complain with a myocardial infarction with duration (1-5) about 73.3%) and re-hospital (1-2) time about (53.3%).

About past history the incidence of hypertension and diabetes mellitus (46.7%), (26.7%) more than 6 years.

Concerning to the information about the health state (53.3%) have information about health status and (33.3%) of patient their information source was from the doctors. Donna, (2004) indicated that the Clinicians must do better, because meeting patients' information needs and respecting their decisional preferences are shown to be associated with better self-efficacy, satisfaction, and health-promoting behavior.

### **Part II- discussing the level of information needs among CAD patient. (Table 4).**

The study presented that the for information was very high for all domains (anatomy, psychology, lifestyle medication information, nutrition information, dealing with the symptom and general information) except physical activity domain to item record low and moderate need for information these items are (when I drive the car and when I return to work), other items of physical activity domain record very high and high need for information. These results agreed with the following study such as:

Czar and Engler 1997 who reported in their study that the least important learning needs at both times were content areas of smoking, work and sex.

Timmins, 2005 stated that patients appear to prioritize information that is pertinent to survival, such as symptom management, rather than broader lifestyle issues such as exercise and diet.

Simth and Lieles 2007 mention in their study that the Items related to medications, complications and physical activities were rated highly. Responses to an open question revealed that driving, returning to work and sources of support were issues of concern.

### **Part III-A. Discussion association between socio-demographic characteristic and need for information for patient with CAD. (Table 5 ).**

Regarding to the socio-demographic characteristics the results presented two types of results, the first which means that there are statistically significant differences according to ( $p=0.05$ ), such as gender, level of education, marital state, residence and smoking. But the second parts have the value more than (0.05) it means not found statistical significant differences such as age, occupational state and monthly income. This result agrees with results reported by Donna et al 2004 who indicated that the women, reported receiving much less information than they wanted from all health professionals. The result of present study supported by another study who revealed that the Non-parametric Mann-Whitney U-tests showed that retired and older patients desired more information than their employed and younger counterparts, especially concerning community support (Simth and Lieles 2007 ).

Czar, and Engler 1997, indicated no correlation was found between the importance of perceived learning needs and age, occupation, smoking and marital status.

### **Part III-B. Discussion association between clinical characteristic and the need for information for patient with CAD. (Table six ).**

In this table show no statistical significant difference according to the ( $p=0.05$ ), excepted in patients with angina there have need more information

## CONCLUSION:

More than half of sample complain with myocardial infarction, with duration of disease was (1-5) years and the rest were complaining with angina, admitted to hospital from (1-2) time. The half of the sample and a quarter of the sample have more than 6 years of incidence of hypertension and diabetes. Regarding to the information more than half of the sample have information about health state and the source of information was the doctors.

The result shows highly needs for information related to anatomy and physiology, psychology factors, lifestyle, medication information, nutritional information, and dealing with the symptom domain.

## RECOMMENDATION:

- 1- The study recommended the need to set up a training program for health team of health care providers of the patient for the purpose of guiding and definition of patient illness and related.
- 2- Pamphlets or manual should distribute to coronary artery disease patients that include information regarding disease, treatment, lifestyle, nutritional and other information.

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