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Determine the Patients' Satisfaction Concerning In-hospital Information Program Post Coronary Artery Diseases in Teaching Baquba Hospital: Intervention Study

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Abstract:
Aims*: The present study aims to identify the effect of in-hospital information program by measuring patients' satisfaction and to find-out the relationship between patient satisfaction and demographic and clinical characteristics. The program and the instrument are designed by the researcher to reach the objective of the study.*
Methodology*: The study sample is comprised of (60) patients with CAD, who admitted to CCU and they are divided equally into the study and the control groups. The study group received the in-hospital information education program. The researcher constructed the information program and satisfaction questionnaire in order to reach the aims of this study. The study was designed to provide the coronary artery disease patient with information relevant to the anatomy of the heart, psychological, lifestyle, medication, nutrition and physical activity factors. The satisfaction questionnaires consist of (3) parts: the first part is about the demographic characteristics, second part is the clinical information about the patients, and the third part consists of patients' satisfactory concerning in-hospital information program post coronary artery diseases that consists of (55) items, and the questionnaires assessed the satisfaction of the patient about the quality of care of physicians, nurses and the hospital consists of (20) items.In order to determine the face-validity of the questionnaire and program, the researcher has distributed copies to experts in medical ,nursing, research, and science education fields to give their opinion about items and program and the questionnaire. The reliability of the questionnaire was determined through the use of test and re-test approach.The measurement of (Frequency, Percentage, Arithmetic mean, Standard deviation) and inferential statistic (relative sufficiency, chi-square test, t- test) is used to analysis the statistical data in order to present the differences between the study group and the control group.*
Results*: The results of the study showed that there are no statistical significant differences between the study group and the control group in all variables that are related to demographic and clinical characteristics. The study group showed improvement in the pre to post in hospital information satisfaction about all domains (health status, medication, lifestyle, diet, post attack information) while the control group recorded no statistical significant differences in all domains in patient satisfaction in the period pre to post in-hospital information. The results showed that the patient satisfaction is related the nurse quality of care which was improved in the period pre to post in hospital information of the study group as compared to the control group. The study showed also statistical differences between patient satisfaction about in-hospital information with gender, occupational status and previous disease.*
Conclusions*: The study concluded that the patient does not have enough in-hospital information throughout the admission to hospital.*
Recommendation*: The study recommended that it is necessary to establish a written standard education program for the nurse and patient in the cardiac care unit and establish a cardiac center rehabilitation in each governorate. It recommends also to help the patients to train and participate the cardiac nursing staff in courses, seminars and conferences in and outside the country.*

I. Introduction:

The heart is a strong muscular pump that is responsible for moving about 3,000 gallons of blood through the body every day. Like other muscles, the heart requires a continuous supply of blood to work properly. Heart muscle gets the blood it needs to do its job from the coronary arteries. (Cleveland Clinic, 2010).

According to the World Health Organization, chronic diseases are responsible for 63% of all deaths in the world, with cardiovascular disease as the leading cause of death. (Boudi, 2012; Thorpe, 2011) and in the UK, USA, Canada and Australia.25.4% of all deaths in the USA today are caused by heart disease. (Nordqvist, 2011).

The effectiveness of medical care is being increasingly measured according to economic as well as clinical criteria, the inclusion of patients' opinions in assessments of services has gained greater importance over the past (25) years (Daoud-Marrakchi, et al, 2009). Providing patients with information about their prescribed medicines is essential to facilitate their appropriate use and an understanding of the likely benefits and risks. This has been recognized by the publication of recommendations for the provision of medication information to patients, including instructions for use, for example, the dose, route of administration, and details of action to be taken in the event of missed doses or accidental overdose and a listing of all contraindications, precautions, and side effects (Horne et al, 2001)

The identification of patients' health needs pivotal in optimizing the quality of health care, increasing patient satisfaction and directing resources allocation. Health needs are complex and not so easily evaluated as health-related quality of life (HRQL), which is becoming increasingly accepted as a means of providing a more global, patient-oriented assessment of the outcome of health care interventions than the simple medical model. The potential of HRQL as a surrogate measure of healthcare needs has not been evaluated (Asadi-Lari et al,2003c). Patient satisfaction belongs to the service dimension as opposed to the technical dimension of quality of care. Most patients report few problems related to the technical quality of care in hospitals and moreover do not feel qualified to judge technical quality and therefore assume technical competence. (Torcson, 2005).

II. Material and methods:-

A quasi-experimental design study was carried out to determine the post coronary artery diseases patient satisfaction concerning in-hospital information program, Non-probability (purposive) sample of (60) patients attended to the Baquba Hospital at (CCU) unit during the period from June 5ed 2012 to January 31 2013 included in the present study the sample was selected Patients who were attending to the Teaching Baquba Hospital for treatment, definitely diagnosed coronary artery disease, admitted to the CCU or the medical ward, agreed to participate in the study.

The sample is divided into two groups; the first (30) patient as study group is exposed to the in-hospital information program and the second (30) patient is not exposed to the in-hospital information program (control group), the two groups have approximately the same demographic characteristics. To determine the effect of patients' satisfaction concerning in-hospital information program, the researcher is constructing a questionnaire format in order to reach the aims of the study. It consists of (3) parts.

Part I: It is related to Socio-demographic characteristics data of the patients, such as (age, gender, level of education, marital status, employment and residence status).

Part II: Part two is related to clinical information of the patients, such as (current illness, duration of disease, previous diseases, getting information about current health, and source of this information).

Part III: This part consists of (two) aspect. The first one is constructed to determine effectiveness of in-hospital information program on patients' satisfaction post coronary artery diseases, at the Teaching Baquba Hospital.

The questionnaires consist of (55) items adapted from Turton (Timmins and Kaliszer, 2003) which included satisfaction of five domains (Health status, Medication, Lifestyle, Diet and Post-attack information). The second aspect of the questionnaire is about assessing the satisfaction of the patient about (The quality of the physicians care, nurses care and satisfaction in general) adapted from (Bredart et al., 2005). The Five-level type liker's scale were measured and scored were (5 for excellent, 4 for very good, 3 for good, 2 for medium and 1 for weakly), these questionnaire transferred to the Arab and make some modification.

Patients in the study and the control groups, who met the study criteria, were approached in 2-3 days after admitted to the CCU and ward and were invited for participation and an explanation of the study objectives. The Socio-demographic and clinical data, pre testing of the patient satisfaction of in-hospital information and patient satisfaction of quality of physician and nurses care were obtained from both groups. The patients in the study group were expose to fourth information sessions theses sessions were (first and second session includes (simple anatomy and physiology, of heart, the signs and symptoms of coronary artery disease, when returning to normal life, and how to prevent coronary artery disease).third and fourth sessions includes information about (modification of diet and cholesterol, rehabilitation and exercised and the Medication, benefited, effect and side effect) these information approachs after 3^{ed}day or when the patient status stable. The patients in the study and the control group of the coronary artery diseases were given the third part of the questionnaire at discharge. Five rating scale was used as the following:

$= \frac{\text{cut of point}}{\text{no.of scale}} \times 100 \qquad = \frac{3}{5} \times 100 = 60$

So interval had ranged between (60-100) that represented the rate of functional capacity effects:

$= \frac{100-60}{5} = 8$

60+ 8= 68 It means (60 to 68) is a low satisfaction about the in-hospital information.

68.1 + 8=76.1 It means (68.1 to 76.1) is a moderate satisfaction about the in-hospital information.

76.2 + 8 = 84.2 it means (76.2 to 84.2) is a high satisfaction about the in-hospital information.

(84.3 to 100) is a very high satisfaction about the in-hospital information.
In addition less than 60 is a very low satisfaction about the in-hospital information.

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). Data are analyzed through the use of SPSS (Statistical package for social sciences) version 16 application.

III. The results of the study

Table (1): Distribution of Socio-demographic Characteristics of the Study and Control Groups for Patients with Coronary Artery Disease.

Variables	Group	Study group n=30		Control group n=30		C.S. P- value
		f.	%	f.	%	
Age	30-39	2	6.7	2	6.7	X^2 test P = 0.20 NS
	40-49	2	6.7	5	16.7	
	50-59	5	16.7	5	16.7	
	60-69	12	40.0	13	43.3	
	70-79	8	26.7	2	6.7	
	80 >	1	3.3	3	10.0	
	Ẍ ± Std.D.	61.17 ± 10.84		59.90 ± 2.49		
Gender	Male	15	50.0	17	56.7	X^2 test P = 0.71 NS
	Female	15	50.0	13	43.3	
Level of education	Not read and write	12	40.0	10	33.3	X^2 test P = 0.91 NS
	Read and write	5	16.7	4	13.3	
	Elementary	5	16.7	6	20.0	
	Intermediate and secondary school	6	20.0	7	23.3	
	Junior	1	3.3	1	3.3	
	Diploma	1	3.3	2	3.3	
Marital state	Single	0	0	1	3 . 3 3.3	X^2 test P = 0.79 NS
	Married	22	73.3	23	76.7	
	Divorced	0	0	1	3.3	
	Widowed	8	26.7	5	16.7	
Occupation	Employee	4	13.3	2	6.7	X^2 test P = 0.71 NS
	Self employment	3	10.0	9	30.0	
	Retired	9	30.0	8	26.7	
	Housewife	14	46.7	11	36.7	
Residence	City	21	70.0	16	53.3	X^2 test P = 0.01 S
	Village	9	30.0	14	46.7	
Financial resource	One source	26	86.7	29	96.7	X^2 test P = 0.69 NS
	Two sources	4	13.3	1	3.3	
Average monthly income of the family	Enough	3	10.0	1	3.3	X^2 test P = 0.93 NS
	Enough to some extent	10	33.3	9	30.0	
	Not enough	17	56.7	20	66.7	
Smoking	Previously	8	26.7	8	26.7	X^2 test P = 0.73 NS
	Now	10	33.3	11	36.7	
	Not smoking	12	40.0	11	36.7	

n = number,% = Percentage, C.S.= Compare Significant, Ẍ =Arithmetic Mean , Std.D.= Stander deviation, P = P-value, X^2 test= chi-square test, NS = Non Significant at p>0.05.

In general the results presented that no statistical differences between the study group and the control group in all items related to demographic characteristics except with residence.

Table (2): Distribution of Clinical Characteristics of the Study and Control Groups for Patient with Coronary Artery Disease.

Variables	Group	Study group n=30		Control group n=30		C.S. P- value
		f.	%	f.	%	
Current diagnosis	Angina	16	53.3	12	40.0	X^2 test P = 0.76 NS
	MI	14	46.7	18	60.0	
Duration of illness	Less than one month	9	30.0	12	40.0	X^2 test P = 0.03 S
	1-6 month	1	3.3	3	10.0	
	6-12 month	9	30.0	5	16.7	
	More than 1 year- 5years	6	20.0	7	23.3	
	More than 5 years	5	16.7	3	10.0	
Previously admitted to hospital	Yes	13	43.3	13	43.3	X^2 test P = 0.78 NS
	No	17	56.7	17	56.7	
If the answer yes	1-3 times	4	13.3	12	40.0	X^2 test P = 0.68 NS
	4-7 times	4	13.3	1	3.3	
	More than 8 times	5	16.7	0	0	
	Nil	17	56.7	17	56.7	
Previous disease	↑BP	7	23.3	6	20.0	X^2 test P = 0.75 NS
	DM	2	6.7	4	13.3	
	↑BP+DM	6	20.0	4	13.3	
	↑BP+DM+arteriosclerosis	2	6.7	0	0	
	No previous disease	13	43.3	16	53.3	
Duration of ↑ blood pressure	Less than one year	0	0	1	3.3	X^2 test P = 0.94 NS
	1-3 years	2	6.7	1	3.3	
	4-8 years	5	16.7	4	13.3	
	More than 8 years	8	26.7	4	13.3	
	Nil	15	50.0	20	66.7	
Duration of diabetes	Less than one year	1	3.3	0	0	X^2 test P = 0.80 NS
	4-8 years	4	13.3	5	16.7	
	More than 8 years	5	16.7	3	10.0	
	Nil	20	66.7	22	73.3	
Cardiac catheterization	Yes	5	16.7	1	3.3	X^2 test P = 0.64 NS
	No	25	83.3	29	96.7	

n = number, f. =Frequency, % = Percentage, C. S.= Compare Significant, P = P-value, X^2 test= chi-square test, NS = Non Significant at p>0.05.

Table (2) presented that the (53.3%) of patients in the study group has angina, while (60.0%) of the control group have a myocardial infarction. And about duration of illness (30.0%) of patients in the study group are with the period (less than one month and 6-12 months). Concerning the previously admitted to hospital the (56.7%) of patients in both groups are not admitted to the hospital and (43.3%) of the study and (53.3%) of the control groups have no previous disease. About cardiac catheterization the table showed that (83.3%), (96.7%) of patients in the study group and the control group do not make any cardiac catheterization respectively.

No statistical significant differences were observed with regard to clinical characteristics of both groups (P > 0. 05). Except in duration of illness.

Table (3): Distribution of Patient Information and Source of Information about Coronary Artery Disease for the study and control groups.

Variable	Group	Study group n=30		Control group n=30		C.S. P- value
		f	%	f	%	
Get information on your current health	Yes	7	23.3	16	53.3	X^2 test P = 0.52 NS
	No	23	76.7	14	46.7	
Source of information	Physician	4	13.3	10	33.3	X^2 test P = 0.85 NS
	Nurse	0	0	5	16.7	
	Health worker	2	6.7	1	3.3	
	Media	1	3.3	0	0	
	Nil	23	76.7	14	46.7	

n = number f.=Frequency, % = Percentage, C.S.= Compare Significant, P = P-value, X^2 test= chi-square test, NS = Non Significant at p>0.05.

Table (3) presented (76.7%) of patient in study group does not have any information about their current health, while (53.3%) of the control group has information about their current health by interview. Related to the source of information (13.3%) of patients in the study group while, (33.3%) of patient in the control group get their information from physicians. (16.7 %) of patient in the control group get their information from the nurse. No statistical significant difference was observed between the study group and the control group related to the source of getting their information.

Table (4) Comparison Between CAD Patient Satisfaction (pre-post) in-hospital Information for the Study and Control Groups.

Domains of in-hospital information patient satisfaction	Study group no=30							
	In-hospital information satisfaction (Pre)				-In-hospital information satisfaction post (At discharge)			
	MS	SD	RS%	Grads	MS	SD	RS%	Grads
Health State	1.11	0.27	22.4	VL	3.95	0.40	79.1	H
Medication	1.24	0.38	25	VL	4.43	0.47	88.7	VH
Lifestyle	1.17	0.38	23.4	VL	4.26	0.42	85.2	VH
Diet	1.47	0.48	29.5	VL	4.65	0.39	93	VH
Post-attack information	1.14	0.30	22.9	VL	4.23	0.36	84.7	VH
	Control group no=30							
	In-hospital information satisfaction (Pre)				In-hospital information satisfactionpost (At discharge)			
Health State	1.20	0.32	24.17	VL	1.34	0.34	26.9	VL
Medication	1.17	0.27	23.4	VL	1.45	0.35	29.0	VL
Lifestyle	1.39	0.45	27.8	VL	1.51	0.38	30.2	VL
Diet	1.61	0.37	30.42	VL	1.72	0.32	34.6	VL
Post-attack information	1.24	0.26	24.8	VL	1.48	0.33	29.7	VL

MS=mean score, SD = stander deviation, RS= relative sufficient, VL= very low (less than 60), L= low(60-68), M= moderate (68.1-76.1), H= high (76.2-84.2), VH= very high (84.3-100).

Table (4) shows in study group improvement in patient satisfaction in all domains of satisfaction (health status, medication, lifestyle, diet, post attack information) from pre to post in-hospital information. Patient satisfaction in pre- in-hospital information recode (VL= very low) satisfaction for all items in all domains, while most items of patient satisfaction in post-in-hospital information in all domain records (VH= very high satisfaction) and high, see figure (1).

Concerning the control group it presented at all items in all domains (pre and post-in-hospital information) was very low satisfaction about in-hospital information about CAD patients, see figure (1).

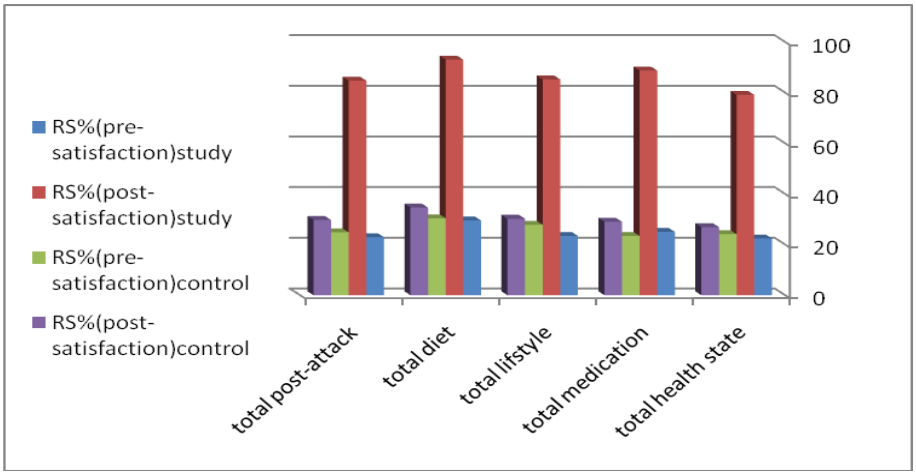

Figure (1) Comparative between relative sufficiency (pre-post) satisfaction study and control group.

Table (5) Comparison between CAD pre and post in-hospital information related patient satisfaction with quality of physician and nurses care for the study and control group.

Domain of Satisfaction with quality of physician and nurses care	Study group no=30							
	Pre-in-hospital information				Post-in-hospital information			
	MS	SD.	RS%	Grads	MS	SD.	RS%	Grads
Satisfaction with quality of physician care	1.66	4.10	33.26	VL	2.01	4.81	40.33	VL
Satisfaction with quality of nurses care	2.1	2.77	42	VL	4.32	5.32	86.4	VH
Satisfaction in general	1.76	1.29	35.3	VL	3.34	2.17	66.8	L
	Control group no=30							
	Pre-in-hospital information				Post-in-hospital information			
Satisfaction with quality of physician care	1.53	3.45	30.7	VL	1.70	3.89	34.0	VL
Satisfaction with quality of nurses care	2.24	1.76	44.8	VL	2.33	2.87	46.7	VL
Satisfaction in general	2.36	1.09	47.3	VL	2.95	.68	59.1	VL

MS=mean score, SD = stander deviation, RS= relative sufficient, VL= very low (less than 60), L= low (60-68), M= moderate (68.1-76.1), H= high (76.2-84.2), VH= very high (84.3-100).

Table (5) and figure (2) revealed that the satisfaction related to physician care was very low level in pre and post in-hospital information in the study group and pre and discharge for the control group.

Concerning the satisfaction of patients related to nursing care shows improvement in satisfaction of the CAD patient from pre to post in-hospital information in the study group while in the control group the results presented that the satisfaction related to nursing care was very low level in pre and at discharge

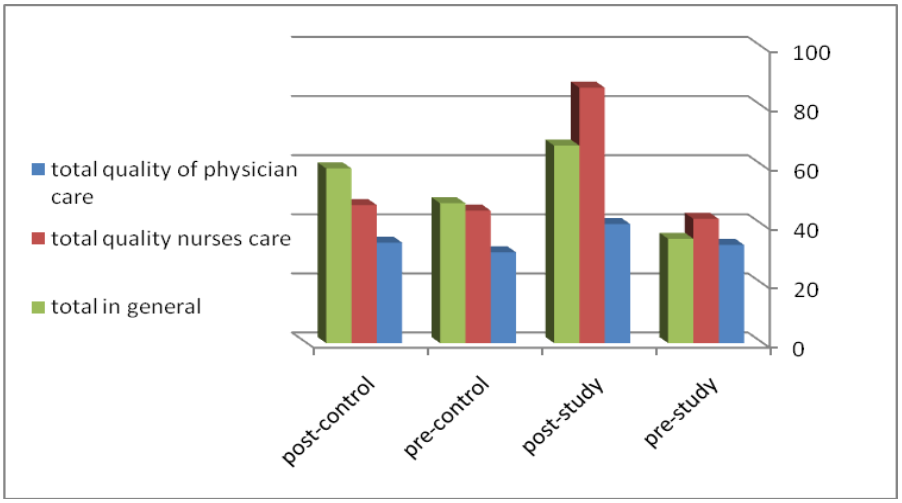

Figure (2) Comparative of relative sufficiency (pre-post) satisfaction study group.

Table (6) Association Between Socio-demographic Characteristics with in-hospital information patient satisfaction and Patient satisfaction with quality of physician and nurses care for patients with CAD at discharge (the study and the control group).

Socio-demographic Characteristics	The study group n=30		The control group n=30	
	In-hospital information satisfaction (		Patient satisfaction with quality of physician and nurses care	
	test	p ≤ 0.05	test.	p ≤ 0.05
Age	F=.99	P=.44	F=1.10	P=.38
Gender	t=-2.59	**P=.00**	t=.14	
Level of education	F=1.46	P=.23	F=.48	P=.78
Marital state	F=3.62	P=.06	F=.32	P=.57
Occupation	F=4.21	**P=.01**	F=.31	P=.81
Residence	t=1.43	P=.14	t=-.32	P=.92
Financial resource	F=2.13	P=.15	F=.23	P=.63
Average monthly income of the family	F=.20	P=.81	F=.75	P=.48

F = One way ANOVA, t = Independent T test.

Table (6) reveals that there were statistical differences between patient satisfaction about in-hospital information with gender and occupational status at $p \leq 0.05$. While there are no statistical differences between patient satisfaction about the quality of care of physician and nurse in all socio- demographic Characteristics at $p \leq 0.05$.

Table (7) Association Between Clinical Characteristics and in-hospital information regarding post patients satisfaction test for (the study and the control group)..

Clinical Characteristics	The study group n=30		The control group n=30	
	In-hospital information satisfaction (		Patient satisfaction with quality of physician and nurses care	
	Test.	$p \leq 0.05$	Test	$p \leq 0.05$
Current diagnosis (angina, MI)	t=.75	P=.67	t=.07	P=.49
Duration of illness	F=1.88	P=.14	F=1.01	P=.41
Previously admitted to hospital	t=-1.16	P=.31	t=1.11	P=.56
Previous disease	F=2.82	**P=.04**	F=.07	P=.98
Duration of ↑hypertension	F=1.04	P=.39	F=.20	P=.89
Duration of diabetes mellitus	F=1.05	P=.38	F=.26	P=.85
Cardiac catheterization	t=.71	P=.12	t=-1.30	P=.26

F = One way ANOVA, t = Independent t- test.

Table (7) showed that there are no statistical significant differences between the CAD patient satisfaction about in-hospital information and all clinical characteristics variable except the previous disease, there are statistical differences with a satisfaction in-hospital information at $p \leq 0.05$.

And the table presented there are no statistical differences between patient satisfaction about the quality of care of physician and nurses in all clinical Characteristic $p \leq 0.05$.

IV. Discussion:

Interpretation and discussion of the study findings are presented with supportive evidences which are available in the literature through this chapter.

1. Discussion of the Socio-demographic characteristic finding of the sample: the study group and the control group of the patients with coronary artery disease. (Table 1).

Analysis of demographic characteristics ensures equivalence in both groups and there is no significant difference between the study group and the control group. The result of the study is accepted in the quasi-experimental study. It is found that the CAD patients age in the study group was (40%) and (40.3%) in the control group in (60-69) age group. Mean of age 61.17 ± 10.84 and 59.90 ± 2.49 for the study group and the control group respectively. (50%) of the study sample are male and (56.7%) of sample in the control group are male. These findings were supported by Quintana et al. (2006) who indicated in their study that the revealed mean age of the patients was 62.2 years old; (54.3%) were men. And not supported by Ashrafun and Uddin (2011) presented in their study, (65.8%) of the inpatients are males and (34.2%) are females. The inpatients are relatively young, with a mean age of (37.19) years,

Regarding the level of education, a high percentage (40%) of the study group and (33.3%) of the control group, do not read and write. The majority (73.3%) of the study group and (76.7%) of the control group are married. These findings were supported by Qadri et al. (2012) showed in his study that, a total of (450) patients attends the various indoor and outdoor departments included in the study. (66.4%) in the study population comprised of males. The majority of the patients (58.9%) were in rural areas. (53.55%) were employed while the rest were students, housewife, or were retired. Most of the patients (87.2%) were married. A good number of patients belonged to the lower socioeconomic status.

Soufi et al. (2010) Face to face interviews were carried out in (214) cases (CAD patients) of which (46.3%) were men and (53.7%) were women, Age above 60 years is (30.8%), while (69.2%) are not married, the (62.6%) of cases live in urban,

Concerning to the occupational state in the present study, the results revealed most of the women (46.7%) in the study group and (36.7%) in the control group were housewife and only (23.3%) in the study group and (36.7%) in the control group were governmental and self-employees.

About the financial resource the majority (86.7%) of CAD patient in the study group, (96.7%) in the control group have one source and more than half (56.7%) in the study group and (66.7%) in the control group agree that the monthly income of the family are not enough.

The study group presented that the (40.0%) of the patient do not smoke and (33.3%) are still smoking while (36.7%) of the patients in the control group never smoke and the same percentage are still smoking.

These findings were supported by Ashrafun and Uddin (2011) presented in their study (8.4%) the government employee, the remaining segments are students, unemployed and old people (12.1%). (51.9%) no education, (64%) of monthly income not enough. And Aldaqal et al. (2012) showed that the patients included (55) males (58.5%) and 39 females (41.5%). The average age of patients was 45.9 years (SD = 2, range = 15-83 years). Nineteen percent of patients had completed primary school, (24%) had completed high school, (39%) had completed undergraduate studies, and (13%) had completed postgraduate degrees. Five percent did not provide their education level.

2. Discussion of the Clinical characteristics finding in the study group and the control group of patient with coronary artery disease. (Table 2).

The present study shows that the study group and the control group are also comparable in their clinical characteristic, there is no statistical significant difference between the study group and the control group in current diagnosis, duration of illness, previously admitted to a hospital, previous disease, the incidence of hypertension, diabetes, and doing of cardiac catheterization.And about duration of illness (30.0%) of the patients in the study group are presented (less than one month and 6-12 months). (56.7%) of patients in both groups are no previous admission to the hospital, (43.3%) of the study and (53.3%) of the control groups have no previous disease.

These results supported by Rafii et al., (2007) who showed that the most patients had not been hospitalized during the last five years.

The present study revealed more than half of the study group (56.7) and (46.6%) of the control group had hypertension and diabetes, and atherosclerosis. This result supported by Joseph and Nichols (2007) who stated that the Hypertension and diabetes mellitus were the two most common illnesses afflicting CAD patients.

Regarded to the finding of the present results (83.3%) of the patient in the study group and (96.7%) of the patient in control group didn't make cardiac catheterization.

That's the reason for the reluctance of patients for cardiac catheterization procedure due to the absence of a special catheter, center in the governorate and the consequent transfer or refer them to other centers outside the governorate and this needs to be additional expenses may be most families are unable to cover.

3- Discussion of the patients getting information and a source of information about coronary artery disease of the study group and the control group (Table 3).

The results presented (76.7%) of patients in study group are not getting information about their current health, while (53.3%) of the control group have gotten information on their current health in an interview. The source of information (13.3%) in patients of the study group is from a physician while (33.3%) of patient in the control group have information from physician and (16.7 %) from the nurse. These findings were supported by Agosta, (2005) who revealed in their study that the majority of participants (n = 206, 69.4%) get the most of information from nurse practitioners, while 89 (30%) indicated to the physician.

Supported also by Oterhals et al. (2006) they revealed that the positive correlation between overall satisfaction and the amount of information received during hospital stay was low, but significant (q =0.20; p =0.049, respectively). The more information the patient reported to receive, the more satisfied patient was with the hospital stay in general.

4-a. Discussion of the comparison between CAD patient satisfaction, pre in-hospital information and post (at discharge) for the study and control group. (Tables 4).

Evaluation of in hospital information satisfaction by five domains, includes (health status, medication, lifestyle, diet, and post attack information).

Effectiveness of in-hospital information satisfaction of the study group can be clearly seen in the results, the highly statistically significant association between pre and post in-hospital information satisfaction for study group, in all domains, while there is no statistical significant association between pre and post in-hospital information satisfaction for the control group.

Regarding CAD patient satisfaction, the comparison between CAD patient satisfaction (pre) in hospital information for the study and control group the result revealed, no statistically significant difference was found between the study and the control group in all items and domains.

The effectiveness of in-hospital information satisfaction was clearly observed between the study and control group when compared post satisfaction of CAD patient (study and control group), the results revealed a highly statistically significant difference was found between the study group and the control group in all domains of satisfaction. These results supported by another researcher such as the study done by Udonwa and Ogbonna, (2012) who found of three hundred and fifty (81%) of patient record an improvement in their ability to maintain their health.

Ganova-Iolovska et al. (2008) who presented the improvement with sample of nearly (82%) of the patients reported an improvement of their complaints.

And the study done by Oterhals et al. (2006) who indicated that the information about medication and information at discharge are pinpointed to be the areas having the greatest potential for improvement.

4-b. Discussion of the Comparison between CAD patient satisfaction pre and post in-hospital information related quality of physician and nurses care for the study and control group. (Tables 5).

The finding and results presented the comparative between CAD patient satisfaction related quality of physician and nursing care (pre and post in hospital information).

About the patients satisfaction related to the quality of physician care in pre (in hospital information) of the study and the control group, the result revealed no statistical significant differences in all items except the items (Friendly and courteous doctor deal with patients and Information obtained from a doctor about test results) record statistical significant differences between the study and the control groups.

Concerning the patient satisfaction related to quality of physician care in the post (in hospital information) of the study and the control group, the result revealed no statistical significant differences in all items except the items (Your doctor is best for you, Friendly and courteous doctor deal with you, and Information obtained from a doctor about test results) record significant and highly significant differences between the study and the control group.

About the CAD patient satisfaction related to quality of nurses care, the results showed high statistical significant differences between pre and post (in hospital information) in all domains for the study group, while no statistical significant differences between pre and post for the control group..

Concerning the patient satisfaction related to quality of nurses, care in pre (in hospital information) of the study and the control group, the result revealed no statistical significant differences in all domains.

Concerning the patient satisfaction related to quality of nurses, care in the post (in hospital information) of the study and the control group, the result revealed highly statistically significant differences between study and control group in all domains.

This finding supported by many studies such as Ashrafun and Uddin (2011) that showed patients' satisfaction is moderately connected with doctors' treatment (.625), behavior of nurses (620), services of nurses (537). Muhondwa et al. (2008) presented that the Patients were asked to indicate the extent to which they were satisfied with the medical care provided by the doctors, and the nursing care they received while they were in the wards.

Rafii et al. (2007) who stated that a statistically significant relationship exists between patient reports of nurse caring and satisfaction with nursing care ($r=0.72$, $p=0.000$). And Weetch, (2003) who presented the results a wide variation of responses with satisfaction slightly above the midpoint. Specifically, (73%) felt that they needed more information about the effect of angina on their daily activities. And showed that patients who had been hospitalized with angina were dissatisfied with the amount of information that they were given. They wanted to know more about the causes of angina, its treatment, their medication and the effect it will have on their daily activities. The finding of Ganova-Iolovska et al. (2008) showed that the overall satisfaction (24%) of the patients was satisfied with the treatment in the hospital setting, (14%) were unsatisfied and (62%) of the patients were satisfied to some extent.

Agosta (2005) who presented that the respondents were asked to indicate the health care provider type with whom they had been most satisfied. The categories provided included "Physician," "Nurse Practitioner", and "Physician Assistant". The majority of participants (n = 206, 69.4%) indicated the most satisfaction from nurse practitioners, while 89 (30%) indicated physician.

This finding disagrees with the result of Bu-Alayyan et al. (2008) were an effort to evaluate patient satisfaction for a better patient focus. And the overall satisfaction score in this study was (60.7%) of all services. Another study presented the other face of finding by Iezzoni et al. (2002) who stated that the quality domains generating the greatest dissatisfaction of information about the condition and ease getting to the doctors.

5. Discussion of the association between socio-demographic Characteristics of CAD patient and their satisfaction about in-hospital information. (Tables 6, 7*)*

The finding of the researcher reveals statistical differences in the study group between satisfaction in-hospital information with gender, occupational status $p \leq 0.05$. While no statistical differences between total patient satisfaction with all socio- demographic Characteristics in study group $p \leq 0.05$, and showed no statistical significant differences between satisfaction in-hospital information and patient satisfaction with all clinical characteristics variable except the previous disease $p \leq 0.05$.This finding exactly agrees with the results of Ashrafun and Uddin (2011) with respect to the relation between patients' occupation and patient satisfaction with the quality of hospital services, the $\chi 2$ value is (017) which is lower than(.05) (5% significance level).

Oterhals et al. (2006) who presented that the Amount of information was not found to be different between those with hospital stay <4 (n =25) and _4 days (n =75); p =0.841. Information received altogether was significantly related to age, patients reported receiving more information. The single items that showed significant differences were ‘‘What is a myocardial infarction?’’, ‘‘Causes of a myocardial infarction’’, ‘‘Problems I may be facing after MI’’ and ‘‘Smoking’’. The finding differs with the Ashrafun and Uddin (2011) were presented a weak association between patients’ age and in patient satisfaction with the quality of hospital services.

The researcher presented statistical significant differences in the control group between satisfaction in-hospital information in items get information and source of information and in patient satisfaction with all clinical characteristics variable no statistical significant difference except the cardiac catheterization $p \leq 0.05$.

The present study shows no statistical significant differences in the control group between satisfaction with all Socio-demographic characteristics variables at $p \leq 0.05$. And presented no statistical significant differences between satisfaction about in-hospital information and all clinical characteristics variable except the cardiac catheterization $p \leq 0.05$. The present finding is agreement with the results of Tin-Oo et al. (2011) who found no significant associations between patient satisfaction and age, education level, the perception of having crowded and poorly aligned teeth.

The finding of the present study also agreed with Zandbelt et al. (2004) who mentioned that the patients' satisfaction was not associated with characteristics such as their age, gender, educational level, primary language, and physical or mental health. Also, patients' preference for information and for participation in medical decision making did not predict their satisfaction ratings. And also the results are agreeing with the results of Asadi-Lari et al. (2003b) who reported that the Patients over 65 years ($p < 0.05$) and with higher social classes ($p < 0.01$) had more social needs, but there was no significant difference with gender, education nor their diagnosis.But another study disagrees with the present finding such as Udonwa and Ogbonna (2012) who presented in their study that none of the socio-demographic variables studied were found to have any statistically significant relationship with a patient satisfaction in a consultation. This study could not demonstrate any statistical significance between a patient's age and their satisfaction with the consultation.

V. Conclusions

The improvement of satisfaction (pre and post-in hospital information) of CAD patients in the study group, and No satisfaction related physician care was very low in pre and post in hospital information in the study and control group. While the satisfaction on nurses care shows the improvement from pre to post in hospital information of the CAD patient. The results reveal statistical differences between satisfaction in-hospital information with gender, occupational status in the study group. While there are no statistical differences between patient satisfaction with all socio- demographic characteristics of the study group the control group it shows no statistical significant differences (post in hospital information). The results showed no statistical significant differences between satisfaction in-hospital information and all clinical characteristics variable except the previous disease for study group while the control group which presented no statistical significant differences except the cardiac catheterization there are statistical differences.

VI. Recommendation:-

1. Establishment cardiac center rehabilitation is needed in all governorate to cover the service of the patient with heart problems.
2. Writing standard education program for the nurse and patient in the cardiac care unit to improve the care provided to the patient.
3. Establishment of a center for heart surgery in each governorate to provide services directly to patients and without transport or transferred to other hospitals outside the governorate and these centers contain all the centers and devices and materials that cover the needs of this governorate.

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