Patients' Health Related Quality Of Life After Percutaneous Coronary Intervention In Baghdad City.

نوعية الحياة المتعلقة بالصحة للمرضى بعد التداخل القسطاري التاجي في مدينة بغداد

***Ayad Majid Mousa**/University of Baghdad/ College of Nursing
****Assist Prof. Dr. Huda Baqer Hassan/** University of Baghdad/ College of Nursing
dr.hudabaker@hotmail.com

الخلاصة

الهدف: تهدف الدراسة الى تقييم نوعية الحياة المتعلقة بالصحة للمرضى بعد التداخل القسطاري التاجي في مراكز ومستشفيات مدينة بغداد القلبية وايجاد العلاقة بين الجنس والعمر والحالة الزوجية و التحصيل التعليمي و المهنة، و مقياس كتلة الجسم، عدد الشرايين المسدودة،وعدد الشبكات المزروعة مع نوعية الحياة بعد التداخل القسطاري التاجي للمرضى في مدينة بغداد.

المنهجية: دراسة وصفية أجريت في مراكز والمستشفيات القلبية في مدينة بغداد للمدة من الثاني من تشرين الاول 2012 ولغاية الثلاثين من تموز 2013 و تم اختيار عينة غرضية غير احتمالية ل 100 مريض بعد التداخل القسطاري التاجي من المرضى الذين يراجعون العيادة الاستشارية في المراكز والمستشفيات القلبية في مدينة بغداد وجمعت المعلومات من خلال ملئ الاستبانة المتكونة من جزأين حيث تضمن الجزء الاول على المعلومات الديموغرافية والتاريخ الطبي للمريض وتكون والجزء الثاني من اثنا عشر فقرة والمتضمنة (الصحة الجسمية، الوظائف الجسمية،الدور الجسمي،الدور العاطفي،الوظائف الاجتماعية،الالم الجسمي،الحيوية،الصحة العقلية) وتم تحديد ثبات الاستبانة من خلال قياس التطابق الداخلي بين الفقرات بعد تطبيق مقياس كرون باخ الفا والمساوي = 882. وحددت مصداقيتها من خلال عرضها على 10 خبراء من ذوي الاختصاص ولتحليل البيانات تم استعمال الاحصاء الوصفي الذي تضمن التكرارات والنسب المئوية والوسط الحسابي والانحراف المعياري والاحصاء الاستدلالي الذي شمل اختبار معامل التوافق.

النتائج: أشارت نتائج الدراسة الحالية بانخفاض نوعية حياة المرضى بعد اجراء التداخل القصطاري لمحوري الصحة العامة وحيوية المريض وتحسن في نوعية حياة المرضى لمحوري الدور الجسمي والدور العاطفي والصحة الاجتماعية ونوعية حياة متوسطة لمحوري الوظائف الجسمية والالم الجسمي والصحة العقلية واظهرت الدراسة الى وجود علاقة معنوية بين عمر المريض والوظائف والدور الجسمي وعلاقة معنوية بين الحالة الاجتماعية والصحة العامة ومحور الألم وحيوية المريض وعلاقة معنوية بين المستوى التعليمي والصحة العامة بمستوى معنوية اقل او يساوي 0.05

التوصيات: بناءا" على نتائج الدراسة الحالية يوصي الباحثان باجراء برنامج تثقيفي للمرضى بعد اجراء التداخل القصطاري يشمل كل محاور الحياة لتكيف المريض مع حالته الصحية الجديدة.

Abstract

Objectives: The study aims to assess the patients' health related quality of life and find out the association between the gender, age, marital status, educational level, employment, body mass index, severity of disease vessels, and number of implanted stents with health related quality of life.

Methodology: descriptive study design is starting from October 2nd. 2012 to the 30th July 2013 was carried out at Iraqi center for heart diseases, Ibn Al-Nafees for cardiac surgery hospital and Ibn- Al-Betar specialist center for cardiac surgery in Baghdad City. purposive (non probability) sample consist of 100 patients collected through interview method by using questionnaires composed from two parts, first part composed from demographic and medical history data and second part includes short form 12 item health survey scale to measure health related quality of life .Reliability of the questionnaires was determine by calculating Cronbach s' Coefficient alpha = .882.Descriptive data analysis was done through frequency, percentage mean, standard deviation and relative sufficiency and inferential data analysis was done by contingency coefficient.

Results: The results of the present study revealed that the patients have low level in quality of life for the general health and vitality domains , moderate level in quality of life for physical function, bodily pain and mental health domains, and high level in quality of life for role physical, role emotional and social health domains after percutaneous coronary intervention, and the findings revealed there were significant association between age and physical function and role physical; marital status and general health, bodily pain and vitality; level of education and general health at $P \leq 0.05$ value.

Recommendations: According to present findings the researcher recommends to prepare educational program related to quality of life domains for patients after PCI .

Keyword: coronary artery disease, after percutaneous coronary intervention, health related quality of life,

INTRODUCTION:

Coronary artery disease (CAD) is the most common cause of mortality in the developed world, the term "coronary artery disease" encompasses a range of disease that result from athermanous change in coronary vessels [(1).] CAD develops when a combination of fatty materials, calcium and scar tissue (plaque) builds up in the arteries that supply the heart muscle with blood, coronary artery disease affects about 14 millions men and women in the united states [(2) .]

Burden of CAD remains high across Europe and the rest of the world, is continues to be the main cause of death and a major cause of morbidity and loss of quality of life [(3)].

percutaneous coronary intervention (PCI) is a minimally invasive procedure used to open occluded or stenos coronary arteries. PCI is an increasingly common treatment for coronary heart disease [(4)] ·Health-related quality of life (HRQoL) shows a subjective and multidimensional concept that is composed of a range of domains, generally including physical, social, emotional, mental, and functional health [(5)] ·Percutaneous coronary intervention is performed primarily to improve health-related quality of life in patients with symptomatic coronary artery disease [(6)].

METHODOLOGY:

Descriptive, cross-sectional design of the study study starting from October 2nd. 2012 to the 30th July 2013 was carried out at Iraqi center for heart diseases, Ibn Al-Nafees for cardiac surgery hospital and Ibn- Al-Betar specialist center for cardiac surgery in Baghdad city.

purposive (non probability)sample was consist of 100 patients collected through interview method by using questionnaires which composed of two parts, first part composed from demographic characteristics and medical history of the study samples, and second part includes short form 12 item health survey scale to measure health related quality of life with eight domains (general health(one item),physical functioning (two items) role physical(two items), role emotional(two items) ,social health(one item), bodily pain (one item),vitality(one item),and mental health domain (two items)

Validity of questionnaires determined through panels of experts and Reliability of the questionnaires was determined by internal consistency through calculating Cronbach s' Coefficient alpha = .882

Descriptive data analysis was done through (frequency, percentage, mean, standard deviation and relative sufficiency) and inferential data analysis was done by contingency coefficient test) through application by spss version 16.

RESULTS:

Table 1: Distribution of the Samples According to Demographic Characteristics

Variables	Groups	F.*	Percent
Gender	Male	86	**86.0**
	Female	14	14.0
	Total	**100**	**100.0**
Age	40 – 46 Years	5	5.0
	47 – 53 Years	24	24.0
	54 – 60 Years	34	**34.0**
	61 – 67 Years	26	26.0
	≥ 68 Years	11	11.0
	Total	**100**	**100.0**
(Mean&SD) of age	**58.44±7.92**		
Marital Status	Single	3	3.0
	Married	86	**86.0**
	Widow	6	6.0
	Divorced	1	1.0
	Separated	4	4.0
	Total	**100**	**100.0**
Educational level	Illiterate	7	7.0
	Reads and writes	9	9.0
	Primary school graduate	32	**32.0**
	Intermediate school graduate	13	13.0
	preparatory school graduate	15	15.0
	Institute graduate	3	3.0
	College &post graduate	21	21.0
	Total	**100**	**100.0**
Employments	Governmental employee	30	**30.0**
	Retired not work	25	25.0
	Retired work	8	8.0
	Housewife	9	9.0
	Free job	13	13.0
	Not work	15	15.0
	Total	**100**	**100.0**

* F. = frequency

Findings of table 1 presented that there were 86% of the study samples were males at 54-60 years old, most of them were primary school graduated, and 30% of them were government employed.

Table 2: Medical History of the Study Samples

Variable	Groups	F.*	Percent
Body Mass Index	Less than 18.5 (Under weight)	--	--
	18.5-24.9 (Normal)	16	16.0
	25.0-29.9 (Overweight)	50	50.0
	30.0 - 34.9 (Obese class I)	29	29.0
	35.0 - 39.9 (Obese class II)	4	4.0
	40 and above (Obese class III)	1	1.0
	Total	**100**	**100.0**
Mean &SD for BMI	**28.47±3.99**		
severity of diseased vessels	One vessel disease	47	**47.0**
	Two vessel disease	40	40.0
	≥ 3 vessel disease	13	13.0
	Total	**100**	**100.0**
Number of stents	One stent	49	**49.0**
	Two stents	33	33.0
	Three stents	11	11.0
	Four stents	4	4.0
	Five stents	1	1.0
	Six stents	2	2.0
	Total	**100**	**100**

* F. = frequency

Results of table 2 shows that majority of the study samples were overweight, 47% of them have one vessel disease and 49% of the study samples have one stent .

Table (3) Mean and Standard Deviation for health Related Quality of life Domains after PCI

Domains	Mean	SD*	RS %**	Assess.***
General Health	2.430	.945	48.6	Low
Physical functioning	2.155	1.454	71.8	Moderate
Role physical	3.685	2.398	73.7	High
Role Emotional	3.545	2.193	70.9	High
Social Functioning	3.850	1.351	77	High
Pain	3.080	1.292	61.6	Moderate
Vitality	2.820	1.200	56.4	Low
Mental health	3.225	2.100	64.5	Moderate

*** SD=standard deviation, **RS= relative sufficiency (RS: < 66.66 low, 66.66- 77.77= moderate, ≥77.78= high (3 scale) and RS: <60= low, 60 - 68 = moderate, ≥ 68.1 = high (5 scale), ***Assess. = levels of assessment.**

Table 3 presented the total means, standard deviation, and relative sufficiency for quality of life domains were of; the general health and vitality have low quality of life, while

the physical functioning, pain, and psychological health have moderate quality of life, and the role physical, role emotion, and social functioning have high quality of life .

Table 4: Association between Demographic Characteristics of the Study Sample and HRQoL domains

Demographics / QOL	Gender		Age Groups		Marital status		Level of education		Employments	
	C.C.*	Sig.**	C.C.	Sig.	C.C.	Sig.	C.C.	Sig.	C.C.	Sig.
General health	.032	.750	.071	.973	.338	.012	.398	.004	.355	.013
Physical function	.050	.615	.295	.050	.211	.325	.180	.762	.301	.076
Role physical	.113	.254	.331	.015	.146	.705	.319	.079	.214	.441
Role emotional	.039	.696	.176	.522	.237	.204	.226	.496	.284	.118
Social health	.113	.254	.167	.579	.163	.603	.331	.056.	.240	.297
Bodily pain	.070	.481	.128	.799	.296	.049	.323	.069	.310	.059
Vitality	.066	.506	.138	.747	.323	.020	.258	.307	.358	.012
Mental health	.042	.674	.154	.656	.242	.182	.292	.155	.347	.018

*** c.c. = contingency coefficient, **Significant= at p value ≤0.05, highly significant= at p value ≤ 0.01**

The findings of table 4 reveal that there were significant association between age and physical function and role physical; marital status and general health, bodily pain and vitality; level of education and general health and social health, and there were relationship between employment and general health, bodily pain, vitality, and mental health at P≤0.05 value.

Table (5) Association between Medical History of patients and HRQoL domains

Medical history / QOL domains	Body Mass Index		Severity of diseased vessels		Number of implanted stents	
	C.C.*	Sig.**	C.C.	Sig.	C.C.	Sig.
General health	.265	.109	.305	.016	.532	.006
Physical function	.176	.525	.287	.030	.370	.724
Role physical	.127	.801	.237	.115	.507	.483
Role emotional	.111	.871	.218	.173	.473	.906
Social health	.319	.023	.101	.793	.459	.144
Bodily pain	.325	.019	.144	.551	.484	.050
Vitality	.277	.081	.273	.044	.512	.017
Mental health	.208	.339	.195	.267	.394	.563

*** c.c. = contingency coefficient, **Significant= at p value ≤0.05, highly significant= at p value ≤ 0.01**

The findings of table 5 presented that there were significant association between body mass index and social health and bodily pain, there were significant relationship between severity of vessel disease and general health, physical function and vitality , and there were significant relationship between number of stents and general health, bodily pain and vitality at p value ≤0.05 .

DISCUSSION

The present study shows that there were 86% of the study samples were males at 54-60 years old, most of them were primary school graduated, and 30% of them were government employed, regarding to medical history characteristics that majority of the study samples were overweight, 47% of them have one vessel defected and 49% of the study samples have one stent. The findings of present study revealed that there were low quality of life in the general health and vitality domains these finding is agree with a study which done by (Weilu et al., 2011) who assess the health-related quality of life in Chinese patients with coronary heart disease after percutaneous coronary intervention with stent on a sample 196 they presented the physical functioning, pain, and mental health domains have moderate mean score and, this finding is consistent with longitudinal study done by (Wong and Chair 2007) who assess the changes in health-related quality of life following PTC in Hong Kong Chinese patients in a sample 65 they funded that the role physical, role emotion, and social functioning have high quality of life indicated through high mean scores, There is significant association between patients age with physical function and role physical; marital status with general health, bodily pain and vitality, educational level with general health and social health and finally related to employment there is significant relationship in domains (general health, role physical, bodily pain, vitality and mental health; the present finding supported by (Veenstra, et al., 2004) who study association of changes in health-related quality of life in coronary heart disease with coronary procedures and sociodemographic characteristics , in Norway patients in study sample composed of 254 patients; they concluded that there were significances between age, marital status, and level of education with quality of life domains post percutaneous coronary intervention. The present study shows relationship between body mass index and health related quality of life post-percutaneous coronary intervention with social health and bodily pain domains these results supported by (Park, et al., 2013) who stated that there is association between patients undergoing percutaneous coronary intervention and body mass index where , a low BMI was associated with increased risks of major coronary events and death. Concerning to severity of defected vessels, the current study reveals that there is significant association with general health, physical function, and vitality domains the present finding agree with (Szygula, et al., 2005) who study health related quality of life after percutaneous coronary intervention in a sample 392 in Poland they stated that were significant relationship between severity of defecated vessels with physical functioning and vitality

CONCLUSIONS:

The present study concluded

Patients have low quality of life at general health and vitality domains , and moderate quality of life at physical function, bodily pain and mental health domains after PCI, and the study concluded that there were relationship between patients age with physical function and role physical; marital status with general health, bodily pain and vitality, educational level with general health and social health domains at p value ≤ 0.05

RECOMMENDATIONS:

According to present findings the researcher recommends to prepare health educational program related to quality of life domains for patients after PCI to promote health.

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