STRESSFUL LIFE EVENTS OF PATIENT WITH ISCHEMIC HEART DISEASE AT AL-NASIRIYA HEART CENTER

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ABSTRACT--- *At present, the cardiovascular diseases (CVD) are among the major concerns of World Health Organization (WHO), assurance health systems and researchers in the specific field, because they are the number one cause of deaths globally, and according to several perspective studies, they will become the pathology that generates the greatest economic burden worldwide, through morbidity, disability, poor quality of life, and cause of death. Nowadays, the psychic field and the vulnerability of individual mental level to stress are an important link in the development of mental illness, CVD (included in the group of psychosomatic disorders), and also of interrelationship between them. Objectives: 1.To assess the stressful life events of adult patients with ischemic heart disease (IHD) .2. To find out the relationship between stressful life events and socio-demographical characteristics (age, gender, marital status, and socioeconomic status) of adult patients with ischemic heart disease. Methodology: A descriptive study was carried out to assessment of stressful Life events of patient with coronary artery disease at al-Nasiriya Heart Center. A purposive (non-probability) sample of (100) patients. The study population consisted of a sample of adults from both genders whose ages were 30 years and more, and were newly diagnosed as having CAD by coronary angiography in the cardiac catheterization unit An Nasiriyah heart center.Reliability of the questionnaire form was determined through a pilot study while the content validity of the questionnaire was determined through a panel of experts. And then the Data were collected through the use of the observational tool (questionnaire), which was analyzed through the use of three statistical approaches. They are descriptive statistical analysis (frequencies, percentage, S.D, range of scores, mean of scores and relative sufficiency; inferential statistical analysis (correlation coefficient and chi- square test); and analysis of variance (ANOVA).Results: high percentage (55%) of the study sample have myocardial infarction*. *The advancing age of the patients (50 years & more) is one of the most common non-modifiable risk factors*. *Most of the patients 78(78 %) were male .The majority of the patients 84 (84 %) were married. Lower educated patients have a higher risk to develop coronary arteries disease than the Higher educated patients* . *High percentage (30%) of patients were Unemployed*. *The result of the present study indicates that most of the patients (40%) were suffering from Insufficient income* . *The result of the present study indicates that the majority of the patients (78%) were living in rural . Most of the patients feel stress because of the economic situation and the percentage, were (35%) of patients. There were no statistical significant differences were found between stress management with all socio-demographic characteristic except age.*

Keywords--- Assessment, Stressful, Patients, Ischemic heart disease.

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I. INTRODUCTION

Ischemic heart disease (IHD) is still considered as a serious danger to life and health human beings and has been the main cause of death in most of the developing countries up to this time (1). In 2002, 105.8 / 100,000 of American people die with IHD and this number is decreased in 2004 to 97.6 / 100,000, and in 2002, 252.1 / 100,000 of Iraqi people die with IHD and this number is increased in 2004 to 303.8 / 100,000 (2). Many factors (modifiable and non-modifiable) have identified as risk factor of IHD. One of modifiable risk factor is psychological status and stress (3). Stresses are known to directly trigger attacks of angina pectoris and myocardial infarction(4). It is generally assumed that stressful life events influence the onset of IHD)5 .(Stress refers to conditions or events experienced by people during their lives that are not compatible with their current abilities and facilities and therefore it causes change on individual's health (6). Acute and sudden psychological stresses and chronic stresses have harmful effects. Heart beat is increased in the first month after losing a loved one Moreover, cardiovascular symptoms are increased after natural accidents and between citizens who have experienced war or enemy attacks (7) In 1967, Holmes and Rahe published a social readjustment rating scale (SRRS). This life change scale is a means of monitoring the level of stressful life events over a given period one year. The scale has been used extensively to evaluate people's situations and their susceptibility to physical and mental illness (8). Holmes and Raphe claim that there is a connection between the life stress and major health problems (9). Reaction to stress or confrontation with it through enmity may increase the probability of the risk of suffering from IHD through affecting other dangerous factors like high level of Cholesterol. Many reports have shown the relationship of stress with sudden heart deaths (10).

II. MATERIAL AND METHODS

Design of the Study: a descriptive study was carried out to assessment of stressful Life events of patient with coronary artery disease. Data collection started from 24th of March to the 6th of May 2019.

Setting of the Study :the study was conducted at cardiac outpatient clinics in in an Nasiriyah city.; one of these clinics is located in the in An Nasiriyah heart center.

The Sample of the Study :A non-probability (purposive) sample of (100) patients was selected. All the patients who diagnosed CAD and they had a medical records and admitted to the Coronary Care Units & cardiac wards An Nasiriyah Heart Center

The Study Instruments :for the purpose of the present study, a questionnaire was constructed by the researcher to study the variable for assessment of stressful Life events of patient with coronary artery disease according to medical recommendation. The questionnaire was constructed thorough reviewing of previous literature and related studies for assessment of stressful Life events of patient with coronary artery disease . The study instrument comprised of (3) parts these parts related to the following:

Part I: Socio- Demographic Data: It consists of (8) items, related to the Socio-demographic characteristics of these patients which include age, gender, diagnosis occupational status, level of education , marital status , monthly income , and residential area.

Part II: Past History: Chronic Diseases (hypertension, diabetes mellitus and others), family history which includes (high blood pressure, diabetes mellitus, and heart disease).

Part II: Stress **Management Domain**

This domain was measured through (11items), for the feeling of stress (1item) this item was rated and scored by three level types option scale as ^{never} (1), sometimes (2), always (3)., know the reason of stress (4 items) and patient practice during stress (6 items) these items were rated and scored by two level types option scale as yes (1), no (2)

Conducting Pilot Study: Before starting the data collection, a pilot study was conducted on (10) patients who have coronary artery disease for the following purposes

Determine the reliability of the questionnaire .Estimate the time required for the data collection .Obtain the clarity and the content adequacy of the questionnaire and observation Identify the barriers that may be encountered during the data collection process.

Validity: The validity of the instrument was established through a panel of (12) experts. who had more than five years' experience in their fields in order to achieve study objectives.

Reliability: results of the reliability showed very high level of stability and internal consistency of principle parts concerning item's responses' of the questionnaire, all those were calculated by using the major statistical parameter: Alpha Cronbach, revealed that the person correlation coefficient is (0.73).

Statistical Analysis: The data analyzed through the application of statistical procedures and using the package of SPSS version (20).

III.   RESULTS

Table 1: Distribution of Patients according to Socio - Demographic Characteristic n= 100

Variable		F	%
Age	<45	7	7.0
	45—49	15	15.0
	50—54	13	13.0
	55—59	17	17.0
	60—64	22	22.0
	=>65years	26	26.0
Gender	Male	78	78.0
	Female	22	22.0
Level of Education	Illiterate	23	23.0
	Read & write	21	21.0
	Primary school graduate	27	27.0
	Secondary school graduate	7	7.0
	Intermediate school graduate	14	14.0
	High Institute graduate	7	7.0
	University & Higher education	1	1.0
Marital status	Single	2	2.0
	Married	84	84.0

	Divorced	1	1.0
	Widowed	13	13.0
Occupational	Unemployed	30	30.0
	Government employee	23	23.0
	Self-employee	10	10.0
	Wife house	18	18.0
	Retired	19	19.0
Economic status	Sufficient	33	33.0
	Barely sufficient	27	27.0
	Insufficient	40	40.0
Residential area	Rural	73	73.0
	Urban	27	27.0
Smoking	Currently smoke	28	28.0
	Previous smoking	25	25.0
	Not	47	47.0
Alcohol drinking	Drink Currently	0	0
	Previous drinking	0	0
	No	100	100.0

n= number of samples, F= frequency, %=percentage

This table shows that the high percentage (26%) of patients ages from (65 years old and more). Most of them (78.0 %) were male. The education level represents (71%) of CAD were low educated (27.0%, 23%, and 21%) of patients were from primary school graduate, illiterate, and read and write respectively. Most of them (84.0%) were married, and (30.0%) were unemployed. The table also shows that a high percentage (40.0%) of sample their monthly income were insufficient, (73%) of patients were living in Rural, and (27.0%) live in Urban. Regarding to smoking and drinking, (53.0%) of CAD patients were smoker ,(28.0%) smoke currently, (25.0%) previous smoking , and (47.0%) not smoke cigarette, while (100%) of patient never drink alcohol.

Table 2: Distribution of CAD Patients according to their Clinical Characteristics n= 100

Variables	Groups	F	%
Chronic diseases	Hypertension	24	24.0
	Diabetes Mellitus	12	12.0
	High BP & DM	22	22.0
	No Past Medical History	42	42.0
Family history of disease	Hypertension	5	5.0
	Diabetes	6	6.0
	Heart diseases	15	15.0
	No	71	71.0
	High BP & DM	3	3.0
Age of disease onset (years)	<45	9	9.0
	45--49	19	19.0
	50--54	20	20.0
	55--59	14	14.0
	60--64	22	22.0
	=>65years	16	16.0
Frequency of occurrence of disease	Once times	30	30.0
	Twice times	17	17.0
	Three times	23	23.0
	Four times	4	4.0
	Five times & more	26	26.0

n= number of samples, F= frequency, %=percentage

The result in table (2) shows that, (46%) of the study sample have hypertension, (28%) have hypertension alone and (22%) of the sample had hypertension and diabetes mellitus to gather, while (34%)of study sample have diabetes mellitus, (12%)alone and 22% with hypertension. Regarding to family history of disease, found 15% of sample family had heart disease.

Table 3: Assessment of Stress Management Domain of CAD Patients according to Mean of Scores and Relative Sufficiency for Cutoff Point

Items	Never	Sometimes	Always	MS	RS	Score
Do you feel stress	**28(28.0)**	**40(40.0)**	**32(32.0)**	**2.04**	**68**	**LOW**

Cut off point=2, No= number, %= percentage, MS=mean of score, RS= relative sufficiency, low lifestyle modification = 66.6 – 77.7, moderate= 77.8 – 88.8 , high= 88.9 -100

The findings of this table indicated that the evaluation of relative sufficiency was low on feeling stress .

Table 4: Distribution of IHD Patients according to Causes of Stress and the Patients Behavior Toward Stress

Items		F	%
The stress because of	**The work**	10	10.0
	Economic situation	35	35.0
	The illness	28	28.0
	Don't know	27	27.0
Items		**F**	**%**
How you behave when you are stress?	**Watching TV**	26	26.0
	Visit friends	15	15.0
	Eating	9	9.0
	Start smoking	11	11.0
	Exercise Sports	0	0
	Do nothing	39	39.0

Table 5: Distribution of (IHD) Patients according to Causes of Stress and the Patients Behavior Toward Stress

Items	Variables	Angina		MI		P value
		F	%	F	%	
Do you feel stress	Never	9	20.0	19	34.5	0.244 NS
	Sometimes	21	46.7	19	34.5	
	Always	15	33.3	17	30.9	
The stress because of	The work	6	13.3	4	7.3	0.228 NS
	Economic situation	16	35.6	19	34.5	
	The illness	15	33.3	13	23.6	
	Don't know	8	17.8	19	34.5	
How you behave when you are stressed?	Watching TV	10	22.2	16	29.1	0.812 NS
	Visit friends	7	15.6	8	14.5	
	Eating	3	6.7	6	10.9	
	Start smoking	5	11.1	6	10.9	

Exercise Sports	0	0	0	0			
Do Nothing	20	44.4	19	34.5			

Table 6: Association between the IHD Patients stress and Socio- Demographic Characteristic

		N	Stress management
			Mean ± SD
Age	Less than45	12	2.42 ± 0.66
	More than45	85	1.98 ± 0.77
Sig			t=-1.865 df=95, p=0.0532
Gender	Male	78	2.08 ± 0.75
	Female	22	1.91 ±0.86
Sig			t=0.893 df= 98 , p =0.374
Level of education	Illiterate	23	2.09 ± 0.791
	Read & write	21	1.76 ± 0.76
	Primary school	27	2.15 ± 0.71
	Secondary school	7	2.57 ± 0.53
	Intermediate school	14	1.79 ± 0.89
	High education	8	2.14 ± 0.69
Sig			F= 5.868 df=94 , p=0.978
Occupational status	Un employee	30	2.10 ± 0.75
	Government employee	23	2.04 ± 0.76
	Self-employee	10	2.20 ± 0.19
	Wife house	18	1.83 ±0.85
	Retired	19	2.05 ± 0.70
Sig			F=1.136 df=95 , p= 0.765
Monthly income	Sufficient	33	2.03 ± 0.72
	Barely sufficient	27	2.07 ± 0.73
	Insufficient	40	2.02 ± 0.86
Sig			F=0.035 df=97, p=0.965
	Rural	72	2.00 ± 0.75

Residential area	Urban	27	2.15 ± 0.86
			t=-0.839 df= 98 , p=0.404
Smoking	Yes smoker	28	2.00 ± 0.77
	No smoker	72	2.06 ± 0.78
Sig			t=.319 df=98, p=0.750

ted to stress

management domain . p-value (P ≤ 0.05.)

Table (5) Concerning stress management domain the table shows there were no statistically significant differences between stress management with all socio- demographic characteristic except age. p-value (P ≤ 0.05.)

IV.   DISCUSSION

Through the data analysis of demographic variables, the present study reported that the CAD patients age is the range between (less than 45 years to 65 years and more) and the high percentage of their age is (65 years and more)which accounts for 26 (26 %). Most of the sample are male 78 (78%), 27 (27%) graduate from primary school. Most of the patients, 84 (84%) were married. And highest percentage 30 (30%) of the patients were an employee. The findings of data analysis that are shown in table (1), the present study reported that the MI patients age is the range between (less than 45 years to 65 years and more) and the high percentage of their age is (60 years and more). Most of the sample are male , highest percentage graduate from primary school. Most of the patients were married. And highest percentage of the patients were an employee. Regarding the family income the result indicated of MI patient their income is Barely Sufficient and majority of them were living in Rural. Regarding the family income the result indicated that (40.0%) of CAD patient their income is insufficient and majority (73(73.0%) of them were living in Rural. (Table 1).

These results agree with results obtained from a study done by (Smyth, 2018) which indicated the highest percentages of the sample (52.3%) were noticed among the age group 60 years and more, and the highest percentage (76.2%) of patients are male, and (23.8%) were female .The highest percentage (52.3%) was low educational level, (58.5%) were unemployed, (44.6%) low monthly income[8].

These results were expected because age is considered as one of the major risk factors of myocardial infarction, Over 83 percent of people who die of coronary heart disease are 65 or older . Men have a greater risk of heart attack than women , and they have attacks earlier in life. Even after menopause, when women's death rate from heart disease increases, it's not as great as men's, (American heart association, 2009)[11].

According to causes of stress , 35% of patients feel stress because of the economic situation and this is a highest percentage. this is expected in Iraq especially in an Nasiriyah city which is one of the most cities that faced siege and strong army operations through the war for many years.

The results revealed that a high percentage of patients didn't do anything to manage their stress , (28%) of patients manage their stress by watching TV., (15%) visiting a friend , and (11%).starts smoking.

Researches proved that Watching T.V can help prevent stress action (WHO stress management 200) [12], this can help patients if T.V available during their stress.

(Jacqueline, et al.,2002) [13] show, that everyone has experiences to stress, the mental and physical reaction to life's irritations and challenges. Stress can sometimes be avoided and sometime when it is inevitable, it can be controlled. Techniques for controlling stress include: taking life more slowly, spending more time with family and friends, thinking positively, getting enough sleep, exercising, and practicing relaxation techniques.

V.   CONCLUSIONS

- High percentage (55%) of the study sample have myocardial infarction. The advancing age of the patients (50 years & more) is one of the most common non-modifiable risk factors. Most of the patients 78(78 %) were male .The majority of the patients 84 (84 %) were married. Lower educated patients have a higher risk to develop coronary arteries disease than the Higher educated patients .   High percentage (30%) of patients were Unemployed. The result of the present study indicates that most of the patients (40%) were suffering from Insufficient income . The result of the present study indicates that the majority of the patients (78%) were living in rural .

- Most of the patients feel stress because of the economic situation and the percentage, were (35%) of patients.

- There were no statistical significant differences were found between stress management with all socio-demographic characteristic except age.

VI.   RECOMMENDATIONS

According to the results of the study, the researcher puts the following recommendations: increase the individual awareness about stress management, maintain supporting therapies, training efficient confrontation strategies for stressful factors, prediction the stressful life events, coping strategies, and adaptation to its, relaxation technique, improving individual's social support systems through group therapy, family therapy, and training communication skills can reduces the effects of stressful life events

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