Assessment of Stressful Life Events of Adult Patients with Ischemic Heart Disease in Baghdad City

تقييم الاحداث المجهدة في الحياة على المرضى البالغين المصابين بداء القلب الاقفاري في مدينة بغداد

Mohammed Baqer Abbas Jaffar Al-Jubouri / Adult health Nursing, college of nursing University of Baghdad

Prof. Dr. Batool Amin Jaddoue / Adult health Nursing, college of nursing University of Baghdad

الخلاصة:

الاهداف:1ـ لايجاد علاقة بين الاحداث الحياتية الضاغطة و العوامل الديموغرافية (العمر، الجنس، الحالة الزوجية، و الحالة الاقتصادية) للمرضى البالغين المصابين بداء القلب الاقفاري. 2ـ لتقييم الأحداث الحياتية الضاغطة للمرضى البالغين المصابين بداء القلب الإقفاري في مدينة بغداد.

المنهجية: اجريت دراسة وصفية في ثلاث مستشفيات للاختصاصات القلبية (ابن البيطار، ابن النفيس، و المركز العراقي لامراض القلب) للمدة من 15 كانون الاول 2011 ولغاية 4 تموز 2012.

اختيرت عينة غير احتمالية "غرضية" من (180) مريض مشخصين بمرض داء القلب الاقفاري و راقدين في الردهات الجراحية او الباطنية في المستشفيات التي ذكرت اعلاه.

تم تبني وتطوير استمارة الاستبانة من مقياس الاحداث الحياتية الضاغطة لسنة (1967)، الاستبانة المصممة مكونة من (67) فقرة. حدد ثبات الاستمارة من خلال أجراء الدراسة المصغرة بواسطة استخدام الاختبار وإعادة الاختبار على عشرون شخصا من مرض داء القلب الاقفاري والمجموعة الضابطة و حددت مصداقيتها من خلال مجموعة مكونة من (34) خبير.

استخدمت اجراءات التحليل الاحصائي الوصفي و اجراءات التحليل الاستنتاجي في تحليل البيانات.

النتائج: أظهرت النتائج إن معظم المجموعة الدراسية كانوا ضمن الفئة العمرية (60-69) سنة، متزوجين، اميّين، ويعانون من ضعف الحالة الاقتصادية. اظهرت نتائج الدراسة بان الاحداث الحياتية الضاغطة تلعب دوراً مهما في الاصابة بمرض داء القلب الاقفاري.

الاستنتاجات:]ـ معظم المرضى المصابين بداء القلب الاقفاري كانوا ذكور، متزوجين، اميّين و يعانون من ضعف الحالة الاقتصادية. وهنالك علاقة ذات دلالة احصائية عالية بين الاحداث الحياتية الضاغطة و بين الاصابة بمرض داء القلب الاقفاري.

التوصيات: اوصت الدراسة بضرورة زيادة وعي الأفراد حول كيفية التعامل مع الضغوط، توقّع الاحداث الحياتية، تقبّلها و التكيّف معها، استخدام استراتيجية الاسترخاء، تحسين الحالة الاجتماعية من خلال النشاطات الجماعية، و تدريب مهارات الاتصال للتقليل من تأثير الاحداث الحياتية الضاغطة.

Abstract:

Objectives: 1-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. 2-To assess the stressful life events of adult patients with ischemic heart disease (IHD) in Baghdad city.

Methodology: A descriptive study was carried out at three cardiac hospitals (Ebn-Alnafis, Ebn-Albitar, and Iraqi center for heart diseases). Starting from 15 of December 2011 to 4 of July 2012. A non-probability (purposive) sample of 180 patients that diagnosed with IHD who were admitting to medical or surgical ward of the above listed hospital were selected according to the criteria of the study sample. A questionnaire was adopted and developed from the social readjustment rating scale of Holms and Rahe (1967) and consist of (67) items. The content validity of the instrument was established through penal of (34) experts. Reliability of the stressful life events was determined by test-retest method which was estimated as average (r=0.916). Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods.

Results: The results reveal that the majorities of study group were (60-69) years old, married, illiterate, and low socioeconomic status. The result indicated that the stressful life events play importance role in occurrence of IHD.

Conclusion: The majority of the IHD patients are male, married and illiterates. There is a highly significant relationship at p<0.01 between stressful life events and occurrence of IHD in adults.

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.

Key words: assessment, stressful life events, ischemic heart disease, adult patients

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 Rahe 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].

METHODOLOGY:

The objectives of the study were to find out the relationship between stressful life events and socio-demographical characteristics

A descriptive study was carried out at three cardiac hospitals (Ebn-Alnafis, Ebn-Albitar, and Iraqi center for heart diseases). Starting from 15 of December 2011 to 4 of July 2012.

To achieve the objectives of the study, a non-probability (purposive) sample of 180 patients that diagnosed with IHD who were admitting to medical or surgical ward of the above listed hospital were selected according to the criteria of the study sample. The finalized questionnaire contained (67) items.

The content validity of the instrument was established through penal of (34) experts. Reliability of the problems scale was determined by test-retest method which was estimated as average (r=0.916).

Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods.

RESULTS:

Table 1: Observed Frequencies, Percents and Cumulative Percents of Demographical Characteristics Variables in the Studied Samples and Their Comparison Significant.

Dem. characteristics	Sample	Groups	Freq.	Percent	Cum. Percent	C.S. P-value
Age Groups	Control	< 40	1	0.6	0.6	$\chi^2 = 0.000$ P=1.000 NS
		40 - 49	26	14.4	15	
		50 - 59	56	31.1	46.1	
		60 - 69	69	38.3	84.4	
		70 ≥	28	15.6	100	
	Study	< 40	1	0.6	0.6	
		40 - 49	26	14.4	15	
		50 - 59	56	31.1	46.1	
		60 - 69	69	38.3	84.4	
		70 ≥	28	15.6	100	
Gender	Control	Male	113	62.8	62.8	F.E.P.T. P=1.000 NS
		Female	67	37.2	100	
	Study	Male	113	62.8	62.8	
		Female	67	37.2	100	
Marital status	Control	Single	10	5.6	5.6	$\chi^2 = 21.892$ P=0.000 HS
		Married	142	78.9	84.4	
		Separated	0	0.0	84.4	
		Divorced	6	3.3	87.8	
		Widowed	22	12.2	100	
	Study	Single	2	1.1	1.1	
		Married	118	65.6	66.7	
		Separated	5	2.8	69.4	
		Divorced	8	4.4	73.9	
		Widowed	47	26.1	100	
Education levels	Control	Illiterate	5	2.8	2.8	$\chi^2 = 74.491$ P=0.000 HS
		Reads and writes	30	16.7	19.4	
		Primary school	45	25	44.4	
		Intermediate School	32	17.8	62.2	
		Secondary School	10	5.6	67.8	
		Institute	28	15.6	83.3	
		College	27	15	98.3	
		Post Graduate	3	1.7	100	
	Study	Illiterate	55	30.6	30.6	
		Reads and writes	49	27.2	57.8	
		Primary school	32	17.8	75.6	
		Intermediate School	13	7.2	82.8	
		Secondary School	7	3.9	86.7	
		Institute	6	3.3	90	
		College	17	9.4	99.4	
		Post Graduate	1	0.6	100	
Socio - Economic status	Control	Low	131	72.8	72.8	F.E.P.T. [*] P=0.001 HS
		Moderate	49	27.2	100	
	Study	Low	158	87.8	87.8	
		Moderate	22	12.2	100	

This table indicates that the observed frequencies, percents and cumulative percents of demographical characteristics variables in the studied samples and their comparison significant of age group (60-69) years was the larger group (38.3%) in comparison with

others in study and control group. More than half of the subjects are males in the study and control group (62.8%). Most of study and control group (65.6% and 78.9% respectively) were married. Larger group (30.6%) of study was illiterates which in control group primary school (25%) was larger group in educational level.. Low socioeconomic status was large group in study and control groups (87.8% and 72.8% respectively).

Table 2: Distribution of Overall Stressful Life Events Item's Concerning with IHD in the Studied Samples

| Sample | Freq.'s and percents | Assessment | | Total | C.S. P-value |
		Under	Upper		
Control	Freq.	37	143	180	F.E.P.T. P = 0.008 HS
	% Sample	20.6%	79.4%	100%	
	% Assessment	67.3%	46.9%	50%	
	% of Total	10.3%	39.7%	50%	
Study	Freq.	18	162	180	
	% Sample	10%	90%	100%	
	% Assessment	32.7%	53.1%	50%	Odds ratio (1 : 2.329)
	% of Total	5.0%	45.0%	50%	
Total	Freq.	55	305	360	95% C.I. (1.271 : 4.271)
	% Sample	15.3%	84.7%	100%	
	% Assessment	100.0%	100.0%	100%	
	% of Total	15.3%	84.7%	100%	

This table shows that distribution of overall stressful life events item's concerning with IHD in the studied samples which (F.E.P.T.) statistic reported a highly significant difference at $P<0.01$ throughout the constraint of distribution of the observed frequencies compared with their expected, which indicating that a meaningful cause's correlation ship had been presented in that distribution would be. In addition to that, an odds ratio indicator was explored that approximated that (10: 23) persons has stressful life events (Healthy: Ischemic Heart Disease) respectively with a wide interval estimated approaching to (43) diseases' persons.

DISCUSSION:

Throughout the course of data analysis table number (1) indicates that the majority of the study samples were (60-69) years old who were a counted (38.3%) of both groups. This finding comes along with result obtained from study done by (Ilali, and Taraghi,) which indicated that majority of the study subjects with IHD were (61-71) years old [11].In relation to gender, most of the study and control group 113 (62.8%) were male. This result is compatible with (Moosavi, et al.,) which indicated that (67.7%) of study group with IHD was male [12].Regarding marital status most of study and control group (65.6% and 78.9% respectively) were married whereas the single, separating, divorcing, and widowing take the lowest percentage in study and control group. This findings was supported by result obtained from study done by (Nateghian) which indicated that most of the participates with IHD were married [1].Relative to educational level larger group

(30.6%) of study group was illiterates while in control group primary school (25%) was larger group. This finding agrees with results obtain from other studies done by (Anima, et al.) which indicated that the majority of their study sample have low level of education [13].Concerning socioeconomic state, low socioeconomic status was larger group in study than control group (87.8% and 72.8% respectively). which means that the low socioeconomic status play role in occurrence of IHD and this result is supported by results obtained from study done by (Zhijie, et al.) which indicated that the patients with low socioeconomic status tended to have higher levels of IHD risk factors [14]. Corroborated to the previous of the preceding results concerning with the studied samples (case and control) throughout the meaningful differences that had been illustrated either according to questionnaire's items or within the main's domains, table (2) represents the distribution of an overall assessment (under/upper) cutoff point of global mean of score due to questionnaire's items in the studied samples (case & control) with testing the interaction /or randomness of that distribution among the category responding of assessment as well as an odds ratio indicator with their 95% confidence interval. The result shows that (F.E.P.T.) statistic reported a highly significant difference at $P<0.01$ throughout the distribution of the observed frequencies compared with their expected, which indicating that a meaningful cause's correlation ship had been presented in that distribution would be. In addition to that, an odds ratio indicator was explored that approximated that (10 : 23) persons has stressful life events per (Healthy : IHD) respectively which means stressful life events in case group were twice as much as the control group with a wide interval estimated approaching to (43) diseases' persons. These result is agree with result obtain from study done by Roohafza, et al., which indicated that odds ratios for stressful life events counts were 1.84 (95% CI, 1.10-1.26), which stressful life events was associated with IHD [15]. The result of present study was suitable with result of other studies which showed that stressful life events were very important risk factors for IHD with a statistically significant level at $p<0.01$ [16, 1, 17, 18, 19].

CONCLUSION:

According to the present study findings, the researcher can conclude that the majority of the IHD patients are male. Most of the study sample were married and illiterates. The majority of IHD patients are housewives and have low socioeconomic status. There is a highly significant relationship at $p<0.01$ between stressful life events and occurrence of IHD in adults.

RECOMMENDATIONS:

According to the results of the study, the researcher recommends that:

1. Decrease the stress effects through supporting therapies, training efficient confrontation strategies for stressful factors, prediction the stressful life events, coping, and adaptation to its, relaxation technique, improving individual's social support systems through group therapy, family therapy, and training communication skills can reduces the stress effects.
2. Increase the individual awareness about stress management and the factors that contribute to stress and stress related disease will enable us to reduce IHD that stress causes.

REFERENCES:

1- Nateghian, S.: Mental health and stressful life events in coronary heart disease patients and non- patients, **Iran J Psychiatry**, Vol. 3, N. 2, 2008, Pp: 71-74.

2- WHO, World Health Organization, **WHO Global Infobase**, Estimated Age Standardized Death Rate (per 100,000), Ischaemic heart disease, Both Sexes, Last Updated: 20/01/2011

3- Ogden, J.: **Health Psychology**, 2nd ed, Philadelphia, Open University Press, 2000, p. 197.

4- Kikuchi, T.: stress and ischemic heart disease, **Journal of the Japan Medical Association**, Vol. 45, No. 5, 2002, Pp. 192-194.

5- Byrned, D.; and Whyte, H.: Life Events and Myocardial Infarction Revisited: The Role of Measures of Individual Impact, by the American Psychosomatic Society, New York, **Psychosomatic Medicine Journal**, Vol. 42, N.1, 1980, p. 52.

6- Larzelere, M.; and Jones G.: **Stress and Health**, Primary Care: Clinics in Office Practice, 2008, Pp. 839-856.

7- Braunwald, E.; Zipes, D.; and Libby, P.: Heart Disease: **A Textbook of Cardiovascular Medicine**, Philadelphia, Saunders company, 2001, p.285.

8- Varcarolis, E.: **Foundation of Psychiatric Mental Health Nursing**, 4th ed. USA, Saunders Company, 2002, Pp. 266-268.

9- Wood, S.; and Wood, E.: **The world of Psychology**, 4th ed. Boston, Pearson Education Company, 2002, p. 463.

10- Fuster, V.; Alexander R.; Hurst J.; and O'Rourke R.: **Hurst's the Heart**, 11th ed. New York, McGraw-Hill Professional, 2001, Pp. 981-987, 1107-1127.

11- Ilali, E.; and Taraghi, Z.: Comparison of Risk Factors of Coronary Heart Disease in the Men and Women with MI, **Pakistan Journal of Biological Sciences**, Vol. 13, No. 7, 2010, p. 345.

12- Moosavi, M.; Eslami, O.; Bagloo, Sh.; and Birashk, B.: Mental Strain, More Important than Stressful Life Events in Myocardial Infarction, **Acta Medica Iranica J.,** Vol. 42, No. 2 2004, Pp. 125 - 130.

13- Anima, H.; Subhashis, S.; Sankar, M.; Santanu, Hr.; and Malay, M.: Life Events as Risk Factors for Myocardial Infarction: A Case-control Study in Kolkata, India, **Journal of Health**, Population and Nutrition, Vol.23, N. 1, 2005, Pp. 135 – 136.

14- Zhijie, Y.; Aulikki, N.; Erkki, V.; Guide, S.; Zeyu, G.; Gengwen, Z.; Jaakko, T.; and Huiguang, T.: Associations between socioeconomic status and cardiovascular risk factors in an urban population in china, **Bulletin of the World Health Organization**, Vol. 78, No. 11, 2000, p. 1297.

15- Roohafza, H.; Talaei, M.; Sadeghi, M.; Mackie, M.; and Sarafzadegan, N.: Association between acute and chronic life events on acute coronary syndrome, **Journal of Cardiovascular Nurse,** Vol. 25, N. 5, 2010, p.7

16- Guarneri, M.; Nastri, L.; Assennato, P.; LiPuma, A.; Landi, A.; Bonanno, B.; Maggi, G.; Annino, G.; Bono, F.; and LaBarbera, D.: Heart ischemia and psychosomatics: the role of stressful events and lifestyles**, Monaldi Arch Chest Disease Journal,** 2009, Vol. 72, N. 2, Pp. 77-83.

17- Rosengren, A.; Hawken, S.; Sliwa, K.; Zubaid, M.; Almahmeed, W.; Kathleen, B.; Chitr, S.; Hiroshi, S.; Salim, Y.; and Ounpuu, S.: Association of psychosocial risk factors with risk of acute myocardial infarction**, Journal of the American College of Cardiology**, Vol. 364, 2004, Pp. 953-962.

18- Singh, H.; Jain, S.; Singh, R.; Gupta, M,; and Kishore, K.: Life and past one year stressful events in coronary artery disease, **Indian journal of medical sciences**, Vol. 56, N. 4, 2002, Pp. 172-174.

19- Tennant, C.: Life stress, social support and coronary heart disease, **Aust N Z J. Psychiatry**, Vol. 33, 1999, Pp. 636-641.