#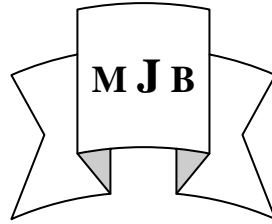 Effects of Psycho-Social Stressors on Occurrence of Breast Cancer in Women: A Retrospective Study in Babylon Governorate

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Abstract

Background: The rapid increase in the cancer burden as breast cancer represents a real crisis for public health and health systems worldwide. Stressful life events are related to the risk of infected women developing an illness (cancer). One of the risks psycho- social life stressors which effects directly or indirectly on breast cancer occurrence in women.

Aims of the study: 1.To determine the effects of psychological &social stressors on occurrence of breast cancer in women.

2. To find out the relationship between breast cancer occurrence and the psychological & social stressors.

Methodology:- A Retrospective Study, a purposive sample of (400) women; (200) women diagnosed with breast cancer were visited the Merjan Teaching Hospital Oncology Cancer Center in Babylon Governorate as a study group and (200) women free of breast cancer as a control group. An assessment tool was constructed for the purpose of the study , it was comprised of Socio-Demographic Data, reproductive Data, Information related to woman healthy life style (exercise & nutrition), Information related to breast cancer (stage, side, period, family history) and psychosocial life stressors consist of (19 psychological item) and (11 social items) of 10 years previous breast cancer occurrence divided to two periods (previous 1-5 years) and (previous 6-10 years). Physical measurements for measuring obesity and overweight of body mass index as well as the medical records to explain in which stage of breast cancer and other details may be assisting this study. Data were collected from 5 February 2012 to 10 April. 2012. Analysis of data was performed through the application of descriptive and inferential statistical data analysis approach.

Results: The study demonstrates that the highest percentage (39.5%) of study sample was in age (50-54) years in comparison with the other age groups for both of study and control groups. There are a highly significant different at P<0.01 between the psychological stressors and breast cancer. While a non significant at P>0.05 was reported with the social stressors.

Key Word: Psychological Stressors, Social Stressors, , Breast Cancer, Women, Retrospective Study

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الخلاصة

الهدف :

١. لتحديد تأثيرات ضغوطات الحياة النفسية والاجتماعية في حدوث سرطان الثدي عند النساء.

٢. لإيجاد العلاقة بين حدوث سرطان الثدي والضغوطات النفسية والاجتماعية.

الخلفية العلمية: الزيادة السريعة في عبء السرطان كسرطان الثدي يمثل أزمة حقيقية للصحة العامة والنظم الصحية في جميع أنحاء العالم. ترتبط الأحداث المجهدة في الحياة بخطر إصابة النساء بالأمراض كالسرطان. ضغوطات الحياة النفسية والاجتماعية هي أحد مخاطر لتي يؤثر بشكل مباشر أو غير مباشر على حدوث سرطان الثدي لدى النساء.

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المنهجية : دراسة ذات أثر رجعي،اختيرت عينة (غرضيه) شملت (٤٠٠) امرأة (٢٠٠) امرأة مصابة بسرطان الثدي ممن قمن بزيارة مركز الأورام السرطانية في مستشفى مرجان التعليمي في محافظة بابل كمجموعة للدراسة و(٢٠٠) امرأة غير مصابة بسرطان الثدي كمجموعة ضابطة وقد نظمت استمارة استبيانيه لتحقيق الغرض من الدراسة شملت الخصائص الديموغرافية، المعلومات الإنجابية، نمط الحياة الصحية بما يخص الرياضة والتغذية، معلومات متعلقة بطبيعة المرض كالمرحلة وجهة الإصابة وفترة الإصابة والتاريخ العائلي للإصابة بسرطان الثدي، ومعلومات عن ضغوطات الحياة النفسية (١٩) فقرة و والاجتماعية (١١) فقرة التي تعرضت لها المرأة المصابة بسرطان الثدي لعشرة سنين سابقة قسمت إلى فترتين (١-٥) سنين و(٦-١٠) سنين. وتم جمع البيانات من العينة من الفترة (٥) شباط ٢٠١٢ ولغاية ١٠ نيسان ٢٠١٢ واجري عليها التحليل الإحصائي من خلال تطبيق الإحصاء الوصفي و الإحصاء الاستدلالي.

النتائج :– أشارت نتائج الدراسة إلى أن النسبة المئويةُ الأعلى (39.5%) من عينة الدراسة كانت من الفئة العمرية (٥٠-٥٤) لكلا المجموعتين مقارنة بالفئات العمرية الأخرى وأن هنالك علاقة ذات دلالة معنوية عالية (P<0.01) بين ضغوطات الحياة النفسية– الاجتماعية وحدوث سرطان الثدي بينما لاتوجد علاقة بين سرطان الثدي وضغوطات الحياة الاجتماعية عند (P>0.05)

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Introduction

Psychological stress refers to the emotional and physiological reactions experienced when an individual confronts a situation in which the demands go beyond their coping resources [1]. The body responds to stress by releasing stress hormones, such as epinephrine (also called adrenaline) and cortisol (also called hydrocortisone). The body produces these stress hormones to help a person react to a situation with more speed and strength. Stress that is chronic can increase the risk of obesity, heart disease, depression, and various other illnesses. Stress also can lead to unhealthy behaviors, such as overeating, smoking, or abusing drugs or alcohol, that may affect cancer risk [2]. Recent epidemiologic studies support what common sense suggests: high levels of stress may contribute to disease processes, including breast cancer. Although the results of some epidemiologic studies are mixed, much evidence now points to social stress as a factor in breast cancer progression and a potential component of the higher breast cancer mortality observed in socioeconomically disadvantaged women. Repeated exposure to a stressor during this period can potentiate the release of glucocorticoids. In adulthood, repeated exposure to the same stressor habituates the mouse to it and thus decreases the glucocorticoid response. Therefore, stressful experiences during these different developmental time periods may have different consequences on the HPA axis and therefore divergent effects on breast cancer risk. The effects of these varying stress responses on mammary development suggest possible developmental windows for stress effects on programming of hypothalamic endocrine systems (HPA and/or HPG) and subsequent risk of breast cancer [3]. perceptions of fear, anxiety and isolation, together referred to as psychosocial stress, and associations with breast cancer aggressiveness. Beast-cancer risk is altered by responses to the social environment will facilitate development of strategies for prevention not only of cancer but of other diseases that are exacerbated in vulnerable populations and contribute to health disparities in the general population [4]. Social support, an external resource, refers to the way in which social relationships protect individuals from the harmful, negative effects of stress [5].

Patients and Methods

A retrospective design (a case control study) a purposive sample of (400) women; (200) women diagnosed with breast cancer were visited the Merjan Teaching Hospital Oncology Cancer Center in Babylon Governorate as a study group and (200) women free of breast cancer as a control group was conducted on determination of contributing psycho-social life stressors to breast cancer in women., they collected from different districts within Babylon Governorate and looks back retrospectively for two period (previous1-5 years) and (previous 6-10 years). The questionnaire was designed for the purpose of the study, it was comprised of 5 parts: socio-demographic data such as (mother's age, weight, length, BMI, educational level, social status, woman occupation, family income, type of family, and present living location and through previous 10 years), reproductive data such as (age of marriage, gravidity, parity, number of stillbirth, number of abortion, number of live children, date of menarche, date of first pregnancy, pregnancy interval, menopausal age, date of last menstrual period, regulatory of menstrual cycle, reproductive age breast feeding, contraceptive pills history and duration, history of infertility, and previous history of other complications), information related to woman healthy life style aspects: exercise which include (5 items), and the nutrition aspect include (14 items). These items rated according to scale (always, sometimes, and never), information related to breast cancer (stage, side, period, and family history of breast cancer), and information related psychological stressors which consist of (19) items such as (The death of a parent or loved one, The death of a son, Loss of spouse, Loss of son, Serious illness of a family member, Separation from husband, Divorce, Divorced son or daughter, Termination of Employment, Retirement, Distrust of others, Depression (diagnosed), Chronic anxiety (diagnosed), Neurological , (irritability), Exposure to psychological violence, Abduction of a family member, Failure in the study, Failure to act / loss of capital) and social stressors (11) items such as (Isolation, Displacement, Disturbance of social relations: 'With husband, With parents, With relatives', Lack of family income, Ongoing family disputes, Change the social events, Negative change in the workplace, Violence at work, Social violence). These items rated according to scale (Yes, No) for two periods (previous 1-5 years) and (previous 6- 10 years). Body mass index indicated for measuring obesity and overweight. The investigator measures the current BMI according to WHO Categories of BMI in 2002 which are: Underweight $=<18.5$ kg/m^2; Normal weight = 18.5-24.9 kg/m^2; Overweight = 25-29.9 kg/m^2; Obesity = 30 kg/m^2 or greater. Medical records explain in which stage of breast cancer and other details may be assisting this study. For pilot study & reliability of the questionnaire :A convenient sample of (20) breast cancer women who attended Merjan Teaching Hospital Oncology Cancer Center in Babylon Governorate for this preliminary study was conducted for the period (5 February, 2012) to (10 April, 2012) .The Reliability Coefficients of the Pilot Study (0.973). The time required for each interview ranged from (20– 30) minutes for each women and (5 –10) minutes for measuring the weight and height for estimate the BMI. Statistical data analysis approaches were used in order to analyze and assess the results of the

study depended on Descriptive data   analysis, and Inferential data analysis.

Results

Table 1 Distribution of the studied demographical characteristics variables in the (Study and control) samples with comparisons significant

Demographical Characteristics	Samples	Groups	No.	Percent	Cum. Percent	Asymp. Sig. [*] (2-tailed)
Age Groups	Study	20 – 24	2	1.0	1.0	Z =0.000 P=1.000 NS
		25 – 29	1	0.5	1.5	
		30 – 34	3	1.5	3.0	
		35 – 39	4	2.0	5.0	
		40 – 44	9	4.5	9.5	
		45 – 49	30	15.0	24.5	
		50 – 54	79	39.5	64.0	
		55 -59	59	29.5	93.5	
		60 ≥	13	6.5	100.0	
	Control	20 – 24	2	1.0	1.0	
		25 – 29	1	0.5	1.5	
		30 – 34	3	1.5	3.0	
		35 – 39	4	2.0	5.0	
		40 – 44	9	4.5	9.5	
		45 – 49	30	15.0	24.5	
		50 – 54	79	39.5	64.0	
		55 -59	59	29.5	93.5	
		60 ≥	13	6.5	100.0	
BMI (Kg/m²)	Study	Underweight	35	17.5	17.5	Z =2.611 P=0.009 HS
		Normal weight	68	34	51.5	
		Over weight	89	44.5	96	
		Obesity	8	4	100	
	Control	Underweight	40	20	20	
		Normal weight	97	48.5	68.5	
		Over weight	53	26.5	95	
		Obesity	10	5	100	
Educational Level	Study	Illiterate	8	4	4	Z =0.161 P=0.872 NS
		Read and write	17	8.5	12.5	
		Primary school	21	10.5	23	
		Intermediate school	37	18.5	41.5	
		Secondary school	79	39.5	81	
		Institute graduate	22	11	92	
		Collage and post graduate	16	8	100	
	Control	Illiterate	9	4.5	4.5	
		Read and write	14	7	11.5	
		Primary school	23	11.5	23	
		Intermediate school	40	20	43	
		Secondary school	77	38.5	81.5	
		Institute graduate	20	10	91.5	
		Collage and post graduate	17	8.5	100	

[*] **C.S. (NS: Non Sig. at P>0.05, HS: Highly Sig. at P<0.01)**
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groups			No.	Percent	Cum. Percent	Asymp. (*)Sig. (2-tailed)
Marital status	Study	Married	141	70.5	70.5	Z =0.900 P=0.368 NS
		Single	16	8	78.5	
		Widowed	27	13.5	92	
		Divorced	14	7	99	
		Separated	2	1	100	
	Control	Married	133	66.5	66.5	
		Single	18	9	75.5	
		Widowed	29	14.5	90	
		Divorced	16	8	98	
		Separated	4	2	100	
Occupational status for respondents	Study	Housewife	168	84	84	Z =0.000 P=1.000 NS
		Employed	32	16	100	
	Control	Housewife	168	84	84	
		Employed	32	16	100	
Family income	Study	Sufficient	85	42.5	42.5	Z =0.984 P=0.325 NS
		Barely sufficient	48	24	66.5	
		Not sufficient	67	33.5	100	
	Control	Sufficient	94	47	47	
		Barely sufficient	47	23.5	70.5	
		Not sufficient	59	29.5	100	
Family type	Study	Nuclear	91	45.5	45.5	Z =1.698 P=0.090 NS
		Extended	109	54.5	100	
	Control	Nuclear	108	54	54	
		Extended	92	46	100	
Location of living	Study	Babylon	127	63.5	63.5	Z =5.099 P=1.000 NS
		Karbala	20	10	73.5	
		Diwanyia	14	7	80.5	
		Najaf	31	15.5	96	
		Samawa	8	4	100	
	Control	Babylon	169	84.5	84.5	
		Karbala	18	9	93.5	
		Diwanyia	4	2	95.5	
		Najaf	6	3	98.5	
		Samawa	3	1.5	100	
Residency	Study	Urban	154	77	77	Z =1.0350 P=0.301 NS
		Rural	46	23	100	
	Control	Urban	145	72.5	72.5	
		Rural	55	27.5	100	

Table (1) shows the distribution of the two samples (Study and Control) according to their demographical characteristics variable's (Age Groups, Educational Level, Marital status, Occupational status for respondents, Family income, Family type, Location of living, and Residency) reported a non significant differences at P>0.05, between the observed frequency's distributions compared with expected at the two groups, which indicated that they were corresponding proportionally /or whether the two independent groups are seems to be drown from the same population. In addition to that, Body Mass Index was reported a highly significant different at P<0.01, with bad assessment at the study group compared with the control. he age group (50-54) years shown to be the larger group (39.5%) in comparison with the other age groups for both of study and control groups.

The highest percentage (44.5%) of study group were overweight, while (48.5%) for the control group had normal weight. The highest percentage (39.5%) of study, and (38.5%) of control group were secondary school graduate, (70.5%) of study, and (66.5%) of control group were married, (77%), (84%) were housewives, (42.5%) (47%) respectively for both groups have sufficient family income, (53%) of study group were live in extended families, while (54%) of control group were live in nuclear families, (63.5%), (84.5%) respectively for both groups live in Babylon city, and (77%), (72.5%) respectively for both groups were urban residency.

Table 2 Distribution of the studied Reproductive & Medical characteristics variables in the (Study and control) samples with comparisons significant

Reproductive Characteristics	Samples	Groups	No.	Percent	Cum. Percent	C.S P-value
Gravidity	Study	0	30	15	15	$\chi^2 = 1.985$ P = 0.921 NS
		1-2	54	27	42	
		3-4	76	38	80	
		5-6	37	17.5	98.5	
		7 and more	3	1.5	100	
	Control	0	32	16	16	
		1-2	44	22	38	
		3-4	78	39	77	
		5-6	41	20.5	97.5	
		7 and more	5	2.5	100	
Parity	Study	0	30	15	15	$\chi^2 = 2.588$ P = 0.858 NS
		1-2	78	39	54	
		3-4	62	31	85	
		5-6	28	14	99	
		7 and more	2	1	100	
	Control	0	32	16	16	
		1-2	64	32	48	
		3-4	66	33	81	
		5-6	34	17	98	
		7 and more	4	2	100	
No. of still birth	Study	0	184	92	92	FEPT P =0.855 NS
		1	13	6.5	98.5	
		2	3	1.5	100	
	Control	0	186	93	93	
		1	11	5.5	98.5	
		2	3	1.5	100	
No. of abortion	Study	0	172	86	86	$\chi^2 = 0.924$ P = 0.630 NS C.C. = 0.131 P = 0.630 NS
		1	10	5	91	
		2	12	6	97	
		3	6	3	100	
	Control	0	175	87.5	87.5	
		1	11	5.5	93	
		2	11	5.5	98.5	
		3	3	1.5	100	

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Reproductive Characteristics	Samples	Groups	No.	Percent	Cum. Percent	C.S P-value
No. of living babies	Study	0	30	15	15	χ^2 = 2.380 P = 0.882 NS
		1-2	70	35	50	
		3-4	70	35	85	
		5-6	28	14	99	
		7 and more	2	1	100	
	Control	0	32	16	16	
		1-2	58	29	45	
		3-4	74	37	82	
		5-6	33	16.5	98.5	
		7 and more	3	1.5	100	
Regulation of menstrual cycle	Study	Regular	147	73.5	73.5	FEPT P =0.047 S
		Irregular	53	26.5	100	
	Control	Regular	162	81	81	
		Irregular	38	19	100	
The women in reproductive age	Study	Rep. age	37	18.5	18.5	FEPT P =0.704 NS
		Post-Rep. age	163	81.5	100	
	Control	Rep. age	40	20	20	
		Post-Rep. age	160	80	100	
Breast feeding	Study	Yes	125	62.5	62.5	FEPT P =0.000 HS
		No	45	22.5	100	
	Control	Yes	151	75.5	75.5	
		No	17	8.5	100	
The use of contraception	Study	Not use	73	36.5	36.5	χ^2 = 7.179 P = 0.066 NS
		Pills	67	33.5	70	
		Helix	28	14	84	
		Surgery	20	10	94	
		Condom	12	6	100	
	Control	Not use	76	38	38	
		Pills	46	23	61	
		Helix	41	20.5	81.5	
		Surgery	20	10	91.5	
		Condom	17	8.5	100	
Infertility	Study	Yes	13	6.5	6.5	FEPT P =0.858 NS
		No	170	85	100	
	Control	Yes	12	6	6	
		No	169	84.5	100	
Other diseases	Study	Yes	59	29.5	25.5	FEPT P =0.504 NS
		No	141	70.5	100	
	Control	Yes	53	26.5	26.5	
		No	147	73.5	100	

Table (2) shows that the highest percentage of study and control group (38%) (39%) respectively were having (3-4) gravida. Regarding parity (39%) of study group were having(1-2) Para , while for control group (33%) of them were having (3-4) Para, (8%) of study group and (7%) of control group had between 1 & 2) still births, (14%) of study group and (12.5%) of controls were having between (1-3) abortions. Regarding the number of living babies (35%) having (1-2) and (3-4) child respectively in study group, while (37%) of control group had (3-4) child. The highest percentage of both study and control groups (73.5%)(81%) respectively were having regular menstrual periods, (81.5%)(80%) of study and control group respectively

were in post-reproductive age, 62.5%), (75.5%) respectively were breast feed their babies for those who were married and having babies. Regarding the use of contraceptive the highest percentage of study and control group were using different types of

contraceptives, and the highest percentage of the users(33.5%) (23%) respectively were using pills, only (6.5%) (6%) respectively for both study and control group were having infertility.

Table 3 Descriptive statistics related to some Reproductive characteristics (Study and Control) groups

Reproductive characteristics	Groups	No.	M.S.	Std. Dev.	Std. Error Mean
Age at menarche	Study	200	12.48	0.81	0.06
	Control	200	12.59	0.83	0.06
Age at first pregnancy	Study	170	27.01	11.81	0.08
	Control	168	23.53	11.52	0.08
Pregnancy interval	Study	170	1.32	0.72	5.10
	Control	168	1.20	0.69	4.92
Age at menopause	Study	112	52.90	1.97	0.19
	Control	112	52.54	1.92	0.18
Age at last menstrual cycle	Study	112	56.81	42.30	4.00
	Control	112	56.54	42.32	4.00
Duration of contraception	Study	130	7.44	1.70	0.15
	Control	125	7.03	2.00	0.18

Table (3): demonstrates the means of some reproductive variables. The mean age at menarche for study sample was (12.48 ±0.81) years which was lower than the age at menarche for control group (12.59±0.83) years. The mean age at first pregnancy (27.01±11.81) years for study sample, while (23.53±11.52) years for the control. Pregnancy interval means (1.32±0.72) years for study sample, and

(1.20±0.69) years for control. Regarding age at menopause (52.90±1.97) years for study sample, and (52.54±1.92) years for control. The mean age at last menstrual cycle (56.81±42.30) years for study sample, and (56.54 ±42.32) years for control, and regarding the duration of contraception use (7.44±1.70) years for the study group, and (7.03±2.00) years for the control.

Table 4 Comparisons significant for some Reproductive characteristics variables between the two groups

Reproductive characteristics	Levine's Test for Equality of Variances		t-test for Equality of Means			C.S.
	(F) Statistic	Sig.	(t) Statistic	d.f.	Sig. (2-tailed)	
Age at menarche	0.591	0.442	1.345	398	0.179	NS
Age at first pregnancy	0.416	0.519	0.561	338	0.575	NS
Pregnancy interval	9.12	0.003	1.17	166	0.241	NS
Age at menopause	0.041	0.841	1.408	222	0.160	NS
Age at last menstrual cycle	0.000	0.998	0.049	222	0.961	NS
Duration of contraception	2.173	0.142	1.750	253	0.081	NS

Table (4) showed the results of testing coincidence's responding between different of the studied groups according to Reproductive characteristics variables through equality of variances and equality of mean value's parameters. The results of testing indicating that there are no significant different at $P>0.05$ were obtained, which indicated that they were corresponding proportionally /or whether the two independent groups are seems to be drown from the same population.

Table 5 Distribution of the study sample according to the breast cancer history

About Breast Cancer	Stage	Freq. [*]	Percent	Cum. Percent	C.S.
Breast cancer stage	Stage 1	8	4	4	$\chi2 =$ 187.36 P = 0.000 HS
	Stage 2	70	35	39	
	Stage 3	120	60	99	
	Stage 4	2	1	100	
Breast cancer side	Right	94	47	47	$\chi2 =$ 94.840 P = 0.000 HS
	Left	104	52	99	
	Both of them	2	1	100	
Family history	Non Applicable	186	93	93	$\chi2 = 3.143$ P = 0.534 NS
	mother	5	2.5	95.5	
	sister	3	1.5	97	
	daughter	1	0.5	97.5	
	aunt	3	1.5	99	
	grandma	2	1	100	
Period of disease in years	1-2	45	22.5	22.5	$\chi2 =$ 94.070 P = 0.000 HS
	3-4	102	51	73.5	
	5-6	51	25.5	99	
	7 and more	2	1	100	

[*] **Frequencies of breast cancer cases**

Table (5): Shows that the majority (60%) of cases had third stage of breast cancer, (52%) of cases had left breast cancer, (93%)of cases had no family history, and (51%) of cases had (3-4) years period of breast cancer. High significant differences were found between breast cancer stages, breast cancer side, period of breast cancer, while no significant differences were found in family history.
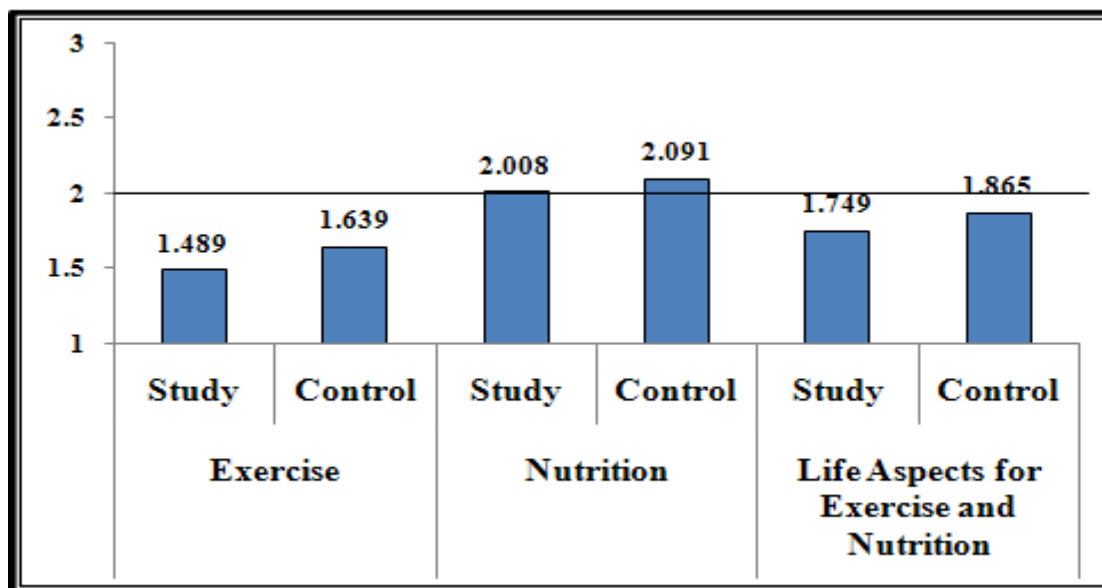
Figure 1 Bar chart for Mean of Score at the Sub and Main Domain of Life Aspects (Exercise & Nutrition) at the (Study and Control) groups

Table 6 Comparisons Significant for the Studied Sub and Main domains of " Life aspects to Breast Cancer in women "between (Study and Control) groups

Sub and Main Domains	Levene's Test for Equality of Variances		t-test for Equality of Means			C.S.
	(F) Statistic	Sig.	(t) Statistic	d.f.	Sig. (2-tailed)	
Exercise	4.385	0.037	-4.878	390.5	0.000	HS
Nutrition	0.161	0.688	-4.272	398.0	0.000	HS
Life Aspects for Exercise and Nutrition	0.692	0.406	-6.405	398.0	0.000	HS

C.S. : (S: Sig. at P<0.05 , HS: Highly Sig. at P<0.01)

Table (6) showed the results of testing coincidence's responding between different of the studied groups according to Sub and Main domain of "Life Aspects to Breast Cancer in women " through equality of variances and equality of mean value's parameters. The results of testing indicating that there are too highly significant different at P<0.001 were obtained, and that concluded a meaningful differences had been reported however that both of groups full their mean of score under cutoff point.

Table 7 Descriptive statistics for the studied Stressors Domains with percentile transformed scoring for the two different groups.

Stressors Domains	Groups	No.	Mean	Std. Dev.	Std. Error	95% C. I. for Mean		Min.	Max.
						L. B.	U. B.		
Psychological	Study	200	10.16	6.73	0.48	9.22	11.10	0	26.3
	Control	200	5.71	5.38	0.38	4.96	6.46	0	26.3
Social	Study	200	13.77	8.93	0.63	12.53	15.02	0	36.4
	Control	200	12.59	8.68	0.61	11.38	13.80	0	36.4

Table (7): The table shows that the means of psychological and social stressors in study group was higher than that of control group.

Table 8 Comparisons Significant for the Studied Sub and Main domains of " Life Stressors to Breast Cancer in women " between (Study and Control) groups

Sub and Main Domains	Levene's Test for Equality of Variances		t-test for Equality of Means			C.S. (*)
	(F) Statistic	Sig.	(t) Statistic	d.f.	Sig. (2-tailed)	
Psychological Stressors	5.594	0.018	7.305	379.5	0.000	HS
Social Stressors	0.534	0.465	1.342	398.0	0.180	NS
Life Stressors	5.540	0.019	6.998	389.5	0.000	HS

(*) C.S. : (NS : Non Sig. at P>0.05 ; S: Sig. at P<0.05 , HS: Highly Sig. at P<0.01)

Table (8) showed the results of testing coincidence's responding between different of the studied groups according to Sub and Main domain of "Life Stressors to Breast Cancer in women"(psychological and social) through equality of variances and equality of mean value's parameters with percentile transformed scoring. The results of testing indicating that there are a highly significant different at P<0.01 were obtained at the psychological Stressors Sub domains, a non significant at P>0.05 was reported with the social sub domain.

Table 9 Distribution of applicable respondent's frequencies for the questionnaire's items of Life Stressors (Psychological Domain) in the two groups with their Study to Control Ratio Score and Grand weighted Mean of Percent

Items	Study			Control			SCR %
	(1-5) Yrs.	(6-10) Yrs.	Total	(1-5) Yrs.	(6-10) Yrs.	Total	
The death of a spouse	25	10	35	21	10	31	13
The death of a parent or loved one	19	9	28	11	7	18	56
The death of a son	8	5	13	3	3	6	117
Loss of spouse	2	0	2	1	0	1	100
Loss of son	4	2	6	2	2	4	50
Serious illness of a family member	15	13	28	2	10	12	133
Separation from husband	-	-	-	-	-	-	-
Divorce	4	1	5	1	1	2	150
Divorced son or daughter	6	1	7	6	1	7	0
Termination of Employment	-	-	-	-	-	-	-
Retirement	0	1	1	0	1	1	0
Distrust of others	11	6	17	8	7	15	13
Depression (diagnosed)	3	0	3	3	0	3	0
Chronic anxiety (diagnosed)	1	3	4	2	1	3	33
Neurological (irritability)	54	53	107	27	29	56	89
Exposure to psychological violence	69	59	128	28	24	52	146
Abduction of a family member	0	2	2	0	2	2	0
Failure in the study	-	-		-	-	-	-
Failure to act / loss of capital	-	-	-	-	-	-	-
Overall Assessment (Grand Weight Mean of Score)	-	-	26	-	-	14	96.07

Table (9): shows the observed frequencies of respondents with respect to the Psychological Stressor's items distributed in the two categories responding (1-5) years and (6-10) years as well as, total numbers, their percentages out of the studied individuals group, Study to Control Ratio Score, and Overall Assessment (Grand Weight Mean of Score). The result indicated that the study group's individuals were reported low assessment grade (96.07%) than control group's individuals concerning with the Psychological Stressor's items.

Table 10 Distribution of applicable respondent's frequencies for the questionnaire's items of Life Stressors (Social Domain) in the two groups with their Study to Control Ratio Score and Grand weighted Mean of Percent

Items	Study			Control			SCR[*] %
	(1-5) Yrs.	(6-10) Yrs.	Total	(1-5) Yrs.	(6-10) Yrs.	Total	
Isolation	6	0	6	3	2	5	20
Displacement	0	12	12	0	12	12	0
Disturbance of social relations - with husband	36	45	81	24	43	67	24
Disturbance of social relations - with parents	26	9	35	19	11	30	20
Disturbance of social relations - with relatives	5	2	7	5	6	11	- 50
Lack of family income	33	15	48	28	14	42	14
Ongoing family disputes	86	22	108	71	26	97	13
Change the social events	-	-	-	-	-	-	-
Negative change in the workplace	-	-	-	-	-	-	-
Violence at work			-	1	1	2	-
Social violence	0	6	6	2	9	11	- 45
Overall Assessment (Grand Weight Mean of Score)	-	-	38	-	-	34	13.93

[*] **SCR : Study to Control Ratio Score (No. of Increasing times at the study group compared with the control group).**

Table (10) shows the observed frequencies of respondents with respect to the Social Stressor's items distributed in the two categories responding (1-5) years and (6-10) years as well as, total numbers, their percentages out of the studied individuals group, Study to Control Ratio Score, and Overall Assessment (Grand Weight Mean of Score). The result indicated that the study group's individuals were reported low assessment grade (13.93%) than control group's individuals concerning with the Social Stressor's items.

Table 11 Association among Demographical Characteristics and some related
variables with an overall assessments due to Life Stressors to Breast Cancer in women

predicted variables	Study			Control		
	C.C.	P-value	C.S.	C.C.	P-value	C.S.
Age Groups	0.287	0.021	S	0.193	0.461	NS
BMI : Kg/m²	0.165	0.135	NS	0.133	0.308	NS
Educational Level	0.156	0.548	NS	0.252	0.035	S
Marital status	0.121	0.560	NS	0.098	0.749	NS
Occupational status for patient	0.105	0.135	NS	0.136	0.053	NS
Family income	0.033	0.643	NS	0.025	0.719	NS
Family type	0.033	0.643	NS	0.25	0719	NS
Location of living	0.144	0.372	NS	0.1113	0.643	NS
Residency	0.039	0.583	NS	0.03	0.749	NS
Age of mother in the marriage	0.182	0.333	NS	0.155	0.552	NS
Gravidity	0.208	0.264	NS	0.154	0.669	NS
Parity	0.267	0.041	S	0.082	0.983	NS
No. of still birth	0.100	0.687	NS	Under Cutoff Point		
No. of abortion	0.18	0.607	NS	0.336	0.203	NS
No. of living babies	0.289	0.016	S	0.123	0.858	NS
Age at menarche	0.106	0.685	NS	0.161	0.259	NS
Age in first pregnancy	0.238	0.068	NS	0.174	0.386	NS
Interval between pregnancies	0.008	0.918	NS	0.018	0.819	NS
Age at menopause	0.294	0.225	NS	0.251	0.584	NS
Age of last menstrual cycle	0.315	0.265	NS	0.247	0.698	NS
Regulatory of menstruation	0.065	0.360	NS	0.048	0.493	NS
The women in reproductive age?	0.058	0.413	NS	0.129	0.067	NS
Breast feeding	0.022	0.776	NS	0.013	0.864	NS
The use of contraception	0.154	0.348	NS	0.081	0.846	NS
Duration of contraception	0.249	0.479	NS	0.288	0.257	NS
Infertility	0.082	0.267	NS	0.143	0.053	NS
Other diseases	0.345	0.000	HS	0.299	0.000	HS

[*]**Improvement Status in high light classification.**

Table (11): The results has reported that the distribution of the Life Stressors to Breast Cancer in women through the two dichotomous of responding had no relationship with their Demographical characteristics variables and as well as of their Reproductive characteristics variables with an overall assessments at the study group except with (Age,

Parity, No. of living babies, and Other diseases) only and we can concluded that the studied questionnaire can be amend for all individuals of the population concerning with Breast Cancer of women whatever a differences with their (Demographical and Reproductive) characteristics variables would be.

Discussion

The result indicated that the Life Stressors to Breast Cancer in women no relationship with their Demographical characteristics variables and as well as of their Reproductive characteristics variables with an overall assessments at the study group except with (Age, Parity, No. of living babies,

and Other diseases) only and we can concluded that the studied questionnaire can be amend for all individuals of the population concerning with Breast Cancer of women whatever a differences with their (Demographical and Reproductive) characteristics variables (Table 11). This study was in

agreement with study conducted by Yavari and others, [6] which stated that nulliparous women were at slightly higher risk of breast cancer than parous women but the difference was not significant. No association was found with parity and breast cancer but an association was found with age at first live birth and number of live birth. Abortion do not affect a women's risk of having breast cancer. Evidence indicating a positive interaction of abortion and a history of abortion is associated with higher breast cancer in genetically susceptible women[7]. In another study conducted by Tang and others[8], the risk of breast cancer was not found to be associated with a prior induced abortion, if followed at some later time by pregnancy and childbirth.

Regarding Psychological domain, the observed frequencies of respondents with respect to the Psychological Stressor's items, the result indicated that the study group's individuals were reported low assessment grade (96.07%) than control group's individuals concerning with the Psychological Stressor's items (Table 9)

The linkage has not been proved despite a long history of research. It has been hypothesized that psychological changes associated with life events influence development of cancer through immune down regulation [9]. Breastcancer.org suggest that depression may cause a slight increase in breast cancer risk. Rauscher and colleagues studied patient-reported perceptions of fear, anxiety and isolation, together referred to as psychosocial stress, and associations with breast cancer aggressiveness. Chronic stress may increase the risk of breast cancer [10]. A new study suggests psychological stress may play a role in the development of aggressive breast cancer, especially among minority populations [11]. psychological stress impairs the ability

of the body's immune system to detect and fight cancer and enhances production of hormones that lead to tumor growth, such as estrogen and breast cancer. Queen's University researchers found a specific biological link between breast cancer and psychological stress. The psychological stress always leads to a change in white cell count at varying degrees depending on the type and duration of the stressor. Current research shows that longer-lasting stressors cause a reduction of immune function and increase our vulnerability to disease [12].

Regarding Social domain, the observed frequencies of respondents with respect to the Social Stressor's items, the result indicated that the study group's individuals were reported low assessment grade (13.93%) than control group's individuals concerning with the Social Stressor's items (Table10).

Most studies of stress and breast cancer have measured stress in terms of highly threatening or adverse life events. While a recent review of prospective studies identified limited evidence for increased risk of breast cancer incidence associated with stressful life events [13]. No independent association between stressful life events and breast cancer risk [14]. The associations were observed between any of the summary social adversity measures and subsequent breast cancer risk, with or without adjustment for age, menopausal status, parity, use of menopausal hormones, age at menarche, age at first birth, family history of breast cancer, physical activity, social class, body mass index, height, and alcohol intake. This study found no evidence that social stress exposure or individual differences in its experience are associated with the development of breast cancer [15]. The most extensively studied psychosocial factors in relation to breast cancer

incidence are stress and stressful life events [16]. Many events can be thought of as stressors. These include disasters, life crises, life changes, and daily hassles. If stress persists after the initial fight or flight reaction, the body's reaction enters a second stage. During this stage, the activity of the sympathetic nervous system declines and epinephrine secretion is lessened, but corticosteroid secretion continues at

The present study shows the observed frequencies of respondents with respect to the psychological and social, distributed in the two categories responding (1-5) years and (6-10) years ,the result indicated that the study group's individuals were reported low assessment grade (96.07%) than control group's individuals concerning with the psychological stressor's items and (13.93%) with the social stressor's items. The study also shows that the means of psychological and social stressors in study group was higher than that of control group. The results of testing indicating that there are a highly significant different at P<0.01 were

1. Activation of media and Ministry of Health role for increasing the awareness of women and their families about the importance of reducing the risk factors which contributing on breast cancer occurrence through :
a. Monthly breast self-examination and regular mammography for age ≥ 40

above normal [17]. Every event in life causes a considerable stress. While in most cases it is unpleasant events that create stress, in some cases it could even be pleasant events, as they too require adapting. Individual reactions may vary widely over the same event. Mentally mature persons suffer less stress from the same event as compared to the weaker ones [18].

Conclusions
obtained at the psychological stressors while no significant different at P<0.05 were obtained at the social stressors No relationship with their demographical characteristics variables and as well as of their reproductive characteristics variables with an overall assessments at the study group except with (Age, Parity, No. of living babies, and Other diseases) only and we can concluded that the studied questionnaire can be amend for all individuals of the population concerning with Breast Cancer of women whatever a differences with their (Demographical and Reproductive) characteristics variables.

Recommendations
years are the recommended methods of breast cancer early detection.
b. Sleep at least 8 hours daily.
c. Exercising regularly at least one hour three times a week.
d. Coping with the stress.
2. Further study on large population.

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