

## Evaluation of the Physical and Psychosocial Domains among Patients Complaining Of Breast Cancer in Iraq

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### Abstract

**Objective:** The main aim of the study was to evaluate the physical and psychosocial domains among breast cancer patients in Iraq.

**Methodology:** A descriptive design was carried out on 100 patients diagnosed and treated for breast cancer. The data were collected from women referred to the Outpatient Clinic of the Oncology Teaching Hospital and the Iraqi National Cancer Research Center of Baghdad University during a one year period from April 2013 till May 2014. The questionnaire was composed of four categories: Part I which included the demographic and clinical variables; Part II which comprised the physical and psychosocial domains; Part III concentrated upon the desire and willingness, while Part IV focused on the support and treatment.

**Results:** About 40% of the study population was within age group (44-53) years, 75% were married, 45% were College graduates 47% were employed while the majority (84%) were living in urban areas. Approximately half of the sample (48%) was diagnosed in stage III and the disease duration ranged between (3-5) years in 35%. The results of the presented work demonstrated that the vast majority of the studied physical problems (67.7%) and psychosocial domains(55.7%) were poor in our breast cancer patients.

**Conclusions:** Our results illustrated that almost all actual domains and sub-domains related to QOL of the breast cancer patients in Iraq were poor with the exception of sex satisfaction which was fair.

**Recommendation:** The study urges promoting public health educational programs to elevate the level of awareness regarding the necessity to support patients complaining of breast cancer in Iraq.

**Key words:** Quality of Life, Physical and Psychosocial Domains, Breast Cancer, Iraq

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### I. Introduction

Breast cancer is the most common cancer among women worldwide (1). In Iraq, it ranks the first cancer among the Iraqi population in general and comprises about one third of the registered female cancers (2,3). It has been reported that women survive breast cancer more than any other type of malignancy (4). However, younger breast cancer survivors are at risk for impaired quality of life (QOL) up to several years after diagnosis<sup>5</sup>.

Several investigators demonstrated that women with breast cancer attain maximum recovery from the physical and psychological trauma of treatment after one year of diagnosis, while certain rehabilitation problems might worsen (6). Breast cancer can impact patients psychologically as well as organically, manifested as post mastectomy depression, increased anxiety, shame, and suicidal attempts. It has been observed that a considerable proportion of patients complain from psychiatric disorder and the quality of life is substantially affected (7). Thus, clinicians should actively explore their psychological adjustment to enable early recognition and treatment of those disorders.

WHO defines Quality of Life as individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (8). Long-term, disease-free breast cancer survivors reported high levels of functioning QOL many years after primary treatment. That information might be useful to patients and physicians who are engaged in the discussions regarding the risks and benefits of systemic adjuvant therapy (9, 10).

The main objectives of this study were to evaluate the physical and psychosocial domains among a sample of Iraqi patients diagnosed with breast cancer after receiving treatment.

## II. Methodology

**2.1 Design of the study:** Descriptive analytical.

**2.2 Sample of the study:** 100 patients diagnosed with breast cancer and subjected to therapy (i.e., surgical, radiotherapy and chemotherapy and hormonal treatment).

**2.3 Setting of the study:** The data were collected from women referred to the Outpatient Clinic of the Oncology Teaching Hospital and the Iraqi National Cancer Research Center of Baghdad University during a one year period from April 2013 till May 2014.

**2.4 Instrument construction:** The study utilized the European Organization for Research and Treatment of Cancer QOL questionnaire (EORTC QLQ-C30)<sup>11</sup> and QOL Breast Cancer instrument (QLQ-BR23)<sup>12</sup>. The EORTC QLQ-BR23 was translated into Arabic and modified. The questionnaire format consists of four parts:

**2.4.1 Part I:** demographic and clinical variables (i.e., age, marital status, educational level, occupational status, residence, breast cancer stage and disease duration).

**2.4.2 Part II:** consisting of two aspects: 1- Physical (32 items) which comprises 3 sub items: Systemic Side Effects, Arm problems and Breast problems; 2- Psycho-social (19 items) which include 6 sub items: Social, Financial problems, Sex satisfaction, Psychological problems& Body image.

The overall questions included (51) items and all items were scored in a 4-point Likert scale (1- Not at all; 2- Sometimes; 3- Often; and 4- Always). The cut- off point was (2) ; where items were considered in the levels of evaluation as the following: < 50= fair and ≥ 50= Poor.

**2.4.3 Part III :** Desire and Willingness (3 items). These were scored on two points (Yes-1; and No--2).

**2.4.4 Part IV :** Patients Suggestions for Social Support of Illness and Treatment.

Statistical methods: The data were analyzed by using the SPSS, version19. The descriptive and inferential statistical data analysis approaches were used in the analysis.

## III. Results

**Table 1: Distribution of the sample by their demography and clinical characteristics**

Variables	Number	Percentage
Age (years)		
Less than 34	5	5
34-43	27	27
44-53	40	40
54-63	26	26
More than 63	2	2
Total Mean=47.75 ±8.878	100	100
Marital status		
Married	75	75
Single	8	8
Widowed	13	13
Divorced	4	4
Total	100	100
Educational Level		
Not read and write	2	2
Read and write	5	5
Primary school	8	8
Intermediate	11	11
Secondary	27	27
7- Institution graduate	2	2
8-College graduate and above	45	45
Total	100	100
Occupation status		
Un employed	45	45
Retired	8	8
employed	47	47
Total	100	100
Residency		
Rural area	15	15
Urban area	84	84
Industrial area	1	1

Total	100	100
Pathological staging		
1	12	12
2	31	31
3	48	48
4	9	9
Total	100	100
Time since diagnosis		
<1	16	16
1-3	28	28
3-5	35	35
5-7	13	13
7 and more	8	8
Total	100	100

Table (1) demonstrates the distribution of demography characteristics. The table showed that the majority of the sample (40%) were within age groups of (44-53) years (Mean=47.75 ±8.878), 75% were married ,45% were college graduate and above, 47% were employed , the highest percentage (84%) of the study sample were living in urban residential area. Relating to the breast cancer stages, it was revealed that 48.4% of the sample were in stage III, and 35% were within disease duration (3-5) years.

**Table 2: The Mean Scores and Levels of the Evaluation Domains in the Study sample**

Domain& Sub Domain	No. of item	Range of rating	Total of M.S.	SD	R.S%	Evaluation
1.Physical domain	32	32-128	2.705	1.159	67.7	Poor
Systemic side effects	19	19-76	2.677	0.102	66.9	Poor
Arm problems	2	2-8	2.433	0.975	60.8	Poor
Breast problems	2	2-8	2.693	2.14	67.3	Poor
Functional	9	9-36	2.511	1.030	62.8	Poor
2. Psychosocial domain	19	19-76	2.229	1.002	55.7	Poor
Social problems	4	4-16	2.263	0.994	56.6	Poor
Financial	1	1-4	2.582	1.005	64.6	Poor
Sex satisfaction	3	3-12	1.576	0.901	39.4	Fair
Psychological	4	4-16	2.467	1.01	61.7	Poor
Body image domain	3	3-12	2.263	0.994	56.6	Poor
Total average of MS	51	51-204	2.517	1.04	83.9	Poor

MS: Mean of score SD=standard deviation, RS= relative sufficiency (RS:< 50= fair, ≥ 50= Poor) RS, Evaluation = levels of evaluation

Table (2) presented the total means, standard deviation, relative sufficiency and levels of evaluation domains and sub domains. The levels of evaluation were poor in the physical domains. The findings in this table also show that poor levels of evaluation were encountered in the psychosocial domains with the exception of the sex satisfaction which were fair. Overall, the total average of MS was poor.

**Table (3): Correlations Among the studied Domains and Sub Domains**

All Domains & Sub domains	Physical domain	Systemic side effects	Arm problems	Breast problems	Functional domain	Psychosocial domain
Physical domain	1 0					
Systemic side effects	.050* .026	1 0				
Arm problems	-.012- .862	.035 .615	1 0			
Breast problems	-.140- .043	.027 .701	.185** .008	1 0		
Function domain	-0.043* 0.195	.066* .044	-.089- .202	.005 .947	1 0	
Psychosocial domain	0.036* 0.212	.076** .008	-.119- .087	.045 .519	0.064 0.054	1 0

\*\* Correlation is significant at the 0.01 level.

\* Correlation is significant at the 0.05 level.

Table (3) depicts that there were significant statistical correlation between physical and sub domains (systemic side effects, breast problems and function domain) at (p<0.01) value, between breast problems and arm problems and between function domain and systemic side effects at (p<0.01) value. There were significant

statistical correlation between the psychosocial domains with physical domain and systemic side effects at (p<0.05) and (p<0.01) value.

**Table (4): Correlations among Psychosocial Domains and Sub Domains**

Psychosocial domains & Sub domains	Psychosocial domain	Social problems	Financial	Sex satisfaction	Psychological Problems	Body image domain
psychosocial domain	1 0					
Social problems	.076 .274	1 0				
Financial	.443** .000	-.181- .068	1 0			
Sex satisfaction	-.212- .032	-.017- .783	-.110- .272	1 0		
Psychological problems	-.034- .571	.443** .000	.185 .061	-.034- .571	1 0	
Body image domain	.047 .418	-.084- .147	-.148- .140	.186** .002	-.078- .121	1 0

\*\* Correlation is significant at the 0.01 level.

\* Correlation is significant at the 0.05 level.

Table (4) depicts that there were significant statistical correlation between psychosocial domains with financial and sex satisfaction at (p<0.05) and (p<0.01) values respectively. Also a significant correlation was observed between Social problems, psychological problem domain and satisfaction domain at (p<0.01) and (p<0.05) values respectively, and with body image domain with sex satisfaction domain.

**Table 5: Association between Demographical Characteristics and overall Domains**

Items	Demographical Characteristics	Contingency Coefficients	Approx. Sig.	C.S.(*)
Main domains	Age Groups	0.488	.000	HS
	Marital Status	0.152	.000	HS
	Level of Education	0.232	.000	HS
	Pathological staging	0.348	.000	HS
	Time since diagnosis	0.381	.000	HS

\*HS: highly significant= at p value ≤ 0.01, C.S=correlation significant

Table 5 reveals that there were highly significant association between the main domains and study variables (age, marital status, educational level, breast cancer staging and disease duration) at p≤0.01 value.

**Table 6: Distribution of Respondents regarding the Desire and Willingness**

No.	Desire and Willingness items	NO		Yes		Total
		No.	%	No.	%	
1.	Do you have a desire to talk about your story?	81	85.3	14	14.7	95(100%)
2.	Are you ready to act as an advisor to others in order to avoid the disease?	90	94.7	5	5.3	95(100%)
3.	Do you have a desire to join an Association Against Breast Cancer?	63	66.3	32	33.7	95(100%)

5 of sample was missing Table (6) shows the distribution of patient's responses about desire and willingness items where 33.7% expressed interest to join an Association Against Breast Cancer, 14.7% revealed a desire to talk about their diseases and 5.3% were ready to act as advisors to others in order to avoid the disease.

#### IV. Discussion

Breast cancer patients experience physical symptoms and psychosocial distress that adversely affect their quality of life (QOL). QOL research can serve a number of functions in patients with breast cancer. Most commonly, QOL assessment can form the basis of descriptive studies and in fact those measures are included as primary end points in most clinical trials. It has also been suggested that QOL scores may be of prognostic significance in certain settings (8,9). Although QOL has gained an important place in the management of cancer in industrialized nations, where increase in survival rates are observed, yet in developing countries very little attention has been paid to this issue. The poor infrastructure and inadequate treatment facilities in developing countries lead to low survival rates and accordingly yielding less attention to the QOL (10)..

The findings of the present study indicated that the majority of the sample (40%) were within the age group of (44-53) years (Mean=47.75 ±8.878), 75% were married, (45%) were college graduates and 47% were employed. The majority (84%) of the study sample came from urban areas. TNM staging system showed that

48% were diagnosed in Stage III while the disease duration ranged between (3-5) years in more than one third of those patients. A similar report from Pakistan illustrated in an over view of demographic characteristics in breast cancer patients that the mean age was  $46.3 \pm 9.52$  years, 94% were housekeepers, 81% were married, 72% were illiterate while 55% were urban (13):

Our results showed that the response of the patients regarding to the QOL domains were poor in the Physical and Psychosocial domain and sub domains; with the exception of sex satisfaction where they had good QOL. Accordingly the total average of the mean of score was poor QOL. On the other hand, a study conducted to assess the quality of life of breast cancer survivors in Bahrain indicated that Bahraini affected women have an average to good functioning QOL and low to average symptoms experience (14).

Other investigators demonstrated that chemotherapy was one form of treatment that could cause physical and psychological problems which adversely affect the patients' QOL (4, 15). The best functional outcomes were those regarding social functioning and role functioning subscales, whereas the emotional function; illustrated in dyspnea, pain and fatigue was the lowest (13). The ultimate evaluator for quality of care seems to be the effectiveness in achieving or producing health satisfaction. In an Egyptian survey, female breast cancer patients were significantly less satisfied than the control (10). In another study, emotional functioning ( $r=0.37$ ,  $p=0.008$ ), dyspnea ( $r=0.426$ ,  $p=0.002$ ), body image ( $r=0.355$ ,  $p=0.011$ ) showed significant positive relationship with Global QOL. Whereas breast symptoms ( $r=-0.511$ ,  $p=0.000$ ), arm symptoms ( $r=-0.304$ ,  $p=0.032$ ) and up-set by hair loss ( $r=-0.354$ ,  $p=0.012$ ) showed reverse relationship with global QOL scale (13). Other authors displayed that younger patients experience greater psychological morbidity and poorer QOL after breast cancer diagnosis than older women (4).

The findings of the present study revealed a significant statistical correlation between physical and sub domains, i.e., systemic side effects, breast problems and functional domains ( at  $p < 0.01$  value) as well as between breast problems and arm problems and between functional domains and systemic side effects (at  $p < 0.01$  value). Likewise, there were significant statistical correlation between psychosocial domains and physical domains and systemic side effects (at  $p < 0.05$  and  $p < 0.01$  respectively). There was a relationship between psychosocial domains and financial and sex satisfaction (at  $p < 0.05$  and  $p < 0.01$  respectively). Similar findings were observed between social problems and psychological problems domains (at  $p < 0.01$  and  $p < 0.05$  respectively) and between body Image domain and sex satisfaction domains.

Long-term, disease-free breast cancer survivors reported high levels of functioning QOL many years after primary treatment (9). In an earlier report, global QOL had demonstrated significant relationship ( $p < 0.05$ ) with emotional functioning, dyspnea, and body image and inverse relationship ( $p < 0.05$ ) with breast symptoms (13). One year after surgery, most women reported high levels of functioning QOL, In Japan, it has been reported that women who experienced lower levels of QOL after one year of diagnosis had greater mood disturbances and poorer body image one month after surgery (16).

The present study illustrated as well that there was a significant association between QOL domains and such variables as age, marital status, educational level, cancer staging and disease duration at  $p \leq 0.01$ . Earlier studies had identified the strength of relationship and consistency between certain demographic factors and QOL of breast cancer patients. In an earlier survey (10) it has been stated that the reverse was observed as the rate of dissatisfaction increased with the increase of the age groups, especially regarding the physical domains ( $p < 0.05$ ). Another report showed that women aged  $< 50$  years had a better QOL than women aged  $\geq 50$  years (13). Many researchers claimed that younger women often have better quality of life after treatment (5). Other researchers compared the QOL in married women versus those who were unmarried and revealed that the relationship was not significantly different (17). In a multivariate regression analysis it has been demonstrated that fatigue, nausea, vomiting, pain, dyspnea, constipation, body image, breast symptoms, and the level of education were significant predictors of the QOL of patients with breast cancer (13).

Regarding the Desire and Willingness items, 32% of our patients expressed interest to join an Association Against Breast Cancer, while only 14% revealed a desire to talk about their disease story and merely 5% demonstrated readiness to play the role of advisors to guide other patients complaining of breast cancer.

In Conclusion, our results illustrated that almost all actual domains and sub-domains related to QOL of the breast cancer patients in Iraq were poor with the exception of sex satisfaction which was fair. There were significant statistical associations between physical and psychosocial domains and sub domains.

## **V. Recommendation**

The study urges promoting public health educational programs to elevate the level of awareness regarding the necessity to support patients complaining of breast cancer in Iraq. That could be achieved through health planners, specialists, health care providers, family members, friends and the society in general with the objective of improving their QOL. An emphasis should be placed to endorse group and behavioral therapy among effected patients through joining relevant teams and associations.

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