ORIGINAL RESEARCH ARTICLE

Burdens of Breast Cancer upon women's psychological health at Oncology Hospitals in Baghdad City

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Abstract

Objectives: The study aims to determine the burdens of breast cancer upon women's psychological health and their socio-demographic characteristics. A descriptive study was conducted at Al-Amal National Hospital for Cancer Management, Oncology Teaching Hospital and Al-Emamain Al- Kadhimain Medical City Hospital for the period from May 18, 2016 to June 1, 2016. A purposive non-probability sample consisted of 100 women with breast cancer. The questionnaire was composed of three parts. First, Socio-demographic data and Socio-Economic Status, Second, General Information, including reproductive information, previous medical history, type of treatment. Third, psychological health burden of breast cancer (Psychological Domain). Reliability of the questionnaire is determined through a pilot study and the validity through a panel of 16 experts. Descriptive and inferential statistical procedures were employed for the data analysis. The highest percentage 35% and 32% of studied sample are at age group 31–40 and 41–50, respectively, having good educational levels (29%), housewives (54%), married (47%) and widowed (30%), live in nuclear type of family (72%), urban residents (83%), and moderate socio-economic status 63%. The results show that sub and main domains with regard to psychological health are assigned to moderately assess the burden status. It could be indicating that all studied patients had extremely assigned from moderate to high burden status of assessments. Their relative sufficiency estimations are bordered to cutoff point moderate/high scale. Weak relationships are accounted with no significant at $P > 0.05$ between women's psychological health status and socio-demographical characteristics variables. The study concludes that women's burden of breast cancer concerning psychological health with an overall assessments assigned moderate assessment of burden status.

Keywords: burdens, breast cancer, psychological health, women health, oncology, psychology

Introduction

Breast cancer is the most common type of malignancy recorded in the cancer registries of almost all countries within the Eastern Mediterranean Region. In Iraq, the continuous rise in the incidence rate is associated with an obvious trend to affect premenopausal women[1]. Breast cancer is the most common cancer, and most frequent malignancy among women worldwide, accounting for 25% of all cancers, with an estimated 1.57 million new cases in 2012. It is also the leading cause of female cancer-related deaths[2,3]. According to the latest Iraqi Cancer Registry, Breast Cancer is the commonest type of female malignancy, accounting for approximately one-third of the registered female cancers[4]. Since it is well documented that cancer patients face physical and emotional challenges after undergoing treatment, they are willing to modify their lifestyle to increase well-being as well as prevent recurrence. They are also enthusiastic to get more information related to food choices, dietary supplement, complementary nutritional therapies and physical activity modification to improve their quality of life[2,5,6,7]. Quality of life is a multidimensional concept which covers various areas related to physical, emotional, sexual or social functioning[8]. Breast cancer patients are at an increased risk of developing fatigue, sleep disturbances, pain and psychological distress such as depression, anxiety, negative thoughts, fear of cancer recurrence, death, sense of loneliness, sexual and body image problems that adversely affect their overall quality of life and survivorship[2].

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Materials and Methods

A descriptive analytic study was conducted at Al-Amal National Hospital for Cancer Management, Oncology Teaching Hospital, and Al-Emamain Al-Kadhimain Medical City Hospital, for the period from May 18, 2016 to June 1, 2016). A purposive non-probability sample consisted of 100 women with breast cancer. The questionnaire was composed of three parts, First, socio-demographic data and socio-economic status, second, general information include reproductive information, previous medical history, type of treatment. Third, psychological health burden of breast cancer; psychological domain, which consisted of 4 sub domains (anxiety consisted of 12 items; depression consisted of 13 items; thought consisted of 4 items; and self-confidence consisted of 4 items). Reliability of the questionnaire is determined through a pilot study and the validity through a panel of 16 experts. Descriptive and inferential statistical procedures were employed for the data analysis. Statistics tables including: Mean of score (M.S.) with their Standard Deviation (SD), Relative Sufficiency (RS%), and assessment by scoring scales throughout (Always, Sometimes, and Never) in contrasts of scales (1, 2, and 3) respectively. In addition to that, three sequential intervals for assessing relative sufficiency's estimates in light of preceding scoring scales (33.33–55.55, 55.55–77.77, 77.77–100), are assessed by High, Moderate, and Low, respectively.

Results

Relative to women's 'Age Groups', studied sample are focused on the (31–40) and (41–50) age groups, and they are accounted 35(35%), and 32(32%), respectively. With respect to women's 'Educational Levels', the studied samples seem to be focused on the good educational levels, since who had high school, and higher education are accounted 50(50%). On women's "Occupation", results illustrated that most of studied samples are housewives, and they are accounted 54(54%), as well as who had unspecialized job are accounted 22(22%), and the remaining numbers of women unemployed. Most of studied women are married and widow, and they are accounted 47(47%), and 30(30%), respectively, as well as who are unmarried are accounted 19(19%). Nuclear type of family reported most of studied patients, and they are accounted 72(72%), while leftover of extended type are reported 28(28%). Finally, urban residents are most of the studied sample, and they accounted 83(83%), while leftover of rural are reported 17(17%).

Relative to women's 'Number of Pregnancies', majority of the studied sample are registered (1–2), and (3–4) pregnancy, and they are accounted 30(37.0%), and 27(33.3%), respectively. With respect to women's 'Number of live birth', majority of the studied sample are registered for (1–2), and (3–4) delivery, and they are accounted 43(53.1%), and 22(27.2%) respectively. Most type of delivery are NVD, and they are accounted 52(64.2%), while leftover of cesarean section (S/C) type, and accounted 29(35.8%). Finally, most types of lactation are mixed feeding, and they are accounted 51(63%), while leftover of breast, and bottle feedings types, and they are accounted 13(16%), and 17(21%), respectively.

Relative to subjects who answered of having breast problem previously are accounted 27(27%), as well as most of studied women are reported age group breast cancer at (31–40) years and (41–50) years, and accounted 44(44%), and 27(27%), respectively. Two sided of the breast are reported similar cases in the studied sample, and they accounted 44(44%) at the right side, and 44(44%) at the left side, while leftover of cases are reported both sided. Two third (67%) of the studied sample had the radical type of surgery, while about one third (33%) had a partial type. Most of studied subjects are illustrated second and third stages, and they are accounted 49(49%), and 35(35%), respectively. Finally, over 50% of studied subjects having a family member suffering from breast cancer, and they are accounted 53(53%).

The result shows that a similar response of treatment types is reported statistically, since no significant different at $P > 0.05$, rather than simply stating that chemotherapy type had more cases at studied sample, and they are accounted 38(38%), then followed with who are radiation type, and accounted 34(34%), and then finally surgical type had reported 28(28%).

This part, represent a summary statistics and initial assessments, such that, grand mean of score, standard deviation, relative sufficiency for studying sub, and main domains concerning the burden psychological health status for studied patients of women's breast cancer. Table 5 results show that sub and main domains with regard to this part are assigned moderate assessment of burden status according to cutoff points, but taking into consideration border line of scoring scales, it could be indicating that all studied patients had extremely assigned moderate to high burden status of assessments, since their relative sufficiency estimations are bordered to cutoff point moderate/high scale.

Discussion

Socio-demographical characteristics

Relative to women's 'Age Groups', studied samples are focused at the (31–40) and (41–50) age groups, and they are accounted 35(35%), and 32(32%), respectively. Mustafa et al. (2016) conducted a study about imaging and clinic-pathological characteristics of breast cancer among women under the age of 40 years, The current study suggests that breast cancer among young Iraqi women under 40 years had a high incidence rate but might be less aggressive than what is reported in western countries despite of high recurrence rate[9]. With respect to women's 'Educational Levels', the studied samples seem to be focused on the good educational levels, since who had high school, and high education are accounted 50(50%). The finding of the study about the educational differences in likelihood of attributing breast symptoms to cancer: A

Table 1 Distribution of the studied sample according to socio-demographic characteristic variables with comparisons significant ($N = 100$)

Demographic variables	Groups	No.	%	C.S. (*) P-value
Age groups (Per years)	20–30	17	17	$\chi^2 = 11.760$ $P = 0.008$ (HS)
	31–40	35	35	
	41–50	32	32	
	51 and more	16	16	
Education level	Illiteracy	4	4	
	Reading	2	2	
	Reading and writing	14	14	$\chi^2 = 36.920$ $P = 0.000$ (HS)
	Primary school	13	13	
	Secondary school	17	17	
	High school	21	21	
	College and institute	29	29	
Occupation	Unspecialized	22	22	$\chi^2 = 19.280$ $P = 0.000$ (HS)
	Housewife	54	54	
	Unemployed	24	24	
Marital status	Married	47	47	$\chi^2 = 39.440$ $P = 0.000$ (HS)
	Unmarried	19	19	
	Widow	30	30	
	Divorced	4	4	
Family type	Nuclear	72	72	Bin. test $P = 0.000$ (HS)
	Extended	28	28	
Residency	Urban	83	83	Bin. test $P = 0.000$ (HS)
	Rural	17	17	

(*) HS, Highly Sig. at $P < 0.01$; S, Sig. at $P < 0.05$; Testing based on One-Sample Chi-Square test, as well as Binomial test.

Table 2 Distribution of studied reproductive information parameters with comparisons significant ($N = 100$)

Reproductive parameters	Groups	No.	%	C.S. (*) P-value
The number of pregnancies	1–2	30	37.0	$\chi^2 = 16.136$ $P = 0.001$ (HS)
	3–4	27	33.3	
	5–6	17	21.0	
	≥ 7	7	8.60	
The number of live birth	1–2	43	53.1	$\chi^2 = 44.086$ $P = 0.000$ (HS)
	3–4	22	27.2	
	5–6	14	17.3	
	≥ 7	2	2.50	
Type of delivery	NVD	52	64.2	Bin. test $P = 0.015$ (S)
	S/C	29	35.8	
Type of lactation	Breast feeding	13	16.0	$\chi^2 = 32.296$ $P = 0.000$ (HS)
	Bottle feeding	17	21.0	
	Mixed feeding	51	63.0	

(*) HS, Highly Sig. at $P < 0.01$; Testing are based on the "Binomial", and "Chi–Square (χ^2)" tests.

Table 3 Distribution of previous medical history with comparisons significant ($N = 100$)

Previous medical history	Groups	No.	%	C.S. (*) P-value
Are your breasts have any problem previously?	Yes	27	27	Bin. test $P = 0.000$ (HS)
	No	73	73	
Age at breast cancer	20–30	17	17	$\chi^2 = 23.920$ $P = 0.000$ (HS)
	31–40	44	44	
	41–50	27	27	
	51–and more	12	12	
Side of breast cancer	Right	44	44	$\chi^2 = 20.480$ $P = 0.000$ (HS)
	Left	44	44	
	Both	12	12	
Type of surgery	Partial	33	33	Bin. test $P = 0.001$ (HS)
	Radical	67	67	
Stage of breast cancer?	1st stage	16	16	$\chi^2 = 16.460$ $P = 0.000$ (HS)
	2nd stage	49	49	
	3rd stage	35	35	
Does a family member suffering from breast cancer	Yes	53	53	Bin. test $P = 0.617$ (NS)
	No	47	47	

(*) HS, Highly Sig. at $P < 0.01$; Testing are based on the "Binomial", and "Chi–Square (χ^2)" tests.

Table 4 Distribution of type of treatment with comparisons significant ($N = 100$)

Type of treatment	No.	%	Cum. %	C.S. (*) P-value
Surgical	28	28	28	$\chi^2 = 1.520$ $P = 0.468$ (NS)
Chemotherapy	38	38	66	
Radiation	34	34	100	

(*) NS: Non Sig. at $P > 0.05$; Testing are based on the "Chi–Square (χ^2)" tests.

Table 5 Summary statistics of women's burden of breast cancer concerning psychological health with an overall assessments

Sub and main domains	No.	GMS	SD	RS%	Assessment
Anxiety	100	2.190	0.409	73.0	M
Depression	100	2.193	0.397	73.1	M
Thought	100	2.323	0.451	77.4	M
Self-confidence	100	2.208	0.421	73.6	M
Psychological domain	100	2.228	0.276	74.3	M

vignette-based study, which suggests that lower education was associated with lower likelihood of making cancer attributions for both symptoms, also after adjustment for cancer avoidance. Lower likelihood of considering cancer may delay symptomatic presentation and contribute to educational differences in stage at diagnosis[10]. On women's 'Occupation', results illustrated that most of studied

samples are housewives, and they are accounted 54(54%), as well as who had unspecialized job are accounted 22(22%), and the remaining numbers of women unemployed. This study was in agreement with a study which stated that the majority of the women who have participated in this study are housewives (55.25%)[11]. A study stated that there is a significant in work that leads to breast cancer risk[12]. Most of studied women are married and widow, and they are accounted 47(47%), and 30(30%), respectively, as well as who are unmarried are accounted 19(19%). A study show that married women were more likely to be diagnosed at an earlier stage compared with single and separated/divorced women, and more likely to receive surgical treatment than all other marital groups. The five-year survival rate for the single was six percentage points lower than the married for women. After controlling for age, race, cancer stage and surgery receipt, married women have a significantly lower risk of death from cancer compared with the single. Within the same cancer stage, the survival differences between the single and the married were strongest for localized and regional stages, which had overall middle-range survival rates compared to any stage so that support from marriage could make a big difference[13]. Nuclear type of family reported most of studied patients, and they are accounted 72(72%), while leftover of extended type are reported 28(28%). A study shows that given the importance of the family context, numerous studies have found that a supportive family environment for women with breast cancer is positively associated with health outcomes[14]. Urban residents are most of the studied sample, and they accounted 83(83%), while leftover of rural are reported 17(17%). This study was in agreement with a study which stated that the highest percentage (84%) of the study sample were living in an urban residential area[15].

Reproductive information

Relative to women's "Number of Pregnancies", the majority of the studied sample are registered (1–2), and (3–4) pregnancy, and they are accounted 30(37.0%), and 27(33.3%), respectively. With respect to women's "Number of live birth", majority of the studied samples are registered for (1–2), and (3–4) delivery, and they are accounted 43(53.1%), and 22(27.2%), respectively. Most types of delivery are NVD, and they are accounted 52(64.2%), while leftover of cesarean section (S/C) type, and accounted 29(35.8%). Finally, most types of lactation are mixed feeding, and they are accounted 51(63%), while leftover of breast, and bottle feedings types, and they are accounted 13(16%), and 17(21%), respectively. This study was in agreement with the study, which stated that perceived family support scale scores of the women with breast cancer who gave birth for 1 or 2 times were found to be higher. Similarly, perceived family support scale scores of the women with breast cancer who had children were also found to be higher[16].

Previous medical history

Relative to subjects who answered of having breasts injured problem previously are accounted 27(27%), as well as most of studied women are reported age group breast cancer at (31–40) years and (41–50) years, and accounted 44(44%), and 27(27%), respectively. Two sided of the breast are reported similarly cases in the studied sample, and they accounted 44(44%) at the right side, and 44(44%) at the left side, while leftover of cases are reported both sided. Two third (67%) of the studied sample had the radical type of surgery, while about one third (33%) had a partial type. Most of studied subjects are illustrated second and third stages, and they are accounted 49(49%), and 35(35%) respectively. Over 50% of studied subjects having a family member suffering from breast cancer, and they are accounted 53(53%). A study stated that the women in low-income occupations or with low education levels are more likely to have advanced tumor stages at presentation, lower implementation rate of clinical breast examination, and less treatment[17]. A study stated that a sister with a history of breast cancer also was related to increased risk, for women with one sister with breast cancer compared with those with one sister without such a history. Women whose mother and sister both had a history of breast cancer compared with those without a family history. These associations did not differ appreciably when stratified by age, menopausal status, history of benign breast disease; body mass index, age at menarche, or parity or age at first birth of the women at risk[18].

Type of treatment

A similar response of treatment types is reported statistically, since no significant different at $P > 0.05$, rather than simply stating that chemotherapy type had more cases at studied sample, and they are accounted 38(38%), then followed with who are radiation type, and accounted 34(34%), and then finally surgical type had reported 28(28%). A study stated that the 95% of the patients in the chemotherapy-first group and 80% in the radiotherapy-first group began treatment within six weeks of the last surgical procedure, as required[19].

Psychological Domain

Rather than sub and main domains regarding to this part are assigned moderate assess of burden status according to cutoff points, but taking into consideration border line of scoring scales, it could be indicating that all studied patients had extremely assigned moderate to high burden status of assessments, since their relative sufficiency estimations are bordered to cutoff point moderate/high scale. A study stated that the individuals who are highly anxious about cancer, they may be strongly motivated to engage in a behavior to avoid developing the disease, but also motivated to avoid their thoughts or feelings when processing cancer-related information[20]. This study was in agreement with study which stated that the prevalence rates of depression were 57.9% for breast cancer[21]. A study stated that the breast cancer is an

unpleasant event that can bring traumatic experiences to the patient, such as fear of death, altered self-image, uncertainty as to treatment and prognosis. After receiving the diagnosis, many women face personal conflicts, some have difficulty in accepting the disease, seem afraid of suffering social discrimination or even discrimination within the family, in addition to facing feelings of mutilation resulting from complete or partial removal of the breast, the part of the body directly connected to the representation of her femininity[5]. All these changes from the occurrence of cancer can be reflected as disturbances in mood, self-esteem and sexuality.

Conclusion
The study concludes that women's burden of breast cancer concerning psychological health with an overall assessments assigned moderate assessment of burden status. It could be indicating that all studied patients had extremely assigned moderate to high burden status of assessments.

Recommendations
Before starting chemotherapy or radiation treatment an instructional intervention program about psychological problem should be implemented to reduce the patient burdens , fear of the side effects after the treatment and increase their awareness about these effect.

Competing interests
The authors declare that they have no competing interests.

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