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Impact of Cancer an Quality of Life Among Women, Single Canter Study, Jeddah, Saudi Arabia: A Cross Sectional Study

[1]Eqan Ahmed, [1]Tasneem Rashid, [1]Nada Ben-Merdah,
[1]Rehab Al-Yamani, [1]Malak Al-Qarni, [1]Hashim Ramadani,
[2]Bassem El-Deek and [3]Samia Al-Amoudi
[1]Department of Obstetrics and Gynecology, [2]Department of Medical Education,
King Abdulaziz University, Jeddah, Saudi Arabia
[3]Department of Obstetrics and Gynecology,
Sheikh Mohammed Hussein Al-Amoudi Center of Excellence in Breast Cancer,
King Abdulaziz University, Jeddah, Saudi Arabia

Abstract: Cancer patients suffer from different psychological and physical outcomes. They live each day with fears either from complications, medication side effects and recurrence. A long life care is needed. Quality of Life (QOL) is the ability of a person to deal and enjoys the important possibilities of his/her life. Researchers have to determine the impact of cancer on the QOL concepts in order to explore all patient needs. A cross-sectional study conducted at a teaching hospital in Jeddah between December 2011 and November 2012, among 95 women with cancer. The result shows, at psychological state (71.6%) of participants lost interest in life, at religious status, all of them confirmed that their faith helped them through the suffering, at social status (79.3%), experienced positive change in their relationship with their families, above all (78.9) confirmed increases in their need financial by 52.6%, socially by 56.8% and emotionally by 64.2%, only 56.8% met their needs. Cancer has a greater impact on life regardless of the type of cancer which is more apparent among lower socioeconomic groups. More attention should be given to the psycho-social aspects, provide information and guidance about body changes and expected complications for women and their families. In order to achieve that all health care providers should address these aspects with the treatment plan in a holistic approach.

Key words: Quality of life, cancer, impact, Saudi women, socioeconomic groups

INTRODUCTION

Cancer is the second leading cause of death in United States of America (Hoyert and Xu, 2012). In fact, cancer patients suffer from different psychological and physical outcome which is effect their Quality of Life (QOL). Patients live each day with different degrees of stress and fears from complications, medication side effects and mostly from recurrence. This is why, they need a lot of support and life long-term care. In KSA 2007, the total number of cancer incident cases reported to the Saudi Cancer Registry in Saudi Arabia was 12,309. Overall cancer was slightly more among women than men. Cancers affected 5,982 (48.6%) males and 6,321 (51.4%) females. Breast cancer is the most common cancer among women in Saudi Arabia (SCR, 2007). Although, incidence rate are increasingly worldwide, survival rate increasing as well, therefore assessment of Quality Of Life (QOL) is getting more attention.

In the era of modern medicine and advancement in cancer diagnosis and therapy. Researchers saw the transformation of cancer from a fatal disease to one of which majority of patients receive a highly effective interventions or became a chronic incurable disease for others (Pollack *et al*., 2009).

In KSA, the cancer 5 years overall survivors representing a good rate during (year 1994 to 2004), according to the 2007 annual report of Saudi National Cancer Registry, it was shown that the highest survival rate in female malignancy are thyroid (95.4%), followed by Hodgkin lymphoma (86.8%), uterine cancer (76.3%), breast (64.4%), leukemia (61.3), non-hodgkin (60.5%), bladder (54%), colorectal (50.6%), ovary (49.5%), stomach (30%) and liver (21.6%) (SCR, 2007).

In outside KSA, it has reported that cancer survival experienced different degrees of symptoms and complications more than non cancer individuals with matched age group such as depression, anxiety, fractures

Corresponding Author: Eqan Ahmed, Department of Obstetrics and Gynecology, King Abdulaziz University, Jeddah, Saudi Arabia

and stroke (Yabroff *et al*., 2004). However, it is reported that the duration of cancer doesn't change the cancer's impact in their lives such as fatigue aches and pain and trouble sleeping except for decreases in cognitive difficulties and social concerns which are in line with the increase of the duration since diagnosis (Bennett *et al*., 2010).

Breast cancer have impact on many aspects of women's life, it affect their self-esteem and may change her role in life. Greater disturbance of QOL in women who receive chemotherapy more than other modalities of treatment (Lee *et al*., 2008; Schreier and Williams, 2004). Elderly cancer patients have much more problems during daily activity living due to the presence of co-morbidities and functional impairment (Grov *et al*., 2010; Fulton and Cope, 2001).

Health care providers play major role in care of survivorship's needs. Collaboration is needed between patient care and health system to ensure the survivor's satisfaction (McDowell *et al*., 2010; Bober *et al*., 2009). A more interesting result reported the importance of female patient to play a major design role in their treatment and plan. They found a major risk for distress and reduced QOL but only for women who played a negative role in decision making (Hack *et al*., 2010).

Researchers have to promote a greater interest in QOL among Saudi's female cancer patients and impact of the disease in the different aspects of their lives. It is important to reach their different needs to improve their QOL.

MATERIALS AND METHODS

This cross-sectional study was conducted at a King Abdulaziz University hospital in Jeddah (Day Care Unit, Radiotherapy Unit, Medical Oncology Clinic, Medical Ward and Surgical Ward). The target population of subjects consisted of all womenwith top ten cancers in Saudi Arabia according to Saudi Cancer Registry records. Hospital's Ethical Committee approval to the protocol was obtained from the Unit of Biomedical Ethics and Research Committee. Demographic and clinical data were collected using self-report instruments. The questionnaire instrument provides an assessment of QOL in four domains (Health and functioning, socioeconomic, psychological/spiritual, family) with knowing the duration since patient diagnoses and the treatment modality. The subjects were between 21 years old and 85. A total of 95 women with the top ten cancer reported in Saudi Arabia, the study was enrolled from May 2011 to October 2012. Each subject must fill out a questionnaire after giving a verbal consent and interviewed with one of the research team.

Statistical analysis: Statically analysis was done by using SPSS (Statistical Package for Social Science) Program. The qualitative data were presented in the form of number and percentage. The quantitative data were presented in the form of mean and standard deviation. The χ^2-test was as a test of significance for qualitative data.

RESULTS AND DISCUSSION

The demographic characteristics of the studied women with cancer which are described by Table 1. The mean age of subjects was 50.31 years (standard deviation 13.48 years, minimal 20 to maximum 83 years); 68.4% were married, 20% were Higher education, 33% were illiterate, 16.8% were currently employed and 83.2% were housewives/unemployed. Barely enough income counts (58.9%) of all subjects.

The psychological status among the subjects in Table 2. About 91.6% of subjects accept their condition, 53.7% became nervous and quick anger, 58.9% anxious and 71.6% were lost of interest. Sleep problems exist in 63.2% of patients. About 55.8% have fear from recurrence, 51.6% have fear from metastasis, 39% have fear from death due to illness and 27.4% have body image issues. The 60% of patients extremely felt sad at time of diagnosis.

Regarding the religious and family status among subjects in Table 3, 100% believe and found that du'aa

Table 1: Demographic characteristics

Variables	No. of subjects	%
Age		
Mean	50.3158	-
SD	13.4846	-
Median	50.0000	-
Minimum	20	-
Maximum	83	-
Area		
North	1	1.1
South	12	12.6
East	3	3.2
West	78	82.1
Central	1	1.1
Education		
Illiterate school	31	32.6
Primary school	14	14.7
Intermediate school	12	12.6
Secondary school	19	20.0
Higher education	19	20.0
Occupation		
Housewife	79	83.2
Employee	16	16.8
Marital status		
Married	65	68.4
Unmarried	7	7.4
Widow	17	17.9
Divorce	6	6.3
Income		
Barely enough	56	58.9
Quite enough	35	36.8
More than enough	4	4.2

Table 2: Psychological status characteristics

	Extremely		Partly		I do not know		Slightly		No	
Variables	No.	%	No.	%	No.	%	No.	%	No.	%
I accept my condition	47	49.5	40	42.1	3	3.2	1	1.1	4	4.2
Nervous and anger	28	29.5	23	24.2	5	5.3	9	9.5	30	31.6
Lose of interest	45	47.4	23	24.2	3	3.2	5	5.3	19	20.0
Anxious	33	34.7	23	24.2	2	2.1	17	17.9	20	21.1
Sleeping abnormalities	43	45.3	17	17.9	0	0.0	11	11.6	24	25.3
Fear of recurrence	28	29.5	25	26.3	3	3.2	11	11.6	28	29.5
Fear of metastasis	29	30.5	20	21.1	3	3.2	10	10.5	33	34.7
Fear of death due to cancer	24	25.3	13	13.7	5	5.3	10	10.5	43	45.3
I found it difficult to look at myself in the mirror (body image)	11	11.6	15	15.8	2	2.1	6	6.3	61	64.2
I feel embarrassed of how people look at me	12	12.6	8	8.4	3	3.2	8	8.4	64	64.4
Degree of sadness at diagnosis	44	46.3	13	13.7	6	6.3	13	13.7	19	20.0
Degree of sadness at chemotherapy (n = 91)	37	40.7	20	22.0	4	4.4	13	14.3	17	18.7
Degree of sadness at radiotherapy (n = 55)	12	21.8	12	21.8	3	5.5	8	14.5	20	36.4
Degree of sadness at surgery (n = 76)	28	36.8	13	17.1	2	2.6	7	9.2	26	34.2
Degree of sadness after treatment (n = 71)	10	14.1	9	12.7	6	8.5	15	21.1	31	43.7

Table 3: Religious and family status characteristics

	Extremely		Partly		I do not know		Slightly		No	
Variables	No.	%	No.	%	No.	%	No.	%	No.	%
Do you think that Dua'a has a huge impact in achieving inner tranquility	90	94.7	5	5.3	0	0.0	0	0.0	0	0.0
Do you think that your faith plays an important role in the alleviating your suffering	87	91.6	8	8.4	0	0.0	0	0.0	0	0.0
Praying on time	70	73.7	9	9.5	4	4.2	2	2.1	10	10.5
Roqya'a	54	56.8	18	18.9	3	3.2	9	9.5	11	11.6
Reading Qura'an	53	55.8	11	11.6	3	3.2	13	13.7	15	15.8
Drink Zammzam water	67	70.5	14	14.7	1	1.1	8	8.4	5	5.3
Change in your relationship with your husband (n = 70)	23	32.9	17	24.3	3	4.3	5	7.1	22	31.4
Change in your relationship with your children (n = 86)	33	38.4	11	12.8	3	3.5	2	2.3	37	4.3
If there's a change in relationship (n = 87)										
Positive	69 (79.3%)	-	-	-	-	-	-	-	-	-
Negative	18 (20.7%)	-	-	-	-	-	-	-	-	-
Do you feel that you are failing in doing your duties towards your family (n = 94)	21	22.3	18	19.1	7	7.4	9	9.6	39	41.5
Are you still in a good relation with your family (n = 94)	49	52.1	19	20.2	4	4.3	15	16.0	7	7.4
Are you still in a good relation with your friends (n = 94)	51	54.3	17	18.1	2	2.1	5	5.3	19	20.2
Do you have difficulties in doing simple tasks that you used to do them easily in the past	42	44.2	24	25.3	2	2.1	6	6.3	21	22.1
If you are student or worker does your disease affecting your education or your career (n = 18)	10	55.6	5	27.8	1	5.6	0	0.0	2	11.1
If you are student or worker how bad did cancer affect your performance (n = 18)	12	66.7	2	11.1	1	5.6	0	0.0	3	16.7

(saying prayers) and faith playing an important role in alleviating their suffering. About 69 (79.3%) of those women who experienced a change in their husbands or children relationship described it as a positive change. About 66 (69.5%) of women found difficulties to do tasks that they are used to do it in the past without depending on others.

Regarding the social and psychological support in Table 4. About 86 (90.55%) of women found help when they are sick or admitted to hospital. From 69 married women, 54 (78.2%) found support from their husbands and 83 (87.3%) found support from their families. About 54 (56.9) found support from the community morally, physically and financially. When they asked about their feeling regarding family care and support. About 58 (61%) felt it's painful to have no support from their families.

In comparison between educated and uneducated women in relation to their psychological status are described in Table 5. Degree of sadness at diagnosis found highly in 28 (73.7%) of educated women and in 29 (50.9%) of uneducated women.

In the comparison between married and unmarried women in relation to their psychological state which is described in Table 6. Sleeping abnormalities were found

Table 4: Social and psychological support characteristics

	Extremely		Partly		I do not know		Slightly		No	
Variables	No.	%	No.	%	No.	%	No.	%	No.	%
I get help from those around me when I'm sick or admitted to the hospital	73	76.8	13	13.7	0	0.0	7	7.4	2	2.1
When I need a doctor I have someone takes me to the hospital	73	76.8	14	14.7	1	1.1	4	4.2	3	3.2
I have good people around me which I spend good times and I share my concerns and fears with them	58	61.1	25	26.3	1	1.1	5	5.3	6	6.3
Dose somebody help you with cooking when you need help	73	76.8	13	13.7	0	0.0	4	4.2	5	5.3
My husband support me (n = 69)	43	62.3	11	15.9	5	7.2	4	5.8	6	8.7
My family support me	67	70.5	16	16.8	3	3.2	2	2.1	7	7.4
My children support me (n = 86)	67	77.9	15	17.4	2	2.3	2	2.3	0	0.0
My family support me in the tough times as well as in the good times	72	75.8	16	16.8	2	2.1	1	1.1	4	4.2
The community support me morally, physically and financially	28	29.5	26	27.4	11	11.6	7	7.4	23	24.2
Relatives and friends visits makes me more optimistic	56	58.9	19	20.0	5	5.3	6	6.3	9	9.5
Adequate care from my doctors increased my hope in cure	57	60.0	23	24.2	5	5.3	5	5.3	5	5.3
During my hospital stay, I felt like I'm around my family	49	51.6	16	16.8	6	6.3	11	11.6	13	13.7
Lack of family support makes me feel sad	46	48.4	12	12.6	7	7.4	1	1.1	29	30.5
I prefer to be alone most of the time	11	11.6	21	22.1	4	4.2	11	11.6	48	50.5
I feel like I'm a burden on others	13	13.7	16	16.8	5	5.3	8	8.4	53	55.8
I had suicidal thoughts	2	2.1	1	1.1	0	0.0	1	1.1	91	95.8

Table 5: The educational status in relation to their psychological characteristics

	High education (Yes)		Uneducated (Yes)		
Variables	No.	%	No.	%	p-values
I accept my condition	33	86.8	54	94.70	0.391
Nervous and quick anger	23	60.5	28	49.15	0.529
Lose of interest	26	68.4	42	73.70	0.214
Anxious	18	47.4	38	66.70	0.173
Sleeping abnormalities	24	63.2	36	63.20	1.000
Fear of recurrence	25	65.8	28	49.10	0.276
Fear of metastasis	22	57.9	27	47.40	0.269
Fear of death due to cancer	15	39.5	22	38.60	0.996
I found it difficult to look at myself in the mirror (body image)	10	26.3	16	28.10	0.946
I feel embarrassed of how people look at me	3	7.9	17	29.80	0.028
Degree of sadness at diagnosis	28	73.7	29	50.90	0.074
Degree of sadness at chemotherapy (n = 91)	24	64.9	33	61.10	0.237
Degree of sadness at radiotherapy (n = 55)	12	54.5	12	36.40	0.412
Degree of sadness at surgery (n = 76)	19	65.5	22	46.80	0.196
Degree of sadness after treatment (n = 71)	12	40.0	7	17.10	0.071

Table 6: The marital status in relation to their psychological characteristics

	Married (Yes)		Unmarried (Yes)		
Variables	No.	%	No.	%	p-values
I accept my condition	80	90.9	7	100.0	0.706
Nervous and quick anger	47	53.4	4	57.1	0.810
Lose of interest	63	71.6	5	71.4	0.873
Anxious	52	59.1	4	57.1	0.908
Sleeping abnormalities	54	61.4	6	85.7	0.199
Fear of recurrence	50	56.8	3	42.9	0.624
Fear of metastasis	48	54.5	1	14.3	0.082
Fear of death due to cancer	35	39.8	2	28.6	0.626
I found it difficult to look at myself in the mirror (body image)	25	28.4	1	14.3	0.644
I feel embarrassed of how people look at me	19	21.6	1	14.3	0.778
Degree of sadness at diagnosis	55	62.5	2	28.6	0.025
Degree of sadness at chemotherapy (n = 91)	53	62.4	4	66.7	0.861
Degree of sadness at radiotherapy (n = 55)	24	44.4	0	0.0	0.612
Degree of sadness at surgery (n = 76)	39	54.9	2	40.0	0.714
Degree of sadness after treatment (n = 71)	18	26.9	1	25.0	0.806

in 54 (61.4%) of married women while it's found in 6 (85.7%) of unmarried women. Fear of death due to cancer was found in 35 (89.8%) of married women while it was found in 2 (28.6%) of unmarried women. About 25 (28.4%) of married women said they found it difficult to look at themselves in the mirror while 1 (14.3%) of unmarried women said that degree of sadness at diagnosis found highly in 55 (62.5%) of married women and in 2 (28.6%) of unmarried women.

The needs changing among studied women after being diagnosed with cancer are described in Fig. 1. About 75 (78.9%) admit that there were a changing in their needs, in 50 (52.6%) of them it was a financial needs, in 61 (64.2%), it was an emotional needs and in 51 (53.7%), it was social needs.

In this study, researchers present impact of cancer on female patients who lives in Saudi Arabia. The impact is more on low socioeconomic background which the largest group in the subject (58.9%). The evidences from other studies show that there is a universal correlation between the QOL and the socioeconomic level (Le Corroller-Soriano *et al*., 2011; Rachet *et al*., 2010).

The reported symptom in the study show high affection of QOL including physical, emotional, cognitive and social functioning like other study indicate (Kjaer *et al*., 2011). These symptoms could be due to present of other co-morbidities and chronic diseases that affect their QOL. Majority of subjects reported: 28.4% of HTN, 21.1% osteoporosis and 16.8% is diabetic. Their symptoms may arise from these medical conditions or their treatment type. The most common symptoms reported here was changed in appetite, fatigue, sleep disturbance, bone pain, hair loss, weight changes, taste and smell change, constipation, diarrhea, dry mouth, headache, scars and depression which interferes with normal life activities, these results are consistent with results of other studies in the same field (Yabroff *et al*., 2004; Bennett *et al*., 2010; Fulton and Cope, 2001; McDowell *et al*., 2010; Hack *et al*., 2010; Kjaer *et al*., 2011; Humpel and Iverson, 2010). The study shows that poor sleep quality was associated with the worst fatigability, also it was significantly associated with daytime dysfunction. We find that depression and physical symptoms are major issues. It is common during cancer treatment and diagnosis. In order to improve their QOL, health care givers should be aware of these symptoms and address them properly for each patient according to their needs.

Majority of the subjects had no problem in accepting their conditions. This could be influenced by religious beliefs and culture. The spiritual and religious needs play an important role in improving the QOL in the entire

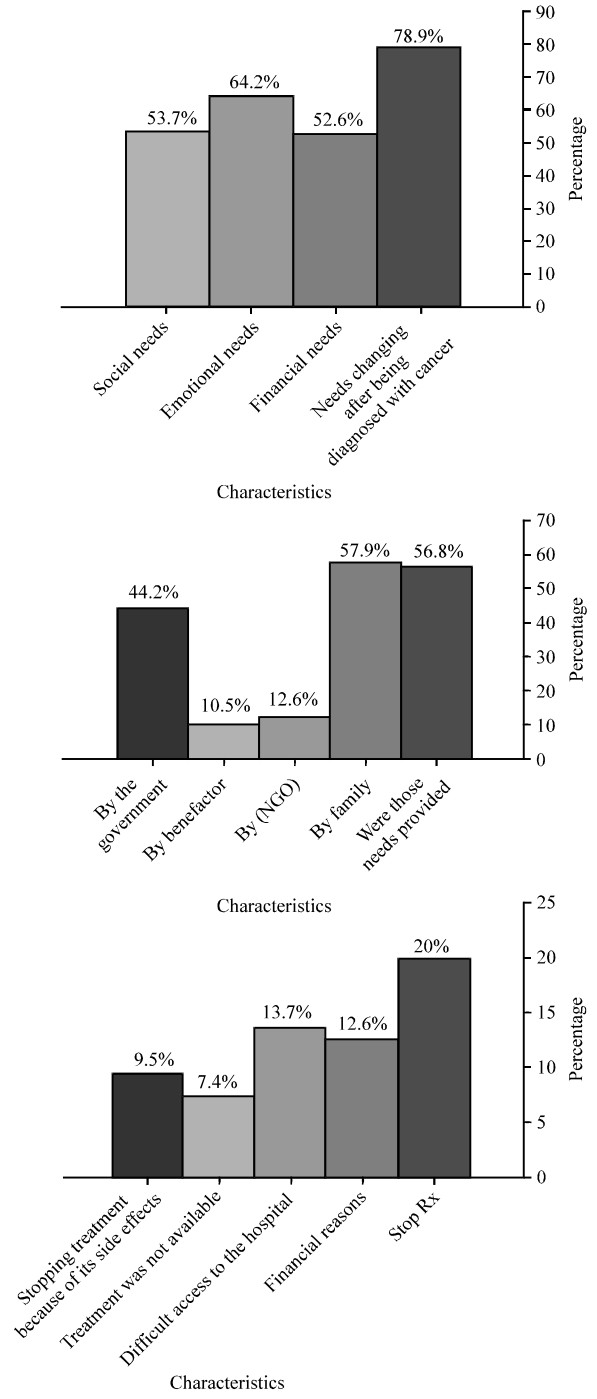

Fig. 1: Patient needs characteristics

subject. Also, they increased their attention toward their religious duties as prayer (83.2) and practising religious method as a complementary treatment (85.2%). In fact, it is reported that spiritual needs can reduce the risk of depression and help the patients to have peace and psychological comfort (Pearce *et al*., 2012).

As known, recurrence is a distressing experience for patients and their families as well. So, in order to achieve their needs, researchers have to support patients and their family as well by addressing the information regarding their cancer and possible complication (Vivar *et al*., 2009). In consistent with this study, Vivar *et al*. (2009) implicate the fear of recurrence have as a strong impact on QOL. The results show that 55% of women have fears of recurrence. This has a strong impact on the patient and her family QOL. Although, the percentage of actual metastases in the study is 29.5%, the fear of metastasis appears to be up to 51.6%. It could be due to lack of knowledge and support.

Family support in the study influenced the patients in a positive way. This is in support with other studies that proved the important of family in reassuring, comforting, adapting and living with strength which help cancer patients during and after treatment (Vivar *et al*., 2009; Schroevers *et al*., 2010). About 41.4% of women felt that they fail in doing their duties towards their families and 69.5% of them found difficulties to do tasks without depending on others. This indicates the great need of family support to provide the strength for cancer women. Also, regarding the financial issues, reduction in family income and losing an occupation had a very negative impact on patients' QOL (Kobayashi *et al*., 2008). The investigated working women, 83.4% of them had an affection in their education or career which is a major factor to lose their jobs and dependency on her own self. The study shows that 91.5% of these women do not have this problem because of their families help and support in the most critical times. Also, family support included providing transportation. However, 61% reported feeling of distress when there is no support from their families. Only 56.9% was found to have support from the community physically and financially. And 30.5% women reported a feeling that they are a burden on everyone. This is finding pointed that cancer survivors are in strong need to develop resources in social and psychological support especially when there is no adequate family support. These sported by others studies (Vivar *et al*., 2009; Schroevers *et al*., 2010).

The study finds 84.2% of women have an adequate care from doctors which increased their hopes in cure. The 68.4% of them felt like they were within their family during hospitalization. This supported the role of medical professionals to ensure whether they satisfied with their treatment and cancer care (McDowell *et al*., 2010; Bober *et al*., 2009). Only 3.2% was having flight idea of suicide. This finding reverse most of articles in this aspect outside Saudi Arabia (Misono *et al*., 2008). This is achieved by the great faith and because this act is a sin in Islam.

In the assessment of the needs among the investigated women after being diagnosed with cancer, about 78.9% admit that there was a change in their needs, 52.6% of them it was a financial needs, 64.2% was an emotional needs and 53.7% was social needs. Only 56.8% meet their needs from different resources like their family caregiver or governmental help.

Socioeconomic issues can add more stress to the cancer patients and may lead them to stop the treatment and the follow ups (Le Corroller-Soriano *et al*., 2011; Rachet *et al*., 2010).

The 60.5% of educated women feel more nervous and anger while 49.15% of uneducated women experienced those feelings also. Regarding the educational factor, researchers found that there is no role in any psychological changes. Previous studies suggest that education inequalities may have a role in QOL (Le Corroller-Soriano *et al*., 2011; Pokhrel *et al*., 2010). Regarding the fear of recurrence, 65.8% of educated women had a fear of recurrence while 49.1% of uneducated women. In the fear of metastasis, 57.9% of educated women and 47.4% of uneducated women have that. No previous study measure the educational factor in relation to the concern of recurrence. In body image disturbance, about 26.3% of educated women said they found it difficult to look at themselves in the mirror while 28.1% of uneducated women said that. This can be a devastating impact to her image in the social life. A previous studies suggest this fact (Sacerdoti *et al*., 2010; Boquiren *et al*., 2013).

Regarding the marital status, they reported the fear of recurrence and metastasis in both, 56.8% of married women and 42.2% of unmarried women. Also, regarding the fear of death, found in 89.8% of married women and in 28.6% of unmarried women. This result doesn't show a major difference in both categories. In body image disturbance both experienced these feelings. Regarding the degree of sadness, whatever at the time of diagnosis or at chemotherapy, radiotherapy, surgery and after treatment, they all share similar results in both married and unmarried women. The study does not find a significant difference in marital status types in relation to their psychological changes. There is also no difference reported in other research. However, unmarried women reported psychological symptom and signs which is significant. It is reported in one study that there is more distress in unmarried women (Kravdal and Syse, 2011). In fact, over time it seems that unmarried women need more attention and supports.

Regarding the religious status among educated women with cancer, there is no significant difference between cancer women backgrounds and cultures. As mentioned before spiritually, there is a strong believes in God which supported them in their lifetime journey with cancer. Despite the marital status of subjects all of them agreed that their faith in God and performing prays helped them through their suffering. The spiritual and religious needs are not affected by marital status. Regarding the religious rituals like roqya'a', Qura'an and zammzam water, unmarried subject shows more interest than married subjects.

CONCLUSION

Cancer has a greater impact on life regardless of the type of cancer which is more apparent among lower socioeconomic groups. To improve cancer patient care, more attention should be given to the psycho-social aspects, provide information and guidance about body changes and expected complications for women with cancer and their families. In order to achieve that all health care providers should understand and address these aspects with the treatment plan in a holistic approach.

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