Impact of Breast Cancer Diagnosis and Treatment on Sexuality of Nigerian Breast Cancer Survivors

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ABSTRACT: Introduction: The advances in breast cancer treatments has led to an increased overall survival amongst patients with early breast cancer with five year survival reaching about 97% especially in the developed countries. The breast is often seen as the part of the body that is strongly associated with women's femininity, maternal role, and sexuality. Therefore, problems that affect the breast (e.g. breast cancer and its treatments) are likely to affect women's sexuality. Approximately 20–30% of breast cancer survivors experience sexuality problems which include general sexual disruption, decreased frequency of intercourse, and difficulties reaching orgasm, which is significantly related to a reduction in their quality of life. **Aim & Objective**: This study was designed to evaluate the sexuality problems in young women who had completed treatment for breast cancer and on follow up appointment. **Methodology**: Women treated for breast cancer on at least six months follow up appointments after completion of their treatment at the Radiotherapy Department and oncology unit of Surgery Department, University College Hospital Ibadan were recruited. A 6-page questionnaire survey which includes demographic information, past medical history, stage of the disease, treatments received, sexual activity and quality of life, using survey items which included: The Female Sexual Function Index (FSFI), Body Image Scale (BIS), and Marital Satisfaction Scale was administered to consenting patients. **Results:** A total of 101 patients completed the questionnaire; they were between the ages of 20 and 50 years, with mean, 40.74 + 5.18 years. 83% were conscious of their appearance. Body image problem reported by 81.3% of the patients, and 73% claimed that the treatment has left their body less whole. 76.2% felt discomfort with nudity because of the scar. The most frequent sexual dysfunctions were the absence or reduction of sexual desire (83.2%), followed by lubrication difficulties (69%), dyspareunia (55%) and inhibited female orgasm (55%). Lack of sexual satisfaction was reported by 73.3%. About 30% reported increased tension in their home following diagnosis of the cancer and its treatments and about the same percentage reported emotional difficulties with their spouses. **Conclusion**: This study demonstrated7 sexuality dysfunctions in women who had undergone breast cancer treatment. Clinicians should bear in mind sexual dysfunctions as possible side effects that could be experienced during and after treatment for breast cancer and so should be considered during counseling sessions while managing these patients.

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Introduction

Lung cancer remains the most common cancer worldwide, which accounts for 1.6 million cases diagnosed in 2008, but this was closely followed by cancer of the breast, which accounts for about 1.4 million cases.[1] Breast cancer is the commonest cancer in women today, with an estimated lifetime risk of 13%.[2] The prevalence of breast cancer in Nigeria is 116 per 100,000 with age-adjusted incidence of 25.3 per 100, 000 women.[3] A desk review of the level of occurrence and pattern of distribution of different cancer types in Lagos and Ibadan cancer registries over a 5 year period (2005-2009) showed that breast cancer was the commonest cancer in south-western Nigeria (20.2%).[4] Study done by Campbell O. B et al revealed that about 29% of breast cancer patients between year 2003-2006 were aged 40 years and below.[5]It is estimated that 26.4% of all newly diagnosed breast cancer cases occur among women younger than 40years.[6] With increasing absolute numbers of young women diagnosed with breast cancer and declining mortality rates,[7,8] five year survival has reached about 97% especially with early disease in the developed countries.[9]

The breast is often seen as part of the body that is strongly associated with women's femininity, maternal role, and sexuality.[10]

Approximately 20–30% of breast cancer survivors experience sexuality problems including general sexual disruption, decreased frequency of intercourse, and difficulties reaching orgasm that may persist for up to 20 years post-treatment.[11] Many studies revealed that younger women have greater psychological morbidity and poorer quality of life (QoL) following breast cancer diagnosis and treatment than older women.[12-17] The changes in the breast as a

result of cancer or its treatments may not necessarily interfere with women's physical ability to have sexual intercourse; however it is strongly associated with sexual well-being, body image and feminine identification. [18,19]Problems commonly experienced by young women with breast cancer include concerns for survival especially for those with young children; premature menopause leading to loss of fertility; concerns about body image and sexuality etc.[20]

Body image is an integral concept to sexual health. According to Roid and Fitts[21] body image is a mental picture of the physical self which includes attitudes and perceptions regarding ones physical appearance, state of health, skills, and sexuality, therefore any problem with body image may affect ones state of health and sexuality.There is a distinct difference between the sexuality and sexual functioning. Sexuality is an individual expression of his or her relationship with others[22], encompassing feelings about one's own body, the need for touch, communication with partner, interest in sexual activities, and the ability to engage in satisfying sexual activities. [23] While sexual functioning refers to areas of functioning such as vaginal lubrication, frequency of sexual activity and breast sensitivity.[24]

Sexuality is a deep, pervasive, and integral aspect of the total human personality[25], which encompasses one's most intimate feelings of individuality. Sexual response involves a temporal sequencing and coordination of several phases[26]. Therefore, problems affecting one domain may interact with other disorders in a complex fashion, resulting in substantial overlap among diagnostic categories[27]. Female sexual dysfunction traditionally includes disorders of desire/ libido, arousal, pain or discomfort, inhibited orgasm and global sexual dissatisfaction [28].

A multi-ethnic (African American, Caucasian, Chinese, Hispanic, Japanese) study of Sexual functioning and practices in midlife women done in USA revealed that above 75% of women age 42 to 55 years in the general population report that sex is moderately to extremely important in their lives, therefore sexual problems are significantly related to reduced quality of life among younger breast cancer survivors.[29]

In Nigeria, religion and cultural factors play major role in our public life, therefore many Nigerians are reluctant when it comes to talking about sex, and they are not at all brazen and open to public discussions of sex. Many Nigerian will see sex primarily for procreation and for the benefit and pleasure of men; therefore very few men will pay attention to the feelings and satisfaction of women. However with the wind of change blowing across the country because of western education, global liberalization, and exposure to western concepts and western practices, public discussion of sex is becoming more accepted and more gregarious.

There is increase in the number of breast cancer survivors and sexual functioning in young survivors in relation to quality of life is important. Sexuality is not a concept that can be considered in separation from that of health; sexuality is in fact central to a person's sense of wellness and self-concept. This study therefore assessed how breast cancer diagnosis and treatment affect the sexuality of these patients. The outcome from this study we believe, will impact on the clinicians to predict the sexuality dysfunctions that breast cancer survivors may have and therefore incorporate measures as part of management of the patients towards assessing, reducing and preventing these problems, if there are any.

MATERIALS AND METHODS

This was a prospective study of women aged 50 years and below who were treated for breast cancer and were on at least six months follow up appointment in the outpatients' clinic and ward of the Radiotherapy Department and oncology unit of Surgery Department of University College Hospital, a tertiary institution situated in Ibadan, Nigeria. All instruments were administered by a trained female research assistant. The study period was between 12Th March to 14Th December, 2012.

Instrumentation

Three instruments including a proforma for demographic data were used for the study. The specific instruments were described below:

Body Image Scale[28]: This is a standard scale by Hopwood P, Fletcher I, Lee A, Al Ghazal S. for the assessment of body image; it measures the impact of treatment on self-consciousness, physical and sexual attractiveness, femininity, satisfaction with body and scars, body integrity, and avoidance behavior of the patients. The scoring of body image items follows the convention of the EORTC QLQ-C30, with high scores on functional items representing healthy levels of functioning and high scores on symptom items representing high symptom burden. The scale is scored in linear transformation (to a score range of 0±100) of the raw scores computed as appropriate.

The Female Sexual Function Index (FSFI). This was designed by Rosen R et al[30]. It consists of 19 items that were assigned to a six domain instrument measuring: (a) desire, (b) arousal, (c) lubrication, (d) orgasm, (e) global satisfaction, and (f) pain. The desire is assessed with item 1, 2, the sexual arousal was assessed with items 3, 4, 5, 6. Lubrication was assessed with items 7, 8, 9, 10. Orgasm was assessed with items 11, 12, 13, global sexual satisfaction was assessed with items 14, 15, 16 and pain during sexual

intercourse was assessed with items 17, 18, 19. The scoring was done according to the original article.

Marital Satisfaction scale by Osinowo, H.O. and Oyefeso A[31] was used to assess relationship satisfaction between patients and their spouses; it consists of 15 items that were assigned to measure three subscales (tension, emotion and attitude) regarding degree of satisfaction with one's partner. And the scoring was done according to the original article.

Sociodemographic variables: These included age of the patient, level of education, employment status, tribe, parity and menopausal status. Other variables include cancer stage, histology, type of the surgery done, chemotherapy, hormonal therapy and radiotherapy treatment, Premenopausal is defined as having normal menstrual period (LMP) within the last 6 months. Postmenopausal is defined as complete cessation of menstrual periods at least 6 months for current status and ≥ 12 months for status before cancer diagnosis.

Data Collection Procedure

Ethical approval for the study was obtained from the UI/UCH Institutional Review Board (UI/UCH IRB Research Approval Number UI/EC/12/0128).

The patients were sequentially recruited into this study based on the study criteria and willingness to participate in the study. They were informed of the purpose of the study and told of their right to refuse to participate in the study. Those who agreed to participate in the study were given the informed consent form to fill after which they were given the questionnaires. The questionnaires were collected immediately on completion.

Data analysis

Data obtained were analyzed using the statistical package for social sciences (SPSS) version 16. Descriptive statistics such as frequency and percentages were used to describe categorical variables. Mean and standard deviation were used for quantitative variables.

Data generated from various scales (body image scale, female sexual function index and marital satisfaction index) were compared across respondent characteristics using student t-test and Analysis of variance (ANOVA).

Multivariate techniques were used to identify factors that are associated with sexuality problems.

Results

A total of 101 patients participated in the survey, and their demographic profiles show that they were between the age of 20 and 50 years, with mean, 40.74 ± 5.18 years. 58.4% were of Yoruba extraction, probably due to the location of the center (South West of Nigeria) others were Igbo(27.7%), Urhobo, Edo (3.0%) and Tiv(2.0%). 83(82.2%) patients were Christians, while the remaining 18 (17.8%) were Muslims.

60(59.4%) of the patients were postmenopausal while 41(40.6%) of the patients were pre-menopausal.

Nine (8.9%) of the patients were nulliparous, 26(25.7%) have low parity (1-2children), 30(29.7%) were multiparous women (having 3-4children), while 36(35.6%) patients were grand multiparous women (having more than 4children)

The most common histology is infiltrating ductal carcinoma which accounted for 88.1%, invasive lobular carcinoma was 9.9%, and mucinous accounts for the remaining 2%.

91(90.9%) of the women had formal education, 22(21.8%) had primary school education, 29(28.7%) had up to secondary school education, 32(31.7%) were graduate of tertiary institutions; while 8(7.9%) patients had postgraduate education-Figure 1. 27 (26.7%) of the patients were hypertensive and only 2 patients were diabetics. About 15(14.9%) of them had history of taking alcoholic drinks and 3% had history of cigarette smoking.

Figure 2 shows that 46(45.5%) of the patients presented with stage III disease, 42(41.6%) presented at stage II, while only 13(12.9%) presented with stage I breast cancer. All patients underwent surgery; 80(79.2%) had mastectomy, 16(15.8%) had lumpectomy, while 5(5.0%) had wide excision. The surgery was followed up with external beam radiotherapy in 85(84.4%) of the patients.

Table 1 shows the different chemotherapy regimen, either as neoadjuvant, adjuvant or both. The commonest chemotherapy combination received was AC(Doxorubicin + Cyclophosphamide) in 47(46.5%) of the patients, 22(21.8%) of the patients had EC(Epirubicin + Cyclophosphamide), 16(15.8%) of the patients received AC-P (4 courses of Doxorubicin + Cyclophosphamide, followed by 4 courses of Paclitaxel), Other combinations received were and Docetaxel based (8%), 4% had CMF (Cyclophosphamide, Methotrexate, and 5-Florouracil) and CAF (Cyclophosphamide, Doxorubicin and 5-Florouracil).

Table 2 shows that a total of 64 (63.4%) patients were on hormone treatment; estrogen receptor antagonist (Tamoxifen) by 60(59.5%) patients, and 4(4%) patients were on aromatase inhibitor.

The mean follow-up period for all the participants is 37 months.

The Body Image Scale was used for the assessment of body image; it scores the impact of treatment on self-consciousness, physical and sexual attractiveness, femininity, satisfaction with body and scars, body integrity, and avoidance behavior. 83% are conscious of their appearance. Body image problem reported by 81.2% of the patients were associated with

the surgical scar; that is 75(93.75%) of patients who had mastectomy and 7(33.33%) of patients who had conservatives surgery. 73% of the patients claimed that the treatment has left their body less whole, and 76.2% of the patients felt discomfort with nudity because of the scar. There was no significant difference in body image scores and other variables (age, level education, financial dependence, stage disease, type of surgery, type of medical therapy).

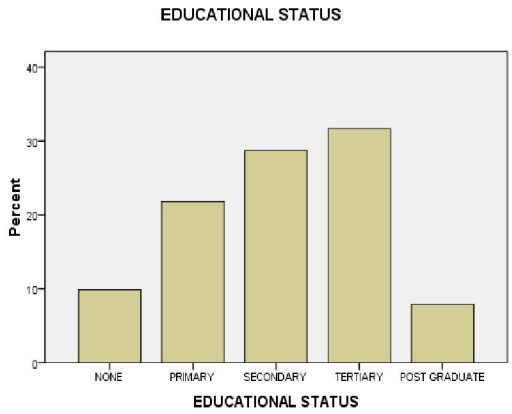

Figure 1: The education qualification of the patients

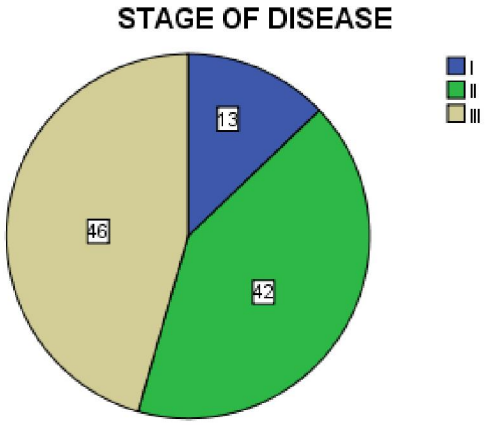

Figure 2: The Stage of Disease of the patients

Table 1: Different chemotherapy combination received by the patients

	Frequency	Percent	Valid Percent	Cumulative Percent
CMF	4	4.0	4.0	4.0
AC	47	46.5	46.5	50.5
CAF	4	4.0	4.0	54.5
AC-P	16	15.8	15.8	70.3
Docetaxel	4	4.0	4.0	74.3
EC	22	21.8	21.8	96.0
EC-Docetaxel	4	4.0	4.0	100.0
Total	101	100.0	100.0	

Table 2: The hormonal treatment received by the patients

	Frequency	Percent	Valid Percent	Cumulative Percent
None	37	36.6	36.6	36.6
TAMOXIFEN	60	59.4	59.4	96.0
AROMATASE INHIBITOR	4	4.0	4.0	100.0
Total	101	100.0	100.0	

The Female Sexual Function Index (FSFI). Was used to assess the sexual satisfaction, it scores the sexual desire, arousal, lubrication, orgasm, sexual satisfaction and pain during intercourse.

The most frequent sexual dysfunctions were the absence or reduction of sexual desire (83.2%), followed by lubrication difficulties (69%), dyspareunia (55%) and inhibited female orgasm (55%). Lack of sexual satisfaction was reported by (73.3%) of the patients. None of the subjects indicated sexual dysfunctions before diagnosis and management of breast cancer. All participants indicated that they had never before discussed sexual dysfunctions with medical or paramedical team manager, and they all claimed not to have received sufficient information about how the disease and treatment might affect their sexual life. No statistically significant correlation between the presence of sexually dysfunctions and other variables (age, menopausal status, stage disease, type of surgery, type of medical therapy). The presence of correlation with educational qualification is probably due to the liberalization and ability to see sex as a right because of education exposure.

Marital Satisfaction Scale was used to measure the degree of satisfaction with one's partner; it' scores marital tension, attitude and emotional attachments. About 30% of the patients reported increased tension in their home following diagnosis of the cancer and its treatments and about the same percentage reported emotional difficulties with their spouse, while 16% reported reduced or loss of affection from their

husband since the illness began and 16(15.8%) now believed they are no more compatible with their spouses. In this sample we found a statistically significant correlation between the presence of tension at home and hypertension. And also there is statistical significance between the attitude and the level of their educational, the higher the educational qualification the higher the attitudinal problem with their spouses.

DISCUSSION

Over the past decades great effort has been expended to enhance the possibility of early diagnosis and improve the treatment outcome of breast cancer. This has led to declining mortality rates,[8] with increasing number of survivous.[9] It is however clear that these survivors experience lot of psycho-social problems which most frequently include depression, body and self-image, and sexual dysfunction.[31,32] Although the management of breast cancer like other cancers is now being seen as multidisciplinary approach but still these sexuality problems associated with both breast cancer and breast cancer treatments is been neglected in medical practice. This study revealed a number of notable findings regarding sexuality after breast cancer treatments.

Table 3: Analysis of variance (ANOVA) of educational qualification and sexual dysfunction

		Sum of Squares	Df	Mean Square	F	Sig.
body image score	Between Groups	648.884	4	162.221	2.061	.092
	Within Groups	7557.255	96	78.721		
	Total	8206.139	100			
Desire	Between Groups	9.408	4	2.352	2.132	.083
	Within Groups	105.920	96	1.103		
	Total	115.328	100			
Arousal	Between Groups	23.318	4	5.829	2.214	.073
	Within Groups	252.733	96	2.633		
	Total	276.050	100			
Lubrication	Between Groups	26.195	4	6.549	1.892	.118
	Within Groups	332.339	96	3.462		
	Total	358.533	100			
Orgasm	Between Groups	35.092	4	8.773	2.278	.066
	Within Groups	369.698	96	3.851		
	Total	404.790	100			
Satisfaction	Between Groups	16.053	4	4.013	1.315	.270
	Within Groups	292.874	96	3.051		
	Total	308.927	100			
Pain	Between Groups	38.100	4	9.525	2.126	.083
	Within Groups	430.095	96	4.480		
	Total	468.195	100			
sexual function total score	Between Groups	706.248	4	176.562	1.967	.106
	Within Groups	8616.717	96	89.757		
	Total	9322.965	100			
Tension	Between Groups	182.680	4	45.670	2.241	.070
	Within Groups	1956.548	96	20.381		
	Total	2139.228	100			
Emotion	Between Groups	11.870	4	2.968	.700	.594
	Within Groups	402.970	95	4.242		
	Total	414.840	99			
‘	Between Groups	148.135	4	37.034	3.982	.005
	Within Groups	892.775	96	9.300		
	Total	1040.911	100			
Marital satisfaction Total score	Between Groups	22.899	4	5.725	.192	.942
	Within Groups	2834.461	95	29.836		
	Total	2857.360	99			

Table 4: Analysis of variance (ANOVA) of Hypertension and Sexual dysfunction

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
body image score	Equal variances assumed	.605	.438	-1.383	99	.170	-2.803	2.028	-6.826	1.220
	Equal variances not assumed			-1.308	41.881	.198	-2.803	2.143	-7.129	1.523
Desire	Equal variances assumed	2.470	.119	.883	99	.379	.21351	.24172	-.26611	.69313
	Equal variances not assumed			.838	42.095	.407	.21351	.25477	-.30060	.72763
Arousal	Equal variances assumed	2.480	.119	1.726	99	.087	.63844	.36992	-.09555	1.37243
	Equal variances not assumed			1.590	40.140	.120	.63844	.40142	-.17277	1.44965
Lubrication	Equal variances assumed	.011	.918	1.245	99	.216	.52838	.42456	-.31404	1.37080
	Equal variances not assumed			1.208	43.817	.233	.52838	.43723	-.35291	1.40966
Orgasm	Equal variances assumed	1.229	.270	1.100	99	.274	.49690	.45188	-.39973	1.39353
	Equal variances not assumed			1.119	47.796	.269	.49690	.44418	-.39629	1.39009
Satisfaction	Equal variances assumed	.004	.951	1.855	99	.067	.72412	.39044	-.05060	1.49885
	Equal variances not assumed			1.846	45.830	.071	.72412	.39231	-.06563	1.51387
Pain	Equal variances assumed	.015	.901	.007	99	.994	.00360	.48894	-.96657	.97377
	Equal variances not assumed			.007	44.553	.994	.00360	.49888	-1.00147	1.00868
sexual function total score	Equal variances assumed	.000	.991	1.214	99	.228	2.62928	2.16578	-1.66809	6.92665
	Equal variances not assumed			1.172	43.367	.248	2.62928	2.24353	-1.89412	7.15268
Tension	Equal variances assumed	2.339	.129	-2.382	99	.019	-2.42142	1.01641	-4.43820	-.40464
	Equal variances not assumed			-3.012	79.124	.003	-2.42142	.80386	-4.02142	-.82142
Emotion	Equal variances assumed	.051	.822	-.265	98	.792	-.12278	.46326	-1.04211	.79655
	Equal variances not assumed			-.281	52.555	.779	-.12278	.43625	-.99797	.75241
Attitude	Equal variances assumed	2.277	.134	.056	99	.956	.04054	.72903	-1.40601	1.48709
	Equal variances not assumed			.052	41.438	.959	.04054	.77568	-1.52548	1.60656
Marital satisfaction total score	Equal variances assumed	.281	.597	-2.082	98	.040	-2.47793	1.19022	-4.83989	-.11597
	Equal variances not assumed			-2.493	69.794	.015	-2.47793	.99397	-4.46045	-.49541

It revealed sexual dysfunction among breast cancer patients who underwent treatment; and that the difficulties related to sexuality and sexual functioning was not uncommon with breast cancer diagnosis and the treatments. It also revealed that there are a number of barriers to the discussion of sexual issues between the patients and their clinicians.

Patients reported worse sexual functioning resulting from the changes in their body image; these sexual dysfunctions are characterized by greater lack of sexual interest, inability to relax and enjoy sex, dyspareunia, difficulty becoming aroused, and difficulty reaching orgasm. Regarding personal and sexual relationships with their spouses, all the respondents reported having good personal relationship with their spouses before the diagnosis of breast cancer; but following diagnosis and various treatments of breast cancer, 30% of the participants now experiencing tension at home and about 16% believed they are no longer compatible with their husbands.

Contrary to study done by Melisko et al, where the sexual dysfunction was seen to occurred more frequently in women who are no longer

menstruating, in this study there was no statistical significance between pre-menopausal women and post-menopausal women. We were unable in this study to compare the data of sexual problem in breast cancer patients with those of normal population, it is also difficult to make a comparison between the data obtained from this study and that which had emerged from research carried out in other countries because of cultural, social, religious and moral variables which enormously affect sexual behavior. Nevertheless, participants in this study had low scores in all body image subscales indicating their dissatisfaction with their body image after breast cancer treatments; this finding is comparable with other studies. [33,37] Howighorst-Knapstein et al found that, mastectomy resulted in lower sexual desire and changes in body image.[38] Backwell and Volker also showed that all types of treatment for breast cancer had a significant impact on body image and menopausal status and finally results in sexual problems.[39]

We think patients should be informed about the likelihood of the side effects including the sexuality problems before commencing the treatment. Healthcare professionals should include an assessment of the effects of medical and surgical treatment on the sexuality of breast cancer survivors. The reconstructive surgery should be considered to prevent the scar which is a major factor affecting their quality of life. Clinicians should pay attention to discussing sexual dysfunctions with the patient as part of the likely side effects during the treatment for breast cancer and in the follow up period. In order to deal with women's sexual issues appropriately, it is important to prepare a secure environment in the hospital where sexual problems will be discussed with patients. It is also necessary to promote understanding about sexual issues among health care providers in general as well as increasing the number of counselors or integrate psychosocial support in the management of cancer patients as part of holistic management of the patients.

In all, this study demonstrates that breast cancer affects many aspects of a woman's sexuality, including changes in physical functioning, perception of femaleness, sexuality and their marriages; Although it is not possible to make distinctions, it appears that the most numerous dysfunctions are those which originate easily from compromises in psychological nature (the absence or reduction of sexual desire), while the fewest dysfunctions were of physical nature (dyspareunia and lubrication difficulties), this is in contrary to the observation of Sbitti Y. et al[34] in their study on the Breast cancer treatment and sexual dysfunction: Moroccan women's perception where they observed that greater dysfunction is of physical nature e.g. dyspareunia rather than psychological. These disturbances, though they noticeably reduce the quality of sex life, do not compromise it completely, as many respondents remain sexually active.

There are however, limitations to this study, and the first is the fact that their pre-morbid sexuality were not assesssible, although most of the respondents claim normal relationship with their spouses prior to the diagnosis of breast cancer and its treatments; and no healthy controls for comparison.

Other perceived limitations include non-inclusion of none co-habiting couples or divorcees, since breast cancer and its treatment could have resulted in their separation. Spouses' perceptions were not considered in this study which could have an important role in patient life, since partner's psychological reaction to the diagnosis and the treatments of breast cancer is believed to be a contributory factor to sexual satisfaction.

However, this study showed that the onset of sexual dysfunctions in concomitance with and after treatment of breast cancer was frequent and that such dysfunctions noticeably compromise the quality of sex life and does sufficiently address a problem that needs to be investigated in greater depth.

Unlike the study done by Kedde H, et al. in the Netherlands, where Half of the women reported that the topic "changes in sexual functioning" had been brought up during treatment, mostly on the initiative of the health professional, none of the respondent in this study said such issues were discussed with them [5].

CONCLUSION

This study has shown that there were sexuality problems in women who had undergone breast cancer treatment.

It demonstrated that these sexuality dysfunctions were: body image problem as a result of the mastectomy scar, there were sexual dysfunctions in the areas of sexual desire or libido, lubrication difficulties, dyspareunia, inhibited orgasm and lack of sexual satisfaction. There is increased tension and emotional difficulties with their spouse following the breast cancer and its treatments.

In agreement with Schover[32], clinicians should pay attention to sexual dysfunctions as part of the side effects experienced during the treatment for breast cancer. Clinicians should have open attitude towards discussing likelihood of sexuality dysfunction prior to commencement of treatments since it could prevent a great deal of anxiety and sadness thus improving quality of life in women with breast cancer.

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References

1. Global Cancer Facts & Figures 2nd Edition. Globocan 2008
2. Daniel D. M and Robert I. G. Patterns of Disease Spread in Metastatic Breast Carcinoma: *Influence of Estrogen and Progesterone Receptor Status AJNR*. 2000; 21: 1064-1066.
3. Adebamowo CA, Ajayi OO: Breast cancer in Nigeria. *West Afr J Med*. 2000, 19:179-91.
4. Olufunsho A, Ayokunle A. A, Deborah F. A, Vincent B. F and Duro C. D: Cancer distribution pattern in south-western Nigeria; Tanzania: *Journal of Health Research* 2011; 13, Number 2.
5. Ntekim, A; Nuhu F. & Campbell O (2009). Breast cancer in young females in Ibadan Nigeria, *African Health Sciences*. 2009; 9(4): 242-246
6. American Cancer Society Cancer Facts and Figures. Atlanta, GA, American Cancer Society, 2003
7. American Cancer Society Cancer Facts and Figures. Atlanta, GA, American Cancer Society, 2000
8, Hankey BF, Miller B, Curtis R, et al: Trends in breast cancer in younger women in contrast to older women. *J Natl Cancer Inst Monogr*. 1994; 16:7-14
9. Thors C.; Broeckel, J.; & Jacobson P: Sexual functioning in breast cancer survivors. *Cancer Control*. 2001; 8(5):442-448
10. Vinokur AD, Threatt BA, Vinokur-Kaplan D, et al: The process of recovery from breast cancer and younger and older patients: Changes during the first year. *Cancer*. 1990; 65: 1242-1254.
11. Alfano, C.; Smith, A.; Irwin, M.; Bowen D.; Sorensen B.; Reeve B & Tiernan A (2007). Physical activity,long term symptoms and physical health related quality of life among breast cancer survivors: A prospective analysis. *Journal of Cancer Survival*. 2007: 1(2); 116-128.
12. Wenzel LB, Fairclough DL, Brady MJ, et al: Age-related differences in the quality of life of breast carcinoma patients after treatment. *Cancer*. 1999; 86:1768-1774.
13. Cordova MJ, Andrykowski MA, Kenady DE, et al: Frequency and correlates of posttraumatic-stress disorder-like symptoms after treatment for breast cancer. *J Consult Clin Psychol*. 1995; 63:981-986,
14. Ganz PA, Rowland JH, Desmond KA, et al: Life after breast cancer: Understanding women's health-related quality of life and sexual functioning. *J Clin Oncol*. 1998; 16:501-514.
15. King MT, Kenny P, Shiell A, et al: Quality of life three months and one year after first treatment for early stage breast cancer: Influence of treatment and patient characteristics. *Qual Life Res*. 2000; 9:789-800,
16. Mor V, Malin M, Allen S: Age differences in the psychosocial problems encountered by breast cancer patient. *Monogr Natl Cancer Inst*. 1994; 16:191-197.
17. Spencer SM, Lehman JM, Wynings C, et al: Concerns about breast cancer and relations to psychosocial well-being in a multiethnic sample of early stage patients. *Health Psychol*. 1999; 18:159-168.
18. Baucom DH, Porter LS, Kirby JS, Gremore TM, Keefe F. J. Psychosocial issues confronting young women with breast cancer. *Breast Disease*. 2006; 23:103–113.
19. Karlsson G. Psychological qualitative research from a phenomenological perspective. Stockholm: *Almqvist & Wiksell International;* 1995.
20. Avis NE, Crawford S, Manuel J: Psychosocial problems among younger women with breast cancer. *Psychooncology*. 2004; 13: 295-308.
21. Roid G, Fitts W. Tennessee Self Concept Scale: Revised Manual. Los Angeles, CA: *Western Psychological Services,* 1998.
22. Avis NE, Crawford S, Manuel J. Psychosocial problems among younger women with breast cancer. *Psycho-Oncology*. 2004; 13: 295–308.
23. Pelusi J. , Sexuality and body image. *American Journal of Nursing*. 2006; 32–38.
24. Henson HK. Breast cancer and sexuality. Sexuality and Disability. 2002; 20(4):261–275.
25. Fogel CI, Lauver D. Sexual Health Promotion. Philadelphia, PA: WB Saunders, 1990.
26. Masters, W. H., & Johnson, V. E. *Human sexual response*. (1966). Boston: Little Brown.
27. Rosen, R. C., Riley, A., Wagner, G., Osterloh, I. H., Kirkpatrick, J., & Mishra, A. The International Index of Erectile Function (IIEF): a multidimensional scale for assessment of erectile dysfunction. *Urology 49*: (1997). 822–830.
28. Hopwood P, Fletcher I, Lee A, Al Ghazal S. A body image scale for use with cancer patients. *Eur J Cancer*. 2001; 189–97.
29. Cain VS, Johannes CB, Avis NE, et al: Sexual functioning and practices in a multi- ethnic study of midlife women: Baseline results from SWAN. *J Sex Res*. 2003; 40: 266-276.
30. Rosen R, Brown C, Heiman J, Leiblum S, Meston C, Shabsigh R. *Journal of Sex & Marital Therapy*. 2000; 191–208.
31. Osinowo, H.O. Oyefeso, A.The development of a scale of marital satisfaction for women, In M.S, Das & V.K.. Gupta(Eds.), *Women, Marriage and Family, MD Publications PVT Ltd, New Delhi*; 1991; 53-60.
32. Schover LR. The impact of breast cancer on sexuality, body image, and intimate relationships CA. *Cancer Clinicians*. 1991;41:112–20. doi: 10.3322/canjclin.41.2.112.
33. Morris T. Patterns of expression of anger and their psychologicalcorrelates in women with breast cancer. *J Psychosomat Res*. 1981;25:111–7.
34. Sbitti Y., Kadiri H., Essaidi I, Fadoukhair Z., Kharmoun S., Slimani K., Ismaili N., Ichou M., and Errihani H. Breast cancer treatment and sexual dysfunction: Moroccan women's perception; *BMC Womens Health*. 2011; 11: 29.
35. Fobair P, Stewart SL, Chang S, D'Onofrio C, Banks PJ, Bloom JR. Body image and sexual problems in young women with breast cancer. *Psycho oncology*. 2006;15:579–94. doi: 10.1002/pon.991.
36. Shoma AM, Mohamed M, Nashaat Nouman, Mahmoud Amin, Ibrahim Ibtihal M, Tobar Salwa S, Gaffar Hanan E, Aboelez Warda F, Ali Salwa E, William Soheir G. Body image disturbance and surgical decision making in egyptian post menopausal breastcancer patients. *World Journal of Surgical Oncology*. 2009;7:66. doi: 10.1186/1477-7819-7-66.
37. Garrusi B, Faezee F. How do Iranian Women with Breast Cancer Conceptualize Sex and Body Image? *Sex Disabil*. 2008;26:159–165. doi: 10.1007/s11195-008-9092-x.
38. Howighorst-Knapstein S, Fusshoeller C, Franz C, Trautmann Kathrin, Schmidt M, pilch H, Schoenefuss G, Kelleher D, Vavpel P, Knapstein P, Koelbl. "The impact of treatment for genital cancer on quality of life and body image-results of a prospective longitudinal 10-years study". *U Gynecology U*. 2002;94:398–403.
39. Backwell RT, Volker DL. "sexual dysfunctions related to the treatment of young women with breast cancer". *Clin J Oncol Nurs*. 2005;9(6):697–701. doi: 10.1188/05.CJON.697-702.