

Original Research Article

Perceived Self-image of Women with Breast Cancer during Pre and Post-mastectomy Periods in Selected Health Institutions in Southwest Nigeria

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Abstract: Bodily changes after mastectomy cause psychological disturbances as well as impacts negatively on the self-image of women. This study analysed and compared changes in self-image pre- and post-mastectomy among women with breast cancer in selected hospitals in Southwest Nigeria. A descriptive exploratory design was adopted; purposive sampling was used to select 56 women aged between 18-70 years diagnosed with breast cancer who subsequently had a mastectomy. The study was conducted at the University College Hospital, Ibadan, and Obafemi Awolowo University Teaching Hospital, Ile Ife. Data was collected using two instruments. These were the Breast Impact of Treatment Scale (BITS) and the Situational Discomfort Scale (SDS). Data was analysed using SPSS version 20 using descriptive and inferential statistics. Findings showed that pre-operative self-image scores of respondents ranged from 2 to 39, with a mean of 13.68 ± 5.74 . None of them had severe distress, however, 77.3% had mild distress; and 22.7 % had moderate distress. During post-mastectomy, the scores ranged from 11 to 62 with a mean of 43.29 ± 5.50 . None of the respondents had mild distress but 89.8 % had severe distress while the rest had moderate distress. The study found a significant difference between pre- and post-mastectomy self-image, the pre-operative mean score was 13.68, while the post-mastectomy mean score was 43.26 at $p = 0.0001$, with a t value of -24.78. This study concluded that, while the respondents had mild self-image distress before mastectomy, severe distress was attributed to post-mastectomy periods.

Keywords: Self-Image, Mastectomy, Breast Cancer, Distress, Women.

BACKGROUND

The human breast is a unique anatomical appendage which plays a significant role in reproduction and cosmetic function mostly among women. The Breast is affected by cancer that arises from the epithelium, lobules or glandular tissue of the breast (Al-Gaithy *et al.*, 2019). In 2020, about 2.3 million women were diagnosed with the disease. Breast cancer is the most common type of cancer among females in the world (World Health Organization, 2021). According to Fatiregun *et al.*, (2021), breast cancer accounts for about 22.7% of all newly diagnosed cancer cases among women in Nigeria, making breast cancer the most diagnosed cancer among women in the country (Fatiregun *et al.*, 2021). Breast-conserving surgery and mastectomy are two major surgical means of managing the disease with a combination of radiotherapy, chemotherapy, or endocrine therapy (Sharma *et al.*, 2010). Czajka and Pfeifer (2021) described mastectomy as the removal of breast tissue that borders the clavicle superiorly, the sternum medially, the inframammary fold inferiorly, and the latissimus dorsolaterally. While some women might have the affected breast surgically removed, some others might proceed to have a double mastectomy otherwise referred to as contralateral prophylactic mastectomy (Jatoi & Parsons, 2014). The choice of surgery considered is largely dependent on the stage of the disease (Gumus *et al.*, 2010). The hallmark of breast cancer disease in Nigeria, like other developing LMIC countries, is the late presentation and this among other factors is majorly responsible for poor treatment outcomes in terms of survival (Olaogun *et al.*, 2020). This late presentation

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is also partly responsible for the increased rate of mastectomy in the management of the disease instead of more breast-conserving treatment options. Erturhan *et al.*, (2018) posited that mastectomy causes an alteration in anatomic, physiologic or psychic disfigurement of any part of the breast which can consequently result in some form of physical, psychological or social disability. Several authors examined the psychological impact of mastectomy and discovered that self-image disturbances, low self-esteem, and altered sexuality are majorly experienced by breast cancer patients who underwent mastectomy (Esmaili *et al.*, 2010). Losing part or all of a breast may affect a woman's body image or confidence (Rezaei *et al.*, 2016). Body self-image among women is a multi-dimensional construct that consists of the behavioural, perceptual and cognitive-affective components (Quittkat *et al.*, 2019). These components often include the increase in sensitivity to appearance, constant estimation of body weight and the attitudes and feelings towards one's body. Psychological issues affecting self-image are core problems in oncology and breast cancer surgery has been seen to seriously affect several aspects of the woman's relationship (Esmaili *et al.*, 2010).

According to Erturhan *et al.*, (2018), mastectomy often results in a feeling of being mutilated and a reduction in the self-worth of women. Previous studies have shown that various factors are responsible for the difference in the disturbance of self-image observed in different patients following mastectomy. While younger women with breast cancer who have had mastectomy have more severe emotional distress, a reduced distress level is seen among older women (Kissane *et al.*, 2004). Patients who suffer from altered appearance distress or lower self-image are much more likely to experience psychosocial, physical, and functional problems than women who do not (Chang *et al.*, 2014). Also, socioeconomic status has been documented as a significant factor associated with altered appearance, distress, altered self-image, and quality of life in women following the procedure (Kissane *et al.*, 2004). However, these findings may not be generalized to women with breast cancer in Nigeria, as a result of differences in culture, individual and societal interpretation of illness, and societal significance of the breast. A study by Sobel (2005) demonstrated the possibility of improving health perceptions, attitudes, and beliefs through healthcare interventions that target psychosocial adaptation to disease. In his opinion, an educational, behavioural and psychological intervention in addition to strategies that increase confidence, decrease isolation and encourage the participation of patients has a way of improving health outcomes. If psychosocial interventions targeted at women diagnosed with breast cancer are introduced before surgery, it is assumed that better post-operative adjustment and adaptation to changes in self-image can be anticipated, hence, this study evaluated the Perceived Self-image Pre and Post-Mastectomy among Women with Breast Cancer in selected Health Institutions in Nigeria.

Objectives of the Study

The Study:

- a) Assessed the self-image of women before mastectomy;
- b) Analysed the changes in self-image after mastectomy and compared the self-image of pre- and post-mastectomy women.

METHODOLOGY

A descriptive explorative study design was used to assess the self-image of women with breast cancer pre and post-mastectomy. The study was conducted in two teaching hospitals in Southwest Nigeria. The study population were women aged 18-70 years who had been diagnosed with breast cancer stage 1-3 and were already on the mastectomy list in the surgical oncology units. A sample size of 56 women was obtained using a purposive criterion sampling technique, with 28 women selected from each institution. The inclusion criteria were that the women had breast cancer and would have surgery on one or two breasts, while the exclusion criteria were women with severe pleural or cerebral metastasis, stage 4 breast cancer at the time of diagnosis, or any other disease condition that would prevent them from participating in the study. In this study, two instruments were used to assess the self-image of women with breast cancer pre and post-mastectomy: the Breast Impact of Treatment Scale (BITS) and the Situational Discomfort Scale (SDS). The BITS is adapted from Frierson *et al.*, (2006) and consists of 13 items that cover body image satisfaction, sexual behaviour, sexual effects, and cancer-related thoughts and behaviour in response to traumatic stress. The SDS consists of five items based on psychosocial research on distressing situations following breast cancer surgeries and assesses the current level of distress in five situations, such as looking at one's chest in the mirror when unclothed. Ethical approvals were obtained from the relevant institutions, and a pilot study was conducted to test the validity and reliability of the instruments. The instruments were reviewed by experts in nursing, surgery, and oncology to ensure relevance to the subject matter.

RESULTS

Table 1: Distribution of Respondents by Socio-Demographic Variables

Variables	N = 56	% (100)
Age (in years) 30-40	9	16.1
41-50	21	37.6

Variables	N = 56	% (100)
51-60	16	28.8
61-70	10	18.0
Total	56	100.0
Marital status Married	48	85.7
Single	1	1.8
Divorced	1	1.8
Widowed	6	10.7
Total	56	100.0
Level of education Primary	9	16.1
Secondary	15	26.8
Tertiary	25	44.6
No formal education	7	12.5
Total	56	100.0
Type of employment Government	23	41.5
Private	10	14.3
Self-employed	21	37.5
Un-employed	4	7.1
Total	56	100.0
Income Above N1,000,000p/a	24	42.9
Below N1,000,000p/a	10	17.8
Below N5000,000p/a	22	39.3
Total	56	100.0
Religion Christianity	42	75.0
Islam	14	25.0
Others	0	0
Total	56	100.0
Mastectomy is done on		
One breast	55	98.2
Two breast	1	1.8
Total	56	100.0

Table 2: Distribution of Respondents by Measures of Affective Domain of Self-Image

Items	Always (5)	Sometimes (3)	Rarely (1)	Not at All (0)	Mean / SD
1. Thought about it when I didn't mean to	2(3.6%)	12(21.4%)	27(48.2%)	15(26.8%)	1.3±1.28
2. avoided getting upset when thinking or reminded of it	0(0%)	17(30.4%)	26(46.4%)	13(23.2%)	1.38±1.15
3. tried to remove it from memory	8(14.3%)	14(25%)	24(47.9%)	10(17.9%)	1.9±1.63
4. had waves of strong feelings about it	0(0%)	9(16.1%)	32(57.1%)	15(26.8%)	1.05±0.96
5. had dreams about it	1(1.8%)	4(7.1%)	10(17.9%)	41(73.2%)	0.48±1.02
6. stay away from reminders of it	2(3.6%)	13(23.2%)	23(41.1%)	18(32.1%)	1.28±1.33
7. felt as if it hadn't happened or it wasn't real	1(1.8%)	14(25%)	18(32.1%)	23(41.1%)	1.16±1.30
8. tried not to talk about it	3(3.6%)	17(30.4%)	19(33.9%)	17(30.4%)	1.53±1.46
9. tried not to think about it	4(7.1%)	7(12.5%)	32(57.1%)	13(23.2%)	1.3±1.34
10.any reminder brought back feelings about it	1(1.8%)	13(23.2%)	27(48.2%)	15(26.8%)	1.2±1.19

The pre-operative affective domain scores ranged from 5 to 30 with a total mean of 16.7 ± 6.37 .

Table 3: Distribution of Respondents by Measures of Cognitive Domain of Self-Image

Items	Always (5)	Sometimes (3)	Rarely (1)	Not at All (0)	Mean / SD
1. How body has changed pops does not mind	0 (0%)	13(23.2%)	25(44.7%)	18(32.1%)	1.16±1.12
2. Have waves of strong feelings about the way your body looks.	0(0%)	15(26.8%)	23(41.1%)	18(32.2%)	1.23±1.18
3. Thinks about how the body used to look.	3(5.4%)	16(28.6%)	22(39.3%)	15(26.8%)	1.54±1.43
4. Things seen or heard remind us that the body is different now.	3(5.4%)	21(37.5%)	18(32.1%)	14(25%)	1.73±1.46
5. When seeing other women, think that body appears different than theirs.	1(1.8%)	13(23.9%)	18(32.1%)	24(42.9%)	1.11±1.29

Items	Always (5)	Sometimes (3)	Rarely (1)	Not at All (0)	Mean / SD
6. feel uncomfortable about being seen naked.	5(8.9%)	15(26.8%)	15(26.8%)	21(37.5%)	1.52±1.63
7. bothered by feelings or thoughts of body disfigurement	0(0%)	9(16.1%)	23(41.1%)	24(42.9%)	0.89±1.04
8. Reminded of breasts when picking out clothes to wear.	1(1.8%)	13(23.9%)	23(41.1%)	19(33.9%)	1.19±1.24
9. Avoid looking at and/or touching breasts.	4(7.1%)	12(21.4%)	17(30.4%)	23(41.1%)	1.30±1.54
10. Feels self-conscious about letting partner see breasts.	2(3.6%)	14(25%)	25(44.7%)	15(26.8%)	1.38±1.31

The pre-operative cognitive scores ranged from 2 to 39 with mean of 16.71±8.32

Table 4: Distribution of Respondents by Measures of Behavioural Domain of Self-Image

Items	extremely distressed (5)	moderately distressed (4)	somewhat distressed (3)	a little distressed (2)	not at all distressed (1)	Mean / SD
1. Looking chest in the mirror when unclothed	0 (0%)	0 (0%)	4 (7.1%)	23(41.7%)	25(51.8%)	1.55±0.63
2. undressed in front of other women	0 (0%)	2(3.6%)	6 (10.7%)	17(30.4%)	31(55.4%)	1.63±0.82
3. undressed in front of partner	0 (0%)	0(0%)	17(30.4)	19(33.9%)	30(53.6%)	1.59±0.71
4. letting other women see the surgical site	0(0%)	0(0%)	5(8.9%)	14(25%)	37(66.1%)	1.43±0.66
5. letting other partners see the surgical site	0(0%)	0(0%)	5(8.9%)	15(26.8%)	36(64.3%)	1.45±0.66

The scores ranged from 5 to 15 with a mean of 7.642± 2.54

Table 5: Distribution of Respondents by Levels of Self-Image Distress

Levels	Affective	Cognitive	Behavioural	Total
Mild	47(83.9%)	48(85.71%)	35(62.5%)	43.3(77.3%)
Moderate	9(16.1%)	8(14.29%)	21(37.5%)	12.7(22.7%)
Severe	0(0%)	0(0%)	0(0%)	0(0%)
Total	56	56	56	56 (100%)

Table 6: Distribution of Respondents by Measures of Affective Domain of Self-Image

Items	Always (5)	Sometimes (3)	Rarely (1)	Not at All (0)	Mean / SD
1. Thought about it when I didn't mean to	31(59.4%)	24(42.9%)	1(1.8%)	0(0%)	4.07±1.07
2. avoided getting upset when thinking or reminded of it	31(59.4%)	24(42.9%)	1(1.8%)	0(0%)	4.07±1.07
3. tried to remove it from memory	36(64.3%)	20(35.7%)	0(0%)	0(0%)	4.29±0.97
4. had waves of strong feelings about it	23(41.1%)	31(59.4%)	2(3.6%)	0(0%)	3.29±1.53
5. had dreams about it	4(7.1%)	11(19.6%)	29(51.8%)	12(21.4%)	1.46±1.40
6. stay away from reminders of it	23(41.1%)	29(51.8%)	4(7.1%)	0(0%)	3.68±1.22
7. felt as if it hadn't happened or it wasn't real	24(42.9%)	26(46.4%)	6(10.7%)	0(0%)	3.64±1.33
8. tried not to talk about it	38(67.9%)	16(28.6%)	1(1.8%)	1(1.8%)	4.27±1.16
9. tried not to think about it	38(67.9%)	17(30.4%)	0(0%)	1(1.8%)	4.30±1.09
10. Any reminder brought back feelings about it	36(64.3%)	20(25.7%)	0(0%)	0(0%)	4.29±0.96

The post-operative affective scores ranged from 37 to 67 with mean of 55.803±7.41

Table 7: Distribution of Respondents by Measures of Cognitive Domain of Self Image

Items	Always (5)	Sometimes (3)	Rarely (1)	Not at All (0)	Mean / SD
1. How the body has changed pops into mind	40(71.4%)	16(28.6%)	0(0%)	0(0%)	4.43±0.91
2. Have waves of strong feelings about the way your body looks.	38(67.9%)	18(32.1%)	0(0%)	0(0%)	4.36±0.94
3. Think about how the body used to look.	44(78.6%)	12(21.4%)	0(0%)	0(0%)	4.57±0.83
4. Things seen or heard remind us that the body is different now.	45(80.4%)	10(17.9%)	1(1.8%)	0(0%)	4.57±0.91
5. When seeing other women, think that body appears different than theirs.	45(80.4%)	9(16.1%)	2(3.6%)	0(0%)	3.75±1.12
6. feel uncomfortable about being seen naked.	40(71.4%)	16(28.6%)	0(0%)	0(0%)	4.43±0.91
7. bothered by feelings or thoughts of body Disfigurement	41(71.4%)	15(26.8%)	0(0%)	0(0%)	4.45±0.89
8. Reminded of breasts when picking out clothes to wear.	36(64.3%)	20(35.7%)	0(0%)	0(0%)	4.28±0.92
9. Avoid looking at and/or touching breasts.	12(21.4%)	36(64.3%)	8(14.3%)	0(0%)	3.14±1.19
10. Feels self-conscious about letting partner see breasts.	34(60.7%)	21(37.5%)	1(1.8%)	0(0%)	4.18±1.06

The scores ranged from 30 to 62 with a mean of 53.554 ± 5.611.

Table 8: Distribution of Respondents by Measures of Behavioural Domain of Self-Image

Items	extremely distressed (5)	moderately distressed (4)	somewhat distressed (3)	a little distressed (2)	not at all distressed (1)	Mean / SD
1. Looking chest in the mirror when unclothed	6(10.7%)	11(19.6%)	19(33.9%)	17(30.4%)	3(5.4%)	3.00±1.08
2. undressed in front of other women	32(60.7%)	20(35.7%)	4(7.1%)	0(0%)	0(0%)	4.50±0.63
3. undressed in front of partner	32(60.7%)	8(14.3%)	8(14.3%)	3(5.4%)	3(5.4%)	4.19±1.20
4. letting other women see the surgical site	35(62.5%)	16(28.6%)	3(5.4%)	1(1.8%)	1(1.8%)	4.48±0.83
5. letting other partners see the surgical site	37(66.1%)	7(12.5%)	6(10.7%)	4(7.1%)	2(3.6%)	4.30±1.14

The scores ranged from 11 to 25 with a mean of 20.43±3.50

Table 9: Distribution of Respondents by Levels of Self-Image Distress

Levels	Affective	Cognitive	Behavioural	Total
Mild	0(0%)	0(0%)	0(0%)	0(0%)
Moderate	4(7.1%)	2(3.6%)	11(19.6%)	5.7(10.2%)
Severe	52(92.9%)	54(96.4%)	45(80.4%)	50.3(89.8%)
Total	56	56	56	56

Compare the Self-Image of Pre-and Post-Mastectomy Women

Table 10: One sample T-test of Self-Image Pre and Post Mastectomy

Items	Pre-operative mean ±SD	Post-operative mean ±SD	t-test	df	Sig. (2-tailed)
Affective domain	16.6964±6.36730	55.8036±7.40864	-28.025	55	.000**
Cognitive domain	16.7143±8.32021	53.5536±5.61142	-24.875	55	.000**
Behavioural domain	7.6429±2.54007	20.4286±3.50510	-21.439	55	.000**
Total	13.685±5.7425	43.262± 5.5083			

****very significant**

DISCUSSION

More than half of the respondents were aged between 41-70 years, while the minority were aged between 31-40 years, this finding agrees with previous studies on self-image among patients treated for breast cancer with mastectomy primarily (Shoma *et al.*, 2009). A larger percentage of the women has a mild degree of pre-operative self-image distress, while a small percentage has a moderate degree of pre-operative self-image distress. Also, there was no statistical difference between the affective, cognitive and behavioural components of pre-mastectomy women. This agrees with Shoma *et al.*, (2009) who stated that there was no statistically significant difference in cognitive, affective, behavioural and evaluative components of self-image during the preoperative assessment stage among women with breast cancer and disagrees with Kissane *et al.*, (2004) who described women as feeling ill-prepared for the impact of surgery and the follow-up treatments on sexuality and self-image. However, less than half of the respondents had a moderate degree of behavioural self-image distress stating that, they became severely distressed when undressing in front of their partners. This was in agreement with Rosser (2008) who posited that the majority of patients with breast cancer reported significant distress after diagnosis and during the initial treatment period, and considered feelings of shock, numbness, and anxiety about the future treatment and prognosis as normal after diagnosis of cancer. The implication of this was that merely anticipating the surgical intervention to come made these women distressed and afraid of the impact this would have on their relationships. Furthermore, findings from this study showed that the majority of the women had a severe degree of self-image distress, while only a minority had a moderate degree of self-image distress, with a mean value of 55.8 ± 7.45 . This showed that the majority of the respondents suffered from severe self-image distress and could be predisposed to psychological symptoms such as anxiety, denials and depression. This finding agreed with Kissane *et al.*, (2009) who showed that most patients were dissatisfied with their post-mastectomy self-images and also by Rosser, (2008) who opined that women who had mastectomy usually experience low self-esteem. From this result, the self-image of post-mastectomy women was seriously low and their psychological balance could be threatened. Also, this study, using three scales in an attempt to cover aspects of the self-image and comparing both groups on dimensions of self-image distress revealed that in preoperative assessment, there was no statistically significant difference regarding affective, cognitive and behavioural impacts. As for cognitive impact; a significant percentage of women both pre and post-mastectomy had negative thoughts regarding their experience with breast cancer. Also, the affective assessment for both pre and post-mastectomy expressed negative feelings. The behavioural impact assessment showed that the majority of both pre and post-mastectomy women stated that, they became severely distressed undressing in front of their partners. A greater level of self-image distress was observed in all components of the self-image scales post-mastectomy. These results indicated that women post-mastectomy showed significantly negative self-image distress, compared with their pre-mastectomy self-image, showing that the loss of breasts causes them greater distress. This finding contradicts Esmaili *et al.*, (2010), who concluded in their study that was performed shortly after mastectomy, that the subjects might have been more concerned with cancer destruction and treatment than with the importance of their self-images. Also, Ford *et al.*, (2005) posited that psychosocial reactions to surgical intervention among surgical patients are usually individualized and do not follow a definite pattern, in support of different mean scores between the affective, cognitive and behavioural aspects of self-image.

Recommendations

- There is a need for nurses to specialise in oncology nursing to gain more expertise in the care of women with breast cancer.
- Nurses should always utilise standardised self-image assessment tools to accurately assess the degree of pre-and post-operative self-image distress effectively.
- Formulation of specific psychological interventions by nurses to promote coping strategies for these women.
- Preoperative and postoperative counselling should be done to help women with breast cancer develop a positive self-image following breast cancer surgery to improve overall quality of life and subjective outlook and self – appreciation.
- Establishment of a mastectomy women's support group to facilitate sharing of life experiences which will promote courage and boost the morale of women affected.

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