

RESEARCH ARTICLE

Variables that Affect the Satisfaction of Brazilian Women with External Breast Prostheses after Mastectomy

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Abstract

Background: In 2012, the breast cancer estimate worldwide stood at 1.67 million new cases, these accounting for 25% of all types of cancer diagnosed in women. For 2014, 57,120 new cases are expected, with a risk estimated at 56.1 cases for every 100,000 women. The objective of this study was to analyze the satisfaction regarding the use of external breast prostheses by women undergoing mastectomy. **Materials and Methods:** This cross-sectional study was conducted with 76 women who used an external breast prosthesis (EBP), registered in the services of the Cuiaba Center for Comprehensive Rehabilitation, Mato Grosso, Brazil, from 2009 to 2012. Data were collected from the records of women who had requested the opening of a process of external breast prosthesis concession. **Results:** Satisfaction with the EBP was identified in 56.6% of the women. Those satisfied with the EBP reported that its weight was not annoying ($p < 0.01$). Although the women felt body sensations of stitches, pains, pulling, dormancy and phantom limb, they are satisfied with the EBP. The variable related to the displacement of the breast prosthesis during activity of everyday life has demonstrated that even though the women have reported the possibility of displacements, they are satisfied with the EBP. The satisfaction with the use of external breast prosthesis did not affect the sexuality of the women with mastectomy. **Conclusions:** Learning the specificities of the EBP, taking into consideration the satisfaction of its use, allows the rehabilitation team, by listening to their clientele more attentively, following up this woman throughout her life journey, supporting and guiding the best way of use, with an eye to her personal, emotional and social life, as well as to her self-esteem.

Keywords: Mastectomy - breast neoplasms - prostheses and implants - quality of life

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Introduction

In 2012, the breast cancer estimative worldwide stood at 1.67 million new cases, and accounts for 25% of all types of cancer diagnosed in women. For 2014, 57,120 new cases are expected, with a risk estimated at 56.09 cases for every 100 thousand women (Brazil, 2014). In Brazil, this type of cancer represents one of the main causes of death, surpassed only by cardiovascular and external causes. There is a belief that elevated death rates derive from the fact that this disease is diagnosed in advanced stages, even when it is regarded as a relatively good prognosis (Lotti et al., 2008).

After being diagnosed with breast cancer, a woman will undergo several treatments, including mastectomy, which remains as the most efficient method. Mastectomy is frequently inevitable to eliminate cancer cells (Furlan et

al., 2013). Still has also discussed the decision to remove the breast as a preventive action in order to decrease the risk of contralateral breast cancer, Kwong and Chu (2012) in a study conducted among Chinese women show that they prioritized this conduct by virtue of their survival.

In the United Kingdom, a significant proportion of women with breast cancer (41,000) will be prescribed with a mastectomy (25%) or quadrantectomy (35%), and will require the use of external breast prosthesis (Scanlon, 2006). Study with the objective of comparing breast conserving surgery with modified radical mastectomy showed that the quality of life and functional status was better in women who received breast-conserving surgery (Acyl and Cavdar, 2014).

After mastectomy, breast reconstruction aims to re-establish the body image and improve the self-esteem, to restore the volume lost, to ensure asymmetry in

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relation to the opposite breast, to recreate the areola and the nipple (Freitas et al., 2011). Women who do not undergo breast recovery surgery are instructed to use external breast prosthesis, which are placed on the bra (Lopes and Figueiredo, 2011). Among the women subjected to mastectomy, 90% will use some type of prosthesis, including the external one. In a research with 65 women with mastectomy, the subjects reported that using prosthesis was rewarding and comfortable (Kubon et al., 2012).

Although it is a widely discussed theme, in the last 5 years just a few works about it have been developed, and several aspects, such as satisfaction and use of external breast prosthesis (EBP) deserve to be further addressed (Gallagher et al., 2010). In light of the exposed, the objective of this study was to analyze the satisfaction regarding the use of external breast prosthesis by women with mastectomy.

Materials and Methods

This is an exploratory, cross-sectional study, carried out with a population of women with mastectomy, who used external breast prosthesis, registered in the services of the Cuiaba Center for Comprehensive Rehabilitation, Mato Grosso, Brazil, from 2009 to 2012. Data was collected from records of women who requested the opening of a process of EBP concession. Of all 92 registered, 13 passed away. The sample of the study was composed of 76 women.

Data was collected by means of a form filled in through telephone survey, and a concession request form by the Brazilian Unified Health System. Women who had died during the period of selection, as well as those who declined to answer the telephone survey, were excluded.

The variable "outcome" addressed in the questionnaire referred to the satisfaction with the use of the EBP. The secondary variables approached were "age" and "marital status". The variables related to the satisfaction with the use of EBP were the characteristics of the prosthesis, such as weight, smell and the features of the bra, in addition to body sensations of heat, stitches, pains, pulling, dormancy on the place of surgery, and phantom limb. The displacement of the prosthesis during everyday life activities and their interference with sexuality were also analyzed as important factors for the satisfaction with

Table 1. Distribution of Sociodemographic Variables According to Satisfaction with the Use of External Breast Prosthesis. Cuiaba, Brazil, 2013

Variables	Satisfaction with the use of external breast prosthesis		p value
	Yes n (%)	No n (%)	
Age			
27-39	3 (42.9)	4 (57.1)	0.24
40-51	8 (42.1)	11 (57.9)	
52-63	17 (70.8)	7 (29.2)	
64-75	15 (57.7)	11 (42.3)	
Marital status			0.86
Married	22 (59.5)	15 (40.5)	
Single	7 (50.0)	7 (50.0)	
Divorced	4 (66.7)	2 (33.3)	
Widow	10 (52.6)	9 (47.4)	

the EBP.

The project was approved by the Ethics Committee on Research Involving Humans of the University of Cuiaba, under legal opinion No 2012-038. Statistical tests were performed to assess demographic characteristics, variables of the EBP, body sensations, use in everyday life activities, and sexuality-related aspects, according to the satisfaction with the use of EBP. Data was treated and analyzed by means of the software Excel (Microsoft). The Chi-square test was adopted for bivariate analysis, through the statistical application Epi Info, version 3.5.1 (2008).

Results

A total of 92 women registered in the service of Cuiaba Center for Comprehensive Rehabilitation Dom Aquino Côrrea were identified during the period studied. Out of this total, 13 women had died during the period of selection; 76 women aged 55.7 years old (sd 11.5), on average, were interviewed. The satisfaction with the use of EBP was identified in 56.6% (43) women. The age group between 52 and 63 years old presented a higher frequency regarding the satisfaction with the use of EBP. As for marital status, single women are less satisfied with

Table 2. Distribution of the Characteristics of the Prosthesis According to Satisfaction with the Use of External Breast Prosthesis. Cuiaba, Brazil, 2013

Variables	Satisfaction with the use of external breast prosthesis	Satisfaction with the use of external breast prosthesis		p value
		Yes n (%)	No n (%)	
Weight	Bothers	9 (33.3)	18 (66.7)	<0.01
	Do not bothers	34 (70.8)	15 (29.2)	
Smell	Bothers	2 (28.6)	5 (71.4)	0.11
	Do not bothers	41 (59.4)	28 (40.6)	
Brassiere	Comfortable	24 (52.2)	22 (47.8)	0.27
	Uncomfortable	19 (65.5)	11 (34.5)	
Brassiere (aspect)	Beautiful	24 (58.5)	17 (41.5)	0.7
	Ugly	19 (54.3)	16 (45.7)	
Use of Brassiere	Yes	28 (56.0)	22 (44.0)	0.88
	No	15 (57.7)	11 (42.3)	

Table 3. Distribution Related to Body Sensations According to Satisfaction with the Use of External Breast Prosthesis. Cuiaba, Brazil, 2013

Variables	Satisfaction with the use of external breast prosthesis		p value
	Yes n (%)	No n (%)	
Hot at the surgical site			0.09
Yes	14 (45.2)	17 (54.8)	
No	29 (64.4)	16 (35.6)	
Twinge at the surgical site			0.57
Yes	30 (58.8)	21 (41.2)	
No	13 (52.0)	12 (48.0)	
Pain at the surgical site			0.26
Yes	17 (65.4)	9 (34.6)	
No	26 (52.0)	24 (48.0)	
Spirit at the surgical site			0.67
Yes	19 (59.4)	13 (40.6)	
No	24 (54.5)	20 (45.5)	
Dormancy at the surgical site			0.27
Yes	25 (62.5)	15 (37.5)	
No	18 (50.0)	18 (50.0)	
Phantom sensation			0.72
Yes	20 (58.8)	14 (41.2)	
No	23 (54.8)	19 (45.2)	

Table 4. Distribution of the Variables Related to the Displacement the Mammary Prosthesis During Activities of Daily and Impact on Sexuality According to Satisfaction with the Use of External Breast Prosthesis. Cuiaba, Brazil, 2013

Variables	Satisfaction with the use of external breast prosthesis		p value
	Yes n (%)	No n (%)	
Displacement			0.37
Yes	10 (66.7)	5 (33.3)	
No	33 (54.1)	28 (45.9)	
Sexuality			0.92
With interference	33 (56.9)	25 (43.1)	
Without interference	10 (55.6)	8 (44.4)	

the use of EBP (Table 1).

The association between the characteristics of the external breast prosthesis and the satisfaction with its use are displayed in Table 2. The women satisfied with the use of EBP reported that its weight is not annoying ($p < 0.01$) (Table 2).

In Table 3, the women who are satisfied with the use of EBP reported that it does not warm the place of surgery. Although these women present body sensations like stitches, pains, pulling, dormancy and phantom limb, they are satisfied with the use of EBP.

The variable related to the displacement of the breast prosthesis during routine activities demonstrated that even though these women reported the possibility of displacements, they are satisfied with the use of EBP. The satisfaction with the use of external breast prosthesis has not affected the sexuality of the woman with mastectomy (Table 4).

Discussion

As far as we know, there are various aspects related to the EBP that influence its satisfaction and use that still deserve some discussion (Gallagher et al., 2010). There is just a few works dedicated to verify the satisfaction and use of external breast prosthesis. In women subjected to mastectomy and who used EBP, few association present significant data, but they should be analyzed, considering their direct relation with a woman's quality of life and the use of breast prosthesis.

Among the women satisfied with the use of EBP, 70.8% reported that its weight is not annoying. Study with 47 women, conducted in Ireland, with the objective of verifying physical characteristics and the use of external prosthesis, evidenced that only 24% of the population was dissatisfied with the weight of the breast prosthesis (Gallagher et al., 2006).

In the present study, the women aged ≥ 52 years old reported to be satisfied with the weight of the EBP, compared to younger ones. Research conducted in Australia (Urbis Social Planning and Social Research, 2010) with 214 women, aiming to assess the use and finance of external breast prosthesis, observed that around two thirds of all women interviewed (64.7%) were aged between 50 and 69 years old, 22.4% belonged to the age group of 30-49 years old, and the other 8.9% were aged

over 70 years old. This data demonstrated that younger women were more inclined to undergo a reconstruction surgery, for presenting greater body awareness after the mastectomy and for being more open to plastic surgery. It was verified, however, that younger women still can make use of an external prosthesis while waiting for surgery, chemotherapy or radiotherapy (Urbis Social Planning and Social Research, 2010).

Even though body sensations like stitches, pains, pulling, dormancy on the place of surgery, and phantom limb, and the fear of displacing the prosthesis during daily activities are presented by women, this has not affected the satisfaction and use of EBP.

In the study conducted with 47 women in Ireland, the unexpected movement of the prosthesis was considered distressing by women with reports of prosthesis moving (temporarily) or falling forward (Gallagher et al., 2009). Kubon et al. (2012), in a research with 19 patients who used external prosthesis, concluded that the most common differences in the group referred to the disease (cancer), the treatment, the feeling of being feminine and attractive, and to sexual activity. Although these differences are visible, there was no statistical significance.

In turn, sexuality had no influence on satisfaction and use of EBP. Our study can be corroborated by Kubon et al. (2012) which found similar data, not presenting any changes in sexual activity nor in the relationship with partners. Study realized with aim to compare hysterectomy and mastectomy patients in terms of depression, body image, sexual problems and spouse relations, showed that women with mastectomy was associated with more depression and not present sexual problems (Keskin and Gumus, 2011).

Nevertheless, Duarte and Andrade (2003) in a study about the analysis of reports by 20 women with mastectomy, regarding questions linked to sexuality, reported that, after mastectomy, nine of them presented problems with their marital relationships, in which those women avoided to take off their clothes before their partners, and to be touched by them. The use of a bra and a shirt during intercourse was also reported by those women (Duarte and Andrade, 2003). A study conducted with Chinese women showed that there is an influence on the psychological status of patients with breast cancer who underwent breast conserving surgery and modified radical mastectomy (Sun et al., 2013).

The disfiguring experience, as a consequence of breast ablation, may lead to the sensation of loss of the capacity of giving affection-considering the breast as the symbolic representation of this capacity-, and the loss of the sense of attractiveness and consequent decrease in self-esteem. Strong feelings of disqualification and feminine incompetence, shame when another person looks at her, including her partner, fear of being rejected, fear of starting new relationships, are experienced by these women after the mastectomy (Teixeira, 2008).

The EBP is a procedure approved by the National Cancer Institute (INCA), when breast reconstruction is not possible, in order to ease alterations in body image (Brazil, 2004). The manufacturers of external breast prosthesis define that its weight, mobility and consistency are similar

to those of a breast, making it a replica of the natural breast, and that using it strengthens the patient's confidence and self-esteem, also allowing the user performing her daily activities normally. Health education activities can be extended to the whole process of treatment of the disease, including contributing to the orientation and compliance with the use of external breast prostheses and quality of life.

In conclusion, learning the specificities of the EBP, when it comes to characteristics like weight, smell, features of the bra, and body sensations—such as heat, stitches, pain, pulling, dormancy on the place of surgery, phantom limb -, and the displacement of the breast prosthesis during everyday life activities, in order to analyze the satisfaction of the use of EBP, allow the rehabilitation team, by hearing this clientele more attentively, following up these women in their life journey, supporting and guiding them in the best form of using it, with an eye to their personal, emotional and social satisfaction, as well as their self-esteem, besides prioritizing the prevention and minimization of complications.

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