Influence of Body Image in Women Undergoing Treatment for Breast Cancer

Influência da imagem corporal em mulheres em tratamento contra câncer de mama

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Abstract

Objective The objective of this study was to investigate the self-esteem of women with and without breast cancer regarding their body image.

Methods A quantitative, case-control study in which 90 women with breast cancer were evaluated in the case group, and 77 women without breast cancer in the control group. For data collection, the body satisfaction scale (BSS), a scale adapted and validated in Brazil, and the Rosenberg self-esteem questionnaire were used. For the statistical analysis of the data, the Statistical Package for the Social Sciences software (IBM-SPSS, Chicago, Il, US), version 16.0 was used.

Results Compared with the women without breast cancer, those with breast cancer were more dissatisfied with body image related to appearance. Women undergoing neoadjuvant chemotherapy were more dissatisfied with their appearance compared with those with cancer who were not undergoing this treatment. Mastectomy also accounted for more dissatisfaction concerning appearance among women who underwent the procedure compared with the women who were submitted to breast-conserving therapy.

Conclusion Women with breast cancer were more dissatisfied with their body image compared with those without breast cancer, particularly following mastectomy or during chemotherapy. The self-esteem was found to be negatively affected in patients who were dissatisfied with their body image.

Keywords
- breast cancer
- body image
- self-esteem

Resumo

Objetivo O presente estudo investigou a influência da imagem corporal na auto-estima de mulheres em tratamento de câncer de mama.

Método Estudo caso-controle. Para o grupo caso, foram avaliadas 90 pacientes em tratamento quimioterápico e cirúrgico; e para o grupo controle, 77 mulheres sem câncer de mama. Para a coleta de dados, foi utilizada a escala de satisfação com a

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imagem corporal (ESIC) e o questionário da autoestima de Rosenberg. Para a análise estatística dos dados, foi utilizado o programa Statistical Package of the Social Sciences (IBM-SPSS, Chicago, Il, EUA), versão 16.0.

Resultados As mulheres com câncer de mama apresentaram maior insatisfação com a imagem corporal relacionada à aparência do que aquelas sem câncer de mama. Aquelas em processo de quimioterapia e as submetidas a mastectomia apresentaram mais insatisfação com a sua imagem corporal relacionada à aparência do que as mulheres submetidas à cirurgia conservadora, que apresentaram maior nível de satisfação. As mulheres submetidas a reconstrução mamária não apresentaram prejuízo na percepção da sua imagem corporal relacionada à aparência. Assim, a percepção da imagem corporal relacionada à aparência pode ser influenciada pela insatisfação em casos de pacientes submetidas a mastectomia ou a quimioterapia.

Conclusão As mulheres com câncer de mama apresentaram maior insatisfação com a sua imagem corporal do que aquelas sem câncer de mama, sobretudo após mastectomia ou durante a quimioterapia. A autoestima foi negativamente afetada em pacientes insatisfeitas com a sua imagem corporal.

Palavras-chave
- câncer de mama
- imagem corporal
- autoestima

Introduction

Cancer is a group of diseases that have cluttered cell growth, with property of invasion of other organs and tissues, featuring the metastasis.[1]

Among all cancers, breast cancer is the one with the highest rate of cancer death worldwide, and is increasing in developing countries, where most cases are diagnosed in advanced stages.[2]

Currently, breast cancer is considered a public health issue in many countries.[3] Its incidence increased by more than 20% between 2008 and 2012, while mortality from breast cancer increased by 14% in 140 countries.[4] In Brazil, the prevalence of breast cancer also increased, reflecting the increase in the number of survivors of this disease.[5] Nevertheless, the same treatment that offers better cure rates may often result in serious emotional harm, diminishing the women's quality of life and provoking changes in their bodies.[6]

The breast is the epitome of femininity, and anything that affects it leads women to question their roles as attractive, feminine individuals and breastfeeding mothers. Body image affects self-esteem and sexuality; therefore, understanding these issues is a way of understanding the female universe.[7]

Body image encompasses self-perception and attitudes related to the body that involve thoughts, beliefs, feelings and behaviors.[8]

With respect to the physical changes that may occur, body image has been studied in many different ways. Some authors have reported that body image is related to self-image and self-esteem. In this respect, women understand the female body as a vehicle for communicating their femaleness to the world.[9]

Self-esteem is defined as a set of impressions that the individual has of him or herself that involve self-assessment, lifestyle and ideas about oneself that can be positive or negative.[10] Thus, individuals with low self-esteem have difficulties employing suitable social strategies; they continually face the conflict to take the challenge to succeed and, therefore, earn the approval of others and of themselves. At the same time, they run the risk of failing and earning the disapproval of others and of themselves.[11]

Evaluating the effect of the type of breast cancer treatment on body image and on self-esteem is extremely relevant, since women with breast cancer participate in the decision-making process regarding their treatment.[12] Self-esteem has been found to be higher in mastectomized women who were submitted to breast reconstruction compared with those who were not.[13] Hence, the loss of an eroticized organ that is capable of provoking desire in others may damage a woman's physical structure, leading her to feel that she has lost her physical attractiveness, her femininity, possibly leading to diminished self-esteem.[14]

Surgical treatment for breast cancer can be subdivided into breast-conserving therapy (quadrantectomy) or mutilating surgery (mastectomy). The defect resulting from the surgery can be repaired during the same surgical procedure (immediate reconstruction) or afterwards (late reconstruction).[15]

Following the surgical treatment, women submitted to mastectomy who do not undergo breast reconstruction experience a feeling of inferiority, since the breast is an organ that is replete in symbolism and indeed symbolizes the concept the woman has of herself. Mastectomy involves the loss of the former figure and harms the image the women make of their bodies; it is considered an attack on body image, which makes patients feel they are not beautiful.[16]

Therefore, understanding that women undergoing breast cancer treatment have poor self-esteem and altered body image, the objective of the present study was to investigate the self-esteem related to body image in women with and without breast cancer, and to seek correlations between body image and the self-esteem of these patients.

Methods

This case-control study involved women with and without breast cancer.

Participants

The participants were invited to take part in the study between March 2011 and February 2013 at the Mastology Program of a teaching hospital in the city of Goiânia, in the Brazilian Midwest region.

Total 257 women diagnosed with breast cancer were treated at the Mastology Program between 2011 and 2013. In 2011, 58 patients were treated; in 2012, 59 patients; and, in 2013, 140 patients were treated.

The possible participants were approached during the medical consultation, and those who accepted to participate were forwarded to the Psychology Room, a space created by the Mastology Program. The participants were then divided into two groups: the case group consisted of patients with breast cancer, and the control group was composed by the patients' companions. It is important to remember that the participants from both groups shared the same sociodemographic data: age, marital status, level of schooling, income and origin.

Inclusion and Exclusion Criteria

Inclusion Criteria for the Cancer Group

a) Patients older than eighteen years.
b) Patients who underwent conservative surgery or mastectomy with or without immediately breast reconstruction, performed between one month to five years.
c) Patient receiving neoadjuvant chemotherapy (which have not undergone the surgery).

Inclusion Criteria for the no Cancer Group

Women over 18 who were in the waiting room of Mastology HC Program / (companions of patients awaiting medical consultation).

Exclusion Criteria for the Cancer Group

a) Patients with metastatic disease without curative intention of cancer treatment.
b) Patients with neuropsychiatric disorders.
c) Patients who had cognitive impairment.
d) Patient receiving adjuvant chemotherapy (which were submitted to surgery).

Exclusion Criteria for the no Cancer Group

a) Women who have had their breasts plastic surgically, resulting in asymmetric breasts.
b) Women with neuropsychiatric disorders.
c) Women who had cognitive impairment.

Sample

There original sample comprised 92 women with breast cancer. However, two failed to answer all the questions of the instrument applied, resulting in a final sample of 90 women who fulfilled all of the selection criteria. The control group consisted of 77 women recruited among the relatives/friends who were accompanying the patients registered at the Mastology Program of the teaching hospital. Therefore, the final sample included 167 participants who were chosen randomly. The study had a significance level of 5% and 80% test power, with a margin of error of 2.63. The sample size was set at 90 subjects in total, and in order to make the necessary calculations for the study, we used as reference the article written by Manos et al.[17]

Ethical Aspects

This study also aimed to show respect for the patients and the institution in which it took place. To that end, we followed Resolution no. 466/12 of the Brazilian National Health Council, which regulates research involving human beings in the country. Before any procedure, the participants were informed about the study's goals and purpose. The study considered refusal as a possibility, and that did not imply any damage to the volunteers. It was approved by the Ethics Research Committee (CEP) of the institution under protocol number 195/2010.

Instruments

The participants were interviewed for the purpose of obtaining their sociodemographic data. In addition, the following two instruments were applied:

a) Body Satisfaction Scale (BSS)
   In order to evaluate satisfaction with body image, a scale adapted and validated in Brazil by Ferreira and Leite[18] was used. The questionnaire contains 25 questions with responses given on a Likert-like scale ranging from 1 (totally disagree) to 5 (fully agree). This instrument was based on two questionnaires: The Body-Esteem Scale (BES) developed by Mendelson et al in 1997, and The Multidimensional Body-Self Relations Questionnaire (MBSRQ) developed by Cash in 1994. The BSS[18] evaluates two factors or subscales: the degree of satisfaction with one's own appearance; and the concern regarding one's weight. The value of Cronbach's α measured for these factors was 0.90 and 0.79 respectively. In this scale, the items that refer to appearance are items 1, 2, 6, 7, 8, 11, 12, 14, 15, 17, 20, 22, 23, 26, 27, 30, 31 and 32. The items related to weight are items 4, 8, 16, 18, 24, 28 and 29. The two subscales are corrected to obtain the individual satisfaction level. The higher the score, the less concern the individual has with respect to weight, and the greater the satisfaction with his/her own body image. In other words, the higher the score awarded for each factor in the scale, the higher the level of satisfaction with the body image. Correction is performed by adding factors to the mean score. In the case of the negative items (items 4, 7, 9, 11, 17, 18, 24, 27, 28 and 29), the score is inverted.
b) Rosenberg Self-Esteem Scale (RSES)
   The Rosenberg Self-Esteem Scale, developed by Morris Rosenberg in 1956 and revised by the same author in 1989, and translated and adapted for use in Portuguese by Avanci et al[19], was used. The scale evaluates an individual's attitude and positive and negative feelings about

him/herself, and encompasses questions on personal satisfaction, self-deprecation, and perception of qualities, competence, self-pride, self-worth, respect and feelings of failure. Self-esteem is then classified based on a final score of 10–40 points. A score of 26–40 points is classified as high self-esteem, while a score of 10–25 points is indicative of low self-esteem. Thus, the self-esteem questionnaire bears a two-dimensional structure (positive or negative). The overall self-esteem contributes substantially to the description of the latent construct. Global self-esteem is calculated by subtracting the high self-esteem score from the low self-esteem score. The questionnaire consists of 10 closed questions that are evaluated on a Likert-type scale in which 1 represents full agreement, and 4, complete disagreement. The value of Cronbach's α measured was 0.68.

Statistical Analysis

Data were inserted into a Microsoft Excel (Microsoft, Redmond, WA, US) spreadsheet, and the statistical analysis was performed using the Statistical Package for the Social Sciences (IBM-SPSS, Chicago, Il, US) software, version 16.0. A univariate analysis was used to compare the groups with respect to their sociodemographic profiles. Student's *t*-test was used to evaluate the results of body image and self-esteem as a function of the therapeutic procedures to which the women in the case group were submitted. Pearson's correlation coefficient was used to verify correlations between the domains of body image and self-esteem in the case group. The significance level was established at 5% ($p < 0.05$).

Results

The case group consisted of 90 women with breast cancer. The age of these women ranged from 31 to 88 years (mean 50 years; standard deviation [SD] 10.3 years). The control group consisted of 77 women without breast cancer. The age of these women ranged from 31 to 77 years, with a mean of 48 years (SD: 11.1 years).

The results of the comparison between the groups were adjusted by the following variables: age group, marital status, level of education, religion, job, income and origin. They are described in ►**Table 1**. The comparison showed that the groups were similar, except when it came to religion ($p = 0.042$), in which there were more Evangelicals in the cancer group, and profession, especially, in the case of the Seamstress ($p = 0.02$).

The results for body image related to weight, body image related to appearance, and self-esteem in both groups are described in ►**Table 2**. A significant difference was found between the groups with respect to appearance (with scores of 56.71 for the case group and 66.75 for the control) ($p = 0.001$), that is, the women with breast cancer felt their appearances were compromised.

►**Table 3** describes the results of the body image and self-esteem domains for the case group as a function of whether or not they had been submitted to neoadjuvant chemotherapy. Statistically significant differences were found only for body image related to appearance ($p = 0.019$) and high self-esteem ($p = 0.031$).

The results of the comparative analysis of the body image and self-esteem domains of the case group as a function of whether or not they had been submitted to mastectomy are described in ►**Table 4**. A statistically significant difference was found only for appearance ($p = 0.001$). ►**Table 4** also shows the results of the comparative analysis of the body image and self-esteem domains for the women in the case group as a function of whether or not they had been submitted to breast conserving therapy. A statistically significant difference was found only for the appearance domain ($p < 0.001$), with the women who had undergone breast conserving therapy reporting being more satisfied with their physical appearance.

A comparative analysis of the domains of body image and self-esteem of the case group in relation to whether or not they had undergone breast reconstruction showed no statistically significant differences.

The results of the correlation analysis between the domains of body image and self-esteem of the case group are described in ►**Table 5**. A statistically significant negative correlation was found between body image related to weight and low self-esteem ($p = 0.039$) and overall self-esteem ($p = 0.034$). A statistically significant negative correlation was found between body image related to appearance and high self-esteem ($p < 0.001$), and low self-esteem ($p < 0.001$) and overall self-esteem ($p < 0.001$). A statistically significant negative correlation was found between high self-esteem and low self-esteem ($p < 0.001$) and overall self-esteem ($p < 0.001$). Finally, a statistically significant negative correlation was found between low self-esteem and overall self-esteem ($p < 0.001$).

Discussion

The results of the present study show differences between the case and control groups with respect to body image and self-esteem. There was a significantly higher mean score for body image related to appearance in the control group compared with the case group. This finding shows that the surgical intervention negatively affected the perception of the women in the study group regarding their body image related to appearance. These results confirm that Brazilian women are usually anxious about their appearance prior to undergoing mastectomy.[20] Other studies have reported that women who were submitted to breast conserving therapy and those submitted to mastectomy with breast reconstruction value their appearance.[21]

We also found that having to undergo chemotherapy resulted in a significant reduction in the scores achieved for body image related to appearance and high self-esteem. Nevertheless, this treatment did not affect body image in relation to weight, low self-esteem or overall self-esteem in the case group. Patients undergoing chemotherapy report great concern regarding hair loss, resulting in anxiety, distress and dismay.[22] This may be one of the reasons behind the results found in this study regarding appearance in patients undergoing chemotherapy. Other authors found that chemotherapy, apart from modifying body image, also

Table 1 Comparison of the sociodemographic characteristics of the case and control groups

Group	Case		Control		*p*	OR	95%CI	
	n	%	n	%			Lower	Upper
Age Group								
31–40 years	12	13.3	19	24.7	0.07	0.38	0.14	1.05
41–50 years	34	37.8	23	29.9	0.80	0.89	0.36	2.17
51–59 years	24	26.7	23	29.9	0.33	0.63	0.25	1.58
$\geq$ 60 years	20	22.2	12	15.6	0.170	0.81	0.59	1.10
	90	100.0	77	100.0				
Marital status								
Single	41	45.6	27	35.1				
Married	49	54.4	50	64.9	0.170	1.55	0.83	2.90
Total	90	100.0	77	100.0				
Level of schooling								
Illiterate	7	7.8	3	3.9	0.22	3.27	0.51	24.84
Lower than high school	47	52.2	48	62.3	0.38	1.84	0.47	7.89
High school	32	35.6	20	26.0	0.23	2.37	0.58	10.58
Higher education	4	4.4	6	7.8	0.926	1.02	0.66	1.59
Total	90	100.0	77	100.0				
Religion								
Catholic	34	38.2	40	51.9	0.042	0.61	0.37	0.98
Evangelical	49	55.1	35	45.5	0.12	1.64	0.87	3.11
Spiritist	1	1.1	1	1.3	0.92	1.17	0.03	47.0
Others	5	5.6	1	1.3	0.10	5.77	0.75	143.2
Total	89	100.0	77	100.0				
Occupation								
Housewife	50	55.6	30	39.0	0.97	0.97	0.33	2.75
Nursing technician	3	3.3	2	2.6	0.90	0.88	0.11	9.00
Salesperson	6	6.7	3	3.9	0.88	1.16	0.21	7.29
Housemaid	5	5.6	11	14.3	0.07	0.28	0.06	1.12
Dressmaker	3	3.3	11	14.3	0.02	0.17	0.03	0.79
Receptionist	2	2.2	2	2.6	0.66	0.60	0.05	6.83
Retired	8	8.9	6	7.8	0.74	0.78	0.18	3.37
Teacher	1	1.1	5	6.5	0.07	0.13	0.00	1.14
Others	12	13.3	7	9.1	0.170	1.08	0.97	1.19
Total	90	100.0	77	100.0				
Income								
$\leq$ 1 MW	39	45.9	25	33.3	0.195	1.74	0.75	4.01
1–2 MW	29	34.1	31	41.3	0.920	1.05	0.46	2.39
$\geq$ 3 MW	17	20.0	19	25.3	0.145	1.35	0.90	2.03
Total	85	100.0	75	100.0				
Origin								
Capital city (Goiânia)	55	61.1	42	54.5	0.590	1.17	0.65	2.11
Cities in the interior of the state	33	36.7	35	45.5				
Others States	2	2.2	0	0.0				
Total	90	100.0	77	100.0				

Abbreviations: 95% CI, 95% confidence interval; MW, minimum wage; OR, odds ratio.
Note: Univariate analysis test; values of $p \leq 0.05$ were considered statistically significant.

Table 2 Comparison between both groups in relation to the domains of body image and self-esteem

Group	Case ($n = 90$)			Control ($n = 77$)			p	Student's t-test
	Mean	Median	SD	Mean	Median	SD		
Body image – weight	23.98	23.50	6.84	23.10	23.00	7.57	0.435	0.783
Body image – appearance	56.71	56.00	17.58	66.75	71.00	19.02	0.001	-3.522
High self-esteem	12.24	13.00	2.21	12.73	14.00	2.73	0.209	-1.262
Low self-esteem	4.36	4.00	3.24	3.51	3.00	2.82	0.075	1. 789
Overall self-esteem	7.89	8.50	4.55	9.22	10.00	4.98	0.073	-1.805

Abbreviation: SD, standard deviation of the mean.
Note: Values of $p \leq 0.05$ were considered statistically significant.

Table 3 Comparison of the variable chemotherapy in relation to the domains of body image and self-esteem in the case group

Chemotherapy	Yes ($n = 22$)		No ($n = 68$) (Patients who underwent surgery)		p	Student's t-test
	Mean	SD	Mean	SD		
Body image – weight	24.23	6.27	23.90	7.06	0.845	0.196
Body image – appearance	49.14	18.45	59.19	16.68	0.019	-2.390
High self-esteem	11.36	2.46	12.53	2.06	0.031	-2.197
Low self-esteem	4.55	3.61	4.29	3.14	0.754	0.314
Overall self-esteem	6.82	5.37	8.24	4.24	0.206	-1.275

Abbreviation: SD, standard deviation of the mean.
Note: Values of $p \leq 0.05$ were considered statistically significant.

Table 4 Comparison of the variables mastectomy and breast-conserving therapy in relation to the domains of body image and self-esteem in the case group

Mastectomy	Yes ($n = 23$)		No ($n = 67$)		p	Student's t-test
	Mean	SD	Mean	SD		
Body image – weight	23.35	5.74	24.19	7.21	0.612	-0.509
Body image – appearance	46.00	14.02	60.22	17.28	0.001	-3.497
High self-esteem	12.17	2.15	12.27	2.25	0.860	-0.176
Low self-esteem	4.52	2.74	4.30	3.42	0.778	0.283
Overall self-esteem	7.65	3.54	7.97	4.87	0.774	-0.288
Breast conserving therapy	**Yes ($n = 21$)**		**No ($n = 69$)**		**p**	**Student's t-test**
	Mean	SD	Mean	SD		
Body image - weight	22.71	7.87	24.36	6.52	0.337	-0.960
Body image - appearance	69.48	10.94	52.76	17.41	< 0.001	4.144
High self-esteem	12.86	2.33	12.06	2.15	0.148	1. 460
Low self-esteem	4.52	3.66	4.30	3.14	0.788	0.270
Overall self-esteem	8.33	5.32	7.75	4.32	0.612	0.509

Abbreviation: SD, standard deviation of the mean.
Note: Values of $p \leq 0.05$ were considered statistically significant.

Table 5 Correlation between the domains of body image and self-esteem in the case group

Domains ($n = 90$)	Body image	High self-esteem	Low self-esteem	Overall self-esteem
Body image – weight				
r	0.130	0.140	−0.218	0.223
p	0.223	0.188	0.039	0.034
Body image – appearance				
r		0.367	−0.389	0.456
p		< 0.001	< 0.001	< 0.001
High self-esteem				
r			−0.368	0.748
p			< 0.001	< 0.001
Low self-esteem				
r				−0.892
p				< 0.001

Abbreviations: r, Pearson's correlation coefficient; SD, standard deviation of the mean.
Note: Values of $p \leq 0.05$ were considered statistically significant.

changes the self-esteem of women, compromising their social relations.[23] A study conducted in Korea showed a moderate correlation between distress related to hair loss and body image, but not with self-esteem.[24] Indeed, patients undergoing chemotherapy and those submitted to breast-conserving therapy do not appear to have problems seeing themselves naked.[25]

Of the body image domains evaluated in the present study, having been submitted to mastectomy resulted in a negative effect only on body image related to appearance. This type of treatment is understood to represent a major challenge for women, exerting a negative effect on emotional and social aspects. The data presented are in agreement with the findings of another study that showed that patients submitted to mastectomy are very concerned with their body image.[26] According to a study conducted in northern Taiwan, concern regarding body image increased significantly in 41.5% of young patients with breast cancer.[27] With respect to the cosmetic aspects of mastectomy, patients have described it as a "terrible mutilation" that is emotionally devastating and leads them to avoid social interactions and physical intimacy.[28,29] Another study showed that 67% of mastectomized patients felt inadequate in regard to their femininity, and found it difficult to accept their new body.[30] A comparative study between mastectomy and breast-conserving therapy showed that 38% of the patients submitted to mastectomy declared that they were dissatisfied with their body image, while patients who had been submitted to breast-conserving therapy did not report dissatisfaction with their body.[31]

Patients submitted to breast-conserving therapy were found to be more satisfied with their appearance, with higher levels of satisfaction with their body image compared with those submitted to mastectomy with breast reconstruction. These findings are in agreement with those reported in a study conducted in Germany, in which a sample of 112 patients was evaluated, with results showing that the women submitted to breast-conserving therapy had a better image of their body compared with those submitted to mastectomy and reconstruction.[32] Another study, conducted in Greece, also showed satisfaction with body image following breast-conserving therapy.[33] A study conducted in the United States found that body image remained unaffected in 57.6% of patients submitted to breast-conserving therapy, while 6.1% declared that their perception of body image was poorer, and 36% stated that it was better. The patients who were dissatisfied with the results of the surgery were more likely to evaluate their physical image negatively compared with patients who were satisfied.[34]

No statistically significant differences were found in the appearance domains or self-esteem of the case group when women who had undergone breast reconstruction were compared with those who had not, that is, having undergone breast reconstruction made no difference to the body image or self-esteem domains in these women. Therefore, patients undergoing this type of treatment have neither a negative perception of their body nor poor self-esteem. A study conducted in Spain reported conflicting results, with patients submitted to breast reconstruction reporting greater satisfaction with their body image and higher self-esteem.[13] In the United States, a study published in 2013 found that 63.9% of women had positive expectations regarding their body image following surgery for breast reconstruction.[35] It has also been reported that women submitted to breast reconstruction report greater satisfaction with their abdominal region, whereas women submitted to breast-conserving therapy are more satisfied with the appearance of their breasts.[36]

As a possible limitation of this study, it is important to mention that the differences found in the treatment variables in the case group may reflect the different religious beliefs of the women; however, the variable religion was not a control factor in the selection of this sample.

Another limitation of this study refers to the questionnaires, as there was a large number of women who refused to participate. Therefore, the time of data collection for the group of women without breast cancer was also a limitation of the study, because it was not possible to apply 90 questionnaires to women without breast cancer.

Conclusion

The results of this study show that self-esteem is negatively affected in patients who are dissatisfied with their body image. In conclusion, the study found women with breast cancer to be more dissatisfied with their body image related appearance compared with women without breast cancer, particularly after mastectomy or during chemotherapy. There was also a weak correlation between the body image and self-esteem domains, showing the influence of the former over the latter

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