



Uneasiness Body Image and Psychological Distress in Women with Breast Cancer in Chemotherapy Treatment

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Abstract

Breast cancer treatment alters body image and causes psychosocial repercussions, with a changing in self-perception. The objectives of this research were to assess distress level and body image uneasiness, in patients with breast cancer, undergoing chemotherapy treatment. Furthermore, differences between these variables in young and adult women were evaluated. In this retrospective study, we enrolled 100 women patients (aged 25 to 75), with breast cancer diagnosis, who have performed surgery and undergoing adjuvant chemotherapy. The search tools used were: Distress Thermometer (DT), Hospital Anxiety and Depression Scale (HADS) and Body Uneasiness Test (BUT). The data were obtained through descriptive and correlational analysis using Statistical Package for Social Science (SPSS) software. A level of Distress above cut-off value was found (6.46). Within body image dimensions, the highest average score was found for concerns for body image (16.44). Also, high scores were found in conduct of avoidance, depersonalization, weight phobia and compulsive controls to own image. Younger women not showed higher average scores than adult women in all areas analyzed. Body image is a fundamental psychosocial issue; impact of body changes is a painful and often difficult to manage aspect not only in young women but also in adult women.

Keywords: Breast cancer; Chemotherapy; Surgery; Body image; Distress; Anxiety; Depression

Introduction

The breast cancer is one of the most common diseases among women worldwide and has highest mortality rate of entire population after lung and colorectal cancer [1]. From moment of diagnosis, the subjects have to face something new and unexpected, which generates fears and worries, which presuppose a complex process of adaptation to new condition [2]. This whole process will influence many aspects of woman life, such as those related to social, family and work role. Furthermore, body image changes this which is one of most painful problems of disease and which seems to play a significant role in its adaptation [3-5]. The breast cancer diagnosis and treatment, in fact, causes changes in body patients, with a significant psychological impact [6]. In western culture, breast for a woman has multiple meanings, it represents femininity, motherhood, and sensuality and charm therefore post-surgical removal for cancer can have serious repercussions on the female personality causing her to perceive that she has lost her role probably leading to a decrease in self-esteem [7]. Same treatments as chemotherapy or surgical interventions, (mastectomy or conservative) can often cause onset of physical symptoms, such as alopecia nausea, weight gain [8,9], but also psychological such as, anxiety, depression, reducing quality of life, low self-esteem, poor sexual functioning and perception of one's body disfigured [10,11]. The hair loss, for example, is the symbol of social identity and cultural beliefs, sometimes more difficult to accept than mastectomy [12,13]. Also, radiation therapy can cause skin reactions and redness, hormonal treatment, can lead to weight gain and flushing [14]. For women looks in the mirror is difficult, they can constantly remember thoughts related to illness and their discomfort, illness modifies the subject image of himself and how it relates to the outside world [15]. The personal identity is, mainly, contained in body image; this identity is threatened from the moment of oncological diagnosis since the body is now identified in disease [16]. Changes in body image of women can lead to development of other psychological problems, such as stress, avoidance, denial, guilt, despair, fear, embarrassment, feeling of lack sexual attraction [17,18]. At different ages, body image represents an important social role, which influences self-esteem and self-confidence, not only in young women [19]. The literature data

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refers mainly to young women, neglecting the conditions that cancer treatments must have on adult and elderly women [17]. Only a few reviews of literature suggest that body image is considered important even in older patients and that body image can have an impact on future life and social functions [20]. It is therefore essential, for health professionals, to gain in-depth knowledge and understanding, of how individuals experience and deal with these particular stressful events [21]. The objectives of this retrospective observational study were to evaluate the level of distress and the impact of body image perception, in women with breast cancer, also evaluating the symptoms of anxiety and depression. In particular, analyzed the differences between young women and adult women with breast cancer.

Materials and Methods

Participants and setting

This study was conducted in Medical Oncology Department of Policlinico Palermo, between July 2018 and December 2019. One hundred women, between ages of 25 and 75 years, were included in this study. The following inclusion criteria required were: overage >18 years; breast cancer diagnosis; undergoing conservative surgery or mastectomy, with or without immediate breast reconstruction; in treatment with adjuvant chemotherapy and a good understanding Italian language. Patients with metastatic disease, in neoadjuvant chemotherapy treatment, who have not undergone surgery, and with obvious psychiatric disorders (i.e. intellectual disabilities, serious psychotic symptoms), were excluded from the study. The study was conducted in accordance with the ethical standards of the Italian Psychological Association (AIP), as well as the Declaration of Helsinki and all patients enrolled provided written informed consent.

Measures

The instrument used for evaluated the variables were:

- Socio-demographic form. This form was helpful both for collection of socio-demographic data, and for understanding information of disease. The socio-demographic variables assessed were: Age, gender, civil status, education, employment, treatment type.

- Distress Thermometer (DT) [22]. The DT is a single item screening question which identifies an individual's distress. It is rated on a visual analogue scale, where 0 means "no distress" and 10 means "extreme distress". The cut off was ≥ 4 . Individuals are asked to respond by marking the place on the scale "that best describes how much distress you have been experiencing in five problem areas in the past weeks, including today".

- Hospital Anxiety and Depression Scale (HADS) [23,24]. The Italian version of HADS is commonly used to evaluate psychological distress in non-psychiatric settings. It is composed of two scales - anxiety (7 items) and depression (7 items). The items are rated on 4-point Likert scale and range from 0 to 3, with higher scores indicating greater anxiety and depression, respectively. The two scores can be calculated separately with three cut-offs: Normal (0-7), borderline (8-10), disturbance (>11). In this study, HADS demonstrated a good internal consistency with a Cronbach's α value of 0.87 for HADS-A and 0.89 for HADS-D.

- Body Uneasiness Test (BUT) [25]. The psychometric test for clinical evaluation of abnormal attitudes and bodily image disorders. It is composed in two-part. The first part (BUT-1) consists of 34 items whose overall average score identifies the degree of severity

related to one's own body image (GSI-Global Severity Index), through 5 subscales: Weight Phobia (WP-Weight phobia), Concerns for Body Image (BIC-Body Image concerns), Avoidance Conduct (A-avoidance), Compulsive self-control image (CSM-Compulsive self-monitoring), Depersonalization (D-Depersonalization). The severity is expressed on a scale from 0 to 5, where 0 corresponds to absence of problems in that sector and 5 to maximum severity. The higher indices of each group, the greater are discomfort. The second part of test, (BUT-2), consists of 37 items and focuses attention on a precise body district and some sensory manifestations derived from it such as sweating, redness, smell, noise. In this study, BUT demonstrated a good internal consistency with a Cronbach's α value of 0.89.

Procedures

The assessment was carried out by trained researchers, all participants were informed about the study purposes, and they signed the informed consent before the assessment. Following a responses preliminary review to socio-demographic form, subjects who did not have an adequate level of understanding of Italian language and those who had obvious psychiatric disorders were excluded from study. Those who agreed were asked to complete a protocol containing self-assessment measures with pencil and paper. The completion time was about 15 min to 20 min.

Statistical analysis

The Monovariate normality of distributions were checked using Skewness and Kurtosis indices. The reliability of each scale was assessed using Cronbach internal consistency index. We used Mardia coefficient for tested multivariate normality between variables. All descriptive analyses (mean, standard deviation) and correlations between variables were performed using Statistical System Statistical Package for Social Sciences (SPSS) version 25.0 for Mac. The correlation between the variables was assessed Chi square test, Pearson's correlation coefficient. A p value of 0.05 was considered statistically significant. For examine differences between average scores of participants and value cut-off to self-report questionnaire were conducted One Sample t-tests.

Results

Socio-demographic characteristics

The normality index verified through univariate indices of Asymmetry and Curtosi was 1 acceptance threshold. No variables showed normal violations. One hundred patients were enrolled in the study. All participants were women and Italian. The median age was 46 years [range 25 to 75]. Fifty patients were aged between 25 to 55 (young patients - N1) and 50 patients were aged between 56 to 75 (adult patients - N2). The most patients were married (72%), the 40% have a dependent work and 16% were self-employed, most patients have average schooling education. Conservative surgery was performed in 56% patients, mastectomy in 44% patients. The socio-demographic characteristics of participants are described in Table 1.

Distress, anxiety and depression analysis

In order to assess the participants' levels of distress, a One Sample t-test analysis was carried comparing the average score with threshold value (cut-off) of evaluation tools. The results indicate that mean score of DT is 6.46 and 60% of patients reported a score of 6, higher than cut-off 4, indicating the presence of clinically relevant psychological discomfort. The results of HADS test showed, higher average scores in anxiety scale (HADS-A) (9.28), rather than depression (HADS-D)

Table 1: Socio-demographic data (n. 100).

Age [range]	46 [25-75]
Civil Status	
Single	16%
Married	72%
Widowed	3%
Separated/Divorced	9%
Children	
Yes	83%
No	17%
Education Level	
Primary and secondary school	44%
High school	48%
Graduated	8%
Surgery	
Quadrantectomy	56%
Mastectomy	44%

Table 2: Comparison between average scores and cut-off of HADS and DT (n. 100).

	M	SD	One Sample t	p
HADS_ ANXIETY	9.28	4.3	9.198	0.003
HADS_ DEPRESSION	6.82	4.2	8.23	0.002
ADJUSTMENT DISORDER	15	7.8	14.56	0.003
THERMOMETER DISTRESS	6.46	1.8	6.62	0.004

Note: HADS: Hospital Anxiety and Depression Scale; DT: Distress Thermometer

Table 3: Average score and deviations standard of BUT Test (n. 100).

	M (DS)
Weight Phobia	12.74 (5.45)
Concern for body image	16.44 (4.95)
Avoidance Conduct	15.48 (4.55)
Compulsive self-control image	8.16 (2.64)
Depersonalization	13.42 (5.09)
Global Severity Index	65.78 (6.23)

Note: BUT: Body Uneasiness Test

(6.82), and a high mean score for adjustment disorder (Table 2). With respect to the prevalence of anxious symptoms, 16% of patients scored under HADS for anxiety between 8 to 10 points, indicative of symptoms; 42% of participant scored more than 10. Therefore, they are in the category of patients with clinically relevant anxious symptoms.

Body image analysis

The analysis of body image size showed concern about the body's image appears to be size with the highest average score, followed by avoidance patterns with a slightly lower average score. A part of sample presents a depersonalization disorder, while, lower scores were showed in the scales on phobia of weight and compulsive self-control image (Table 3). For analysis of body image size by age groups, the sample was divided into groups: Women with over age to 25 to 50 (young patients) and women with over ages to 51 to 75 (adult patients). All scales not showed higher average scores in younger women than adult women (Table 4).

Table 4: Average score and deviations standard of BUT Test in young (n. 50) and adult (n. 50) patients.

	N1	N1	p
	M (DS)	M (DS)	
Weight Phobia	11.53 (6.19)	12.27 (4.84)	2.344
Concerns for body image	16.78 (5.25)	17.72 (3.56)	0.316
Avoidance Conduct	15.96 (4.77)	16.27 (3.85)	0.414
Compulsive self-control image	8.07 (2.73)	7.90 (2.55)	0.112
Depersonalization	13.07 (5.33)	13.68 (4.58)	1.212

Note: BUT: Body Uneasiness Test; N1: Young Patients; N2: Adult Patients

Table 5: Pearson's correlation of body image and Distress (n. 100).

	Global Severity Index	DT	P
Global Severity Index	1	-0.62**	0.001
DT	-0.62**	1	0.001

Note: DT: Distress Thermometer; **p<0.01

Correlations between body image and distress levels

Outcomes of correlation analyzed, between body image uneasiness and distress, through Pearson's coefficient, showed that there are consistent and significant relationship between body image perception (valuated with Global Severity Index-BUT scale) and Distress, confirming our hypotheses. The analysis showed that distress level is significantly correlated with body image with a value r=0.62 p<0.001 (Table 5).

Discussion

Cancer is a pervasive disease; advanced procedures and treatments have led many people to survive and continued to live for long periods with its secondary effects [26]. Psychological distress is present in 60% of patients [27]. The adoption of a multidimensional perspective of disease that involves psychosocial variables allowed the investigation, also body image perception and knowledge the problems related to the aesthetic aspect among breast cancer patients. The results of this study, showed high level of distress in women with breast cancer, both in younger patients and in adult patients, that influences the global body image perception. The results indicate a mean distress score 6.46 is above the threshold value from the cut-off 4 of instrument. This result indicates a distress level present in most patients, regardless of age. Moreover, by evaluating levels of anxiety and depression, important anxious states and a lower level of depression have been found, while difficulties persist in adapting to the new disease condition. The relationship between the alteration of body image and distress suggests that psychological support should be carried out so that patients with a higher risk of developing clinical anxiety and depression symptoms can be identified and treated. The dimensions of body image score, includes the areas of weight phobia, worry about body image, avoidance behavior, compulsive self-control and depersonalization. This variable was altered in two group's analyzed (young and adult women). The results of BUT test showed that higher average score, in the scale "Concern for Body Image"; it followed by higher average score of "Avoidance Conduct". Probably avoidance strategies were used by women to deal with intrusive and distressing thoughts about their own image; they often involve avoidable behavior in front of mirror, avoidance of sexual activity or in general in the relationship with the partner [28]. The most patients present a depersonalization, due to feeling of being detached from their body or perception of owning a body in which these women do not recognize themselves or feel they belong. Finally,

lower average scores are shown in the scales on “Weight Phobia” and “Compulsive Self-control Image”. Subgroup analysis of young and adult patients did not show a higher average score, for all scales of the body uneasiness test. Presumably, even adult women perceive a compromised quality of life compared to young women and this can be attributed to importance that one’s body has for women regardless of age [29]. Body image influences emotional well-being, specific concerns about cancer and intrusive thoughts with avoidant behaviors that are observed even in front of mirror. Literature data showed that younger women with breast cancer are at high risk of anxiety and depression and have more concerns about their careers and finances than adult women. Adult women with breast cancer can have, instead, low quality of life due to other co-morbidities. For different reason higher degree of psychosocial adaptation can be found among women with breast cancer, regardless of age [30]. Moreover, previous life experiences, including previous experience with health system influence the distress level, then, also adult women with breast cancer can, experience dissatisfaction with their body and higher distress levels than younger women [31]. Even most adult women require frequently, breast reconstruction more often than adult women and trying to regain normality in their appearance after surgery and therapies. All women of all ages are less comfortable with the transformations that take place in the body during the process of illness and treatment, showed a high level of distress when confronted with the disease and what comes with it. Future studies on psychological variables in breast cancer patients should consider the change of body image as an outcome measure in addition to including individuals representing a wide range of ages, not excluding adult and older women.

Conclusion

In oncological setting, the screening of psychology impact of patients is fundamental, the adaptation to diagnosis and treatment is influenced by several factors (age, social support, mental health, treatment modality). Changes in body image are one of the most painful aspects of breast cancer and are often considered, by patients, the aspect more difficult to manage than other treatment side symptoms. However, in context of wider studies body image has been secondary addressed on quality of life, as a component of quality of life, and not as a specific factor can explain individual differences in adaptation of disease [32]. Today, it has become important, the psychology support of patients throughout their care and to provide assistance according to their needs, not only medical but also psychology, with particular attention for body image consequence. The psychological rehabilitation for cancer diagnosis consequences and side effects treatment to patients is one of the greatest challenges to modern medicine. The growing number of breast cancer survivors has stimulated the medical community to focus research on quality of life issues, trying not to overlook any aspect.

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