

Short Communications



Breast cancer and sexual self-concept: Comparing women with breast cancer and healthy women

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Abstract

This study aimed to assess and compare the dimensions of sexual self-concept (SSC) in women with (n=80) and without (n=120) breast cancer (BC). Women with BC and healthy cases in the control group were selected from the same center. The recruiting women referred for screening, and no BC was detected based on the results. The participants completed the demographic and Persian versions of the modified Multidimensional Sexual Self-Concept Questionnaires. Chi-square, *t* test, and Mann-Whitney tests were used to analyze the data. Women with BC reported significantly higher scores in negative dimensions of SSC, particularly in sexual anxiety and fear of sex ($P < 0.05$). In the dimension of positive self-concept, only the assertiveness score ($P = 0.008$) was different between the two groups. In contrast, the overall score of positive self-concept did not demonstrate a significant difference between the groups. SSC in women with BC seems impaired compared with healthy women.

Keywords: Breast cancer, Self-concept, Women

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Introduction

Sexual self-concept (SSC) is one of the most critical aspects of human sexuality. It is influenced by one's life experiences and health status (1). SSC shows a person's sexual desires and tendencies, which can help the person gain awareness and identity for the self-evaluation of her/his sexual life (2). The sexual life of people with chronic or acute diseases (e.g., breast cancer [BC]) is affected by decreased femininity and attractiveness and changes in body image, self-esteem, and sexuality (3). A cancer diagnosis can affect aspects of life and health for individuals and their families (4). Researchers indicated that more than 1.2 million patients are annually diagnosed with BC in the world. The incidence of BC in Iran is higher than in other countries (5). The physical, physiological, and emotional problems can be severe among younger BC survivors, and researchers have demonstrated that women with BC in Iran are younger on average than in other societies (6). Thus, this study sought to evaluate the differences and the relationship between the dimensions of SSC in Iranian women with BC and their counterparts without BC.

Materials and Methods

Informed consent was obtained from all women before their inclusion in the study; their anonymity was guaranteed. The sample size was based on the self-concept dimensions of the study by Shahid Sales et al (7), an alpha of 5%, a power of 95%, and the above-mentioned factors. Considering an expected 10% dropout rate, 80 participants were included in each group. The means (\pm standard deviations) of the sexual function index were 21.54 (± 7.3) and 25.92 (± 4.34) in the case and control groups, respectively.

$$n = \frac{(s_1^2 + s_2^2) (z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2}{(x_1 - x_2)^2}$$

Healthy, non-pregnant, and married women who were aged 18 or older and sexually active were included if they had no mental disorders (self-reported), chronic diseases, or severe family conflicts. Women who received treatment at least three months ago or experienced surgery or chemotherapy, or both were also included in the study.

On the other hand, women were excluded from the

study if they had a history of mental illness diagnosed by a medical professional, a history of substance use disorders, a history of infertility, a history of other cancers, self-reported marital or family conflict at the time of recruitment or pregnancy, or were receiving any psychiatric treatment. Women with relapses and hospitalization during the study were excluded as well.

Women were selected using a convenience sampling method from Mehraneh Cancer Center. The control group was selected from the same center; the recruiting women referred for screening, and no BC was detected based on the obtained data.

The instruments consisted of a checklist for demographic factors and Persian Multidimensional Sexual Self-Concept Questionnaires (PMSSQ). All patients were assessed for SSC using the 78-item PMSSQ. As previously described (8), this instrument meets all requirements for international validation and shows acceptable validity (Cronbach's alpha=0.88, with the dimensions varying between 0.41 and 0.87) according to previous research (2). The content validity index was reported to be greater than 0.70. The Kaiser–Meyer–Olkin index was 0.88, and Bartlett's test was less than 0.001, with a K2 of 5256.13. The three factors—positive, negative, and situational—extracted from the Varimax rotation determined 58% of the variances, 34.95, 12.86, and 10.32, respectively. The PMSSQ has been scaled with a Likert score from 0 to 4 for never, rarely, sometimes, most of the time, and always, respectively. The measurement is not based on the total scores but on the total scores in every dimension. The Mann-Whitney test was used to evaluate demographic variables, and the one-way analysis of covariance was employed to compare PMSSQ subscales by considering age as a covariate (SPSS, version 20).

Results

There was not a significant difference between the two study groups in terms of education level, husband's education, husband's job, or the number of children ($P > 0.05$, Table 1).

The results of the Mann-Whitney test showed a significant difference between study groups in stress level ($P < 0.001$, Table 1).

After adjusting for age, significant differences were identified in the total score ($P < 0.001$) and specific dimensions of negative self-concepts between women with BC and the healthy control group. These dimensions included fear of sex ($P = 0.001$) and sexual anxiety ($P = 0.003$). Regarding positive self-concept, the only significant difference between the two groups was found in the assertiveness score ($P = 0.008$), while the overall score did not demonstrate a significant difference (Table 2).

Discussion

The PMSSCQ was used to evaluate sexual problems among Iranian women with BC compared to a healthy group. Negative dimensions, particularly sexual anxiety and fear of sex, were higher in BC survivors versus women without BC, whereas positive dimensions were higher in healthy women. In line with the present study, Pintado indicated that depression had a positive and high correlation with anxiety, a negative and high correlation with self-esteem, a positive and moderate correlation with body image, and a negative and high correlation with self-efficacy. Similarly, they showed a significant relationship between emotional well-being and the components of self-concept and the type of surgery; radical mastectomy was related to increased depression (9). The type of surgery in the present study was radical mastectomy.

Table 1. Comparison of socioeconomics of the participants between the two groups

		Cancer group No. (%)	Healthy group No. (%)	Total No. (%)	P value
Education	None-university	53 (75.71)	50 (71.43)	103 (73.57)	0.70
	University	17 (24.28)	20 (28.57)	37 (26.43)	
Job	Housewife	54 (77.14)	43 (61.43)	97 (69.3)	0.07
	Practitioner	16 (22.86)	27 (38.57)	43 (30.7)	
Husband job	Employee	20 (28.57)	22 (31.43)	42 (30)	0.21
	Working	4 (5.71)	7 (10)	11 (7.9)	
	Self-employed	38 (54.28)	39 (55.71)	77 (55)	
	Other	8 (11.43)	2 (2.86)	10 (7.1)	
Husband education	None-university	48 (68.57)	37 (52.85)	88 (62.86)	0.08
	University	22 (31.43)	33 (47.14)	55 (37.14)	
Level of stress	Very low	7 (10)	15 (22.43)	22 (15.7)	<0.001
	Low	7 (10)	11 (16.71)	18 (12.9)	
	Average	25 (35.71)	41 (58.57)	66 (47.1)	
	High levels	31 (45.28)	3 (4.28)	34 (24.3)	
Age	Mean (SD)	37.72(5.40)	35.23(5.29)	-	0.007
Number of children*	Mean (SD)	2.91 (0.88)	2.66 (1.48)	-	0.08

Note. SD: Standard deviation.

Table 2. Comparison of self-concept dimensions between the two groups

	Cancerous	Healthy	P value
Negative self-concept			
Sexual anxiety	7.10±5.70	4.15±3.51	0.003
Self-blame	8.36±4.94	6.45±3.76	0.19
Depression	3.56±3.29	2.77±2.29	0.62
Fear of sex	8.16±3.39	6.80±2.80	0.001
Total negative self-concept	27.19±11.66	20.18±7.96	<0.001
Positive self-concept			
Self-efficacy	11.20±3.27	11.03±3.20	0.81
Self-esteem	8.72±3.99	10.74±3.55	0.41
Consciousness	13.19±4.61	14.13±3.98	0.24
Motivation to avoid risky sex	16.35±4.37	16.21±4.23	0.48
Preoccupation	7.23±4.37	9.03±4.45	0.85
Motivation	9.93±3.21	11.41±3.74	0.20
Problem management	8.20±2.66	7.94±3.19	0.57
Satisfaction	12.67±11.97	13.82±5.13	0.20
Self-schemata	14.36±4.10	15.77±4.55	0.86
Problem prevention	14.67±4.03	15.18±4.38	0.47
Internal sexual control	11.10±3.98	12.01±4.40	0.38
Assertiveness	8.51±3.85	9.76±3.43	0.008
Optimism	10.30±2.67	11.27±3.30	0.81
Total positive self-concept	146.43±30.98	158.39±37.43	0.29

The research of Yektatalab and Ghanbari underlined the low level of self-esteem in women with BC and an indirect relationship between anxiety and self-esteem (10). We considered another component of positive dimensions in this study. Therefore, using different study tools may help explain our different results.

Likewise, our findings confirmed previous reports of the impaired sexual functioning of BC survivors compared to healthy controls (11). Ganz et al reported poor quality of reproductive and sexual functioning, such as artificial menopause and its related symptoms after chemotherapy (12). Roshandel et al stated that BC patients experienced all features of sexual dysfunction (13).

In contrast with our findings, which explain the psychological aspects of SSC, others have mainly focused on the physical aspects of sexuality affected by cancer and related therapies such as menopause, vaginal dryness, ovarian impairment, or pain. Some studies suggested that arm problems and vaginal dryness, which affect sexuality, are two subjects in which additional effort may still be needed to improve the quality of life and sexual problems of survivors (14). Sexual anxiety resulting in tension about the sexual aspects of life has been reported as an essential factor in one's sexual dissatisfaction and avoidance (14). Our results support previous findings that sexual anxiety and self-blame can be the consequences of affected femininity in women.

Conclusion

SSC in women with BC seems impaired compared with

healthy women. Interventions to work on women's SSC are strongly suggested when diagnosed with cancer.

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Authors' Contribution

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Competing Interests

The authors declare that they have no competing interests.

Ethical Approval

The present study was approved by the Ethics Committee of Zanjan University of Medical Sciences (ZUMS.REC.1395.156). All participants, before participating in the study, signed a consent form. Researchers obtained the permission of the Research Vice-president of Zanjan Cancer Clinic and submitted the license to the sampling center.

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