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Sexual Function and Sexual Behavior in Women with Breast Cancer Having Sexual Distress, Zanjan, Iran

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Abstract

***Background*:** Sexual relationships of women with breast cancer are affected by diagnostic and therapeutic procedures.

***Objectives*:** The aim of this study was to assess sexual function and sexual behavior in women with breast cancer having sexual distress in Zanjan in 2015-2016.

Methods: This cross sectional study was part of a larger study, which was performed on 75 women with breast cancer in the oncology clinic of Valiasr hospital and Mehraneh charity clinic. Sampling was based on a purposeful approach. Data were collected using a demographic questionnaire, Sexual Function Questionnaire (FSFI), and indigenous sexual behavior questionnaire in women of reproductive age (SBQ). Data were analyzed using the Chi-squared and Spearman-Pearson tests.

***Results*:** A majority of the women (77.3%) had an undesirable sexual function and orgasm dysfunction (65.3%). Besides, it was found that the majority of women had low to moderate sexual behavior. The correlational analyses related to sexual function and sexual behavior and their sub-scales showed that there was only a significant positive relationship between the sexual capacity subscale and the total sexual function scale ($P<0.005$).

***Conclusion*:** Women with breast cancer had sexual dysfunction and behavior. Designing and implementing related counseling programs may help to reduce sexual distress, improve sexual function and marital satisfaction, and enhance the quality of life of affected women.

Keywords: breast cancer, sexual function, women

Introduction

Breast cancer is one of the most common cancers around the world [1]. Every year, 1.4 million women are detected by breast cancer. Most of the patients are within the age range of 35 to 44 [2-5]. The improvements in cancer treatment and diagnostic methods, women's awareness, and the number of doctors' visits lead to a rising number of survivals [3].

The survivors encounter several physical and mental problems including sexual dysfunction.

In order to address this issue, sophisticated counseling and psychological methods are required [6-8]. Devoch et al. (2011) reported the prevalence of sexual dysfunction in women as 40%. This figure is 80-90% in women suffering from gynecologic cancers [9]. Based on a study conducted in 2005, 31-51% of Iranian women have sexual dysfunction [8].

The impact of breast cancer on sexual performance and self-esteem in young women is more than in older women [3,4,8]. In Iran, women with cancer are younger than those in other countries [10].

Marital relationships and sexuality are considered as important and influential components of life [11]. Recent studies recommend great attention to the problems in cancer patients, which have a huge impact on their quality of life. It seems that due to the increasing number of patients, sexual problems after termination of treatment, and a reduction in couples' intimacy, it is important to identify the sexual problems of the recovered, provide a therapeutic approach, and help improve the condition of patients [9,15].

Women with breast cancer are involved in complex treatments and their lifestyles are influenced by several dimensions. We have tried to compare the relationship between the obvious dimension of sexual function and the hidden dimension of sexual behavior. Therefore, the aim of this study was to compare sexual function and sexual behavior in women with/suffering from sexual distress in breast cancer in Zanjan.

Methods

This cross-sectional study was part of a larger study that was conducted in the clinic of Valiasr Hospital and Mehrani Charity Clinic in Zanjan (2015-2016) after obtaining approval from the Zanjan University of Medical Science's Ethics Committee (ZUMS.REC.1395.156). The researchers contacted 75 participants by referring to the relevant centers, obtaining the consent of the authorities, and examining the existing medical files of the patients. The objectives of the study were explained to the participants; and after receiving informed consent, they were invited to the study. The inclusion criteria were women suffering from sexual distress (the score>11) diagnosed with breast cancer, being married, being sexually active (according to individual reports), the age range of 20 to 50, treated surgically or with chemotherapy or both, at least three months period from the end of treatment period, not suffering from a mental illness for at least one year, and non-addiction to drugs or alcohol. The exclusion criteria included reluctance to participate in the study, recurrence of illness, hospitalization during the study, pregnancy, and the initiation of drug therapies in the field of psychiatry. The sample size was calculated using the alpha level of 5% and beta 10%, based on a study by Rostamkhani et al. who suggested the following formula [8].

$$\mathbf{n} = \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2 (s_1^2 + s_2^2)}{d^2}$$

The demographic questionnaire included items about age, the number of children, marriage status, and stress, history of the sexual problem in woman and/or spouse, education, habitat status, job status, menopause status, and treatment status. The Female Sexual Function Index-FSFI questionnaire, designed by Rosen et al., was used to evaluate female sexual function. Validity and reliability of the Persian version of this questionnaire were already confirmed by Mohammadi et al (2008), including a Cronbach's alpha of ≥70%. The questionnaire consisted of 19 items in six different areas of sexual function including sexual desire (items 1-2), sexual stimulation (items 3-6), lubrication (items 7-10), orgasms (items 11-13), sexual satisfaction (items 14-16), and pain (items 17-19). For items 14-3 and19-17, points of 5-0 and for items 1,2,15,16, points of 1-5 were considered. The scores for each of the domains were obtained from the accumulation of scores of questions in each area and, then, were multiplied by the coefficient of each area (sexual desire 0.6, sexual stimulation and 0.3 lubrifications, orgasm, satisfaction, and pain 0.4). The range of sexuality scores was between 1.2 and 6 points for sexuality and zero to six points for the rest. The overall score calculated from the total of six domains had the minimum score of two and a maximum of 36. Higher scores

represented better sexual performance. The Cut-off point of the total scale for the diagnosis of sexual dysfunction was 28 [12].

Sexual Behavioral Questionnaire was used to measure the sexual behavior of 33 items that were designed and validated by Gherashi et al. (2012). The sexual behavior questionnaire assesses four dimensions of capacity, motivation, performance, and gender schemata. In this tool, the first 10 questions relate to sexual capacity, the second one to sexual function, 11 questions to sexual stimulation, and the last three questions to sexual schemas. Each question has been evaluated using the scores of zero to five. This questionnaire is evaluated in a way that the total score is divided into three parts: low (weak), moderate, and high (desirable) sexual behavior. If the score of sexual behavior was lower than the 33 percentile, it was considered as low sexual behavior, the score between ranges of 33-68 was considered as moderate, and the score above 68 percentile was considered to be high or desirable sexual behavior [14].

In this study, we used descriptive statistics including the mean, standard deviation, and the absolute and relative frequency of variables. And Pearson correlation coefficient and Spearman tests to assess the relationship between the variables.

Results

The mean age of the participants in this study was 39.88 years and the mean age of the spouses of participants was 43.77 years. The average duration of marriage was 3.18 years. The mean number of children was three. More than half (66%) of the participants lived in urban areas, 77.8% were housekeepers, and 45.4% had high school diploma and higher. The majority of patients (71.75%) were treated with chemotherapy and radiotherapy (Table 1).

Table 1: Characteristics of participants in the study

Variable		Number	Percent	Sexual function mean	Sexual function STD	P value
Habitat	Urban	66	88	59.30	21.02	0.0001
	Rural	9	12	56.77	23.21	
Menstrual status	Menstrual cycles	25	33.3	59.64	23.12	0.0004
	Menopause	50	66.7	5.58	20.32	
Kind of marriage	With your consent	71	94.7	59.54	21.52	0.391
	Without your consent parent	3	4	45.33	6.80	
	Without your consent parent and your consent	1	1.3	-	61	
Stress	Very low	9	12	49.55	17.11	0/550
	Low	7	9.3	60.14	23.01	
	Moderate	25	33.3	55.60	25.43	
	Sever	34	45.3	63.76	17.56	
Job	Housewife	59	87.7	15.58	22.73	0.573
	Employee	16	22.3	62.12	21.02	
Education	Elementary	18	24	55.12	18.49	0.821
	up to secondary education	22	19.3	50.84	28.33	
	High school diploma	17	22.7	63.23	19.21	
	University degree	17	22.7	66.12	19.04	
Husband education	Elementary	17	22.66	52.38	21.51	0.821
	Up to secondary education	21	28	55.68	23.56	
	High school diploma	21	28	60.29	18.86	
	University degree	16	21.33	67.94	17.90	
Sexual	Decreased libido	6	8	61.35	20.98	0.780

problem in spouse	Premature ejaculation	9	12	39.33	24.53	
	……	1	1.3	57	13.82	
	Other	2	2.7	31	-	
	…..	57	76	74	-	
Medical treatment	Tamoxifen					1

The study of female sexual function showed that the majority of women (77.3%) had an undesirable sexual function, which was the most common disorder in the orgasm phase (65.3%) (Table 2).

Table 2: Sexual function in women with sexual distress and breast cancer

Variable	Status	Number	Percent
Sexual desire	favorable	41	54.7
	unfavorable	34	45.3
lubrication	favorable	43	52.3
	unfavorable	32	42.7
Arousal	favorable	39	52
	unfavorable	36	48
Orgasm	favorable	49	65.3
	unfavorable	26	34.7
Satisfaction	favorable	41	60
	unfavorable	34	40
Pain	favorable	45	52.3
	unfavorable	30	42.7
Total scale	favorable	58	77.33
	unfavorable	17	22.66

The results of sexual behavior analysis and its subscales in our participants showed that the majority of women had moderate and low sexual behavior. Sexual behavioral sub-metrics also showed that the participants were in the medium range in all sub-scales (except the sub-standard sexual function). In terms of sexual function, 96% of the participants were in the low range (Table 3).

Table 3: Sexual behavior and its subscales in women with sexual distress and breast cancer

Sub scales of sexual behavior		Percent	Mean of points	STD
Capacity	Less of 16.7	36	1.68	0.54
	16.8- 33.2	60		
	33.3- 50	4		
Motivation	Less of 18.3	96	1.04	0.19
	18.4-36.6	4		
	36.7-55	0		
Function	Less of 15	13.3	2.13	0.62
	16-30	60		
	31-45	26.7		
Scheme	Less of 5	13	2.12	0.67
	5-10	40		
	11-15	22		
Total	Less of 55	45.3	1.54	0.5
	56-110	54.7		
	111-165	.		

There was a significant and inverse relationship between age, arousal, satisfaction, and total scale of sexual function ($P<0.02$, $r<-0/267$). There was a significant relationship between the age of

husband and the subscales of arousal, orgasm, satisfaction, and function (P<0.05, r<-0/264). There was a significant relationship between the ages of couples and all sub-criteria of sexual function (P<0/031, r<-0/453). Among subscales of sexual behavior, the only capacity with sexual function submissions, including lubrication, arousal, satisfaction, pain, and total scale, had a significant relationship (P<0.05, r<0/344) (Table 4).

Table 4: Relationships between sexual function, sexual behavior, and some demographic characteristics of participants in the study

Variable		Lubrication		Arousal		Orgasm		Desire		Satisfaction		Pain		Sexual function	
		r	p	r	p	r	p	r	p	r	p	r	p	r	p
Age		-0.221	0.057	-.0263	0.022	-0.255	0.087	-0.178	0.127	-0.299	0.009	-0.205	0.078	-0.267	0.020
Husband's age		-0.199	0.088	-0.229	0.048	-0.235	0.043	-0.161	0.167	-0.227	0.50	-0.207	0.074	0.264	0.033
Number of years marriage		-0.250	0.031	-0.398	<0.001	0.324	0.005	0.338	0.003	-0.453	<0.0001	-0.238	0.040	-0.377	0.001
Number of children		-0.297	0.015	-0.259	0.025	-0.258	0.025	0.163	0.162	0.293	0.011	-0.246	0.033	-0.298	0.010
Sexual behavior	capacity	0.298	0.009	0.26	0.051	0.324	0.005	0.212	0.067	0.344	0.003	0.295	0.010	0.331	0.004
	function	-0.14	0.906	-0.168	0.150	-0.135	0.247	-0.081	0.490	-0.122	0.296	-0.083	0.478	-0.166	0.323
	motivation	0.145	0.213	0.071	0.546	0.089	0.447	0.080	0.498	0.043	0.713	0136	0.246	0.113	0.335
	scheme	0.138	0.236	0.071	0.509	0.1	0.395	-0.018	0.878	0.022	0.852	0.119	0.311	0.99	0.398
	total	0.158	0.176	0.032	0.784	0.087	0.456	0.051	0.616	0.074	0.527	0.120	0.304	0.096	0.414

Discussion

The aim of this study was to assess the sexual function and sexual behavior of 75 women with breast cancer in Zanjan, Iran. The results showed that sexual function, especially in the phase of sexual orgasm and the sexual behavior of the women was impaired. The highest rate of sexual dysfunction was reported in a study by Zaygami et al. (2008), which is inconsistent with the results of this study in terms of arousal and sexual orientation. The findings of this study are inconsistent with Fahami et al. (2012) who showed a lack of sexual desire and sexual anger in women. The differences in the sample size, and population as well as the concomitant use of aromatase inhibitors in the present study may be the main reasons for the contradictory results [13].

Hassanzadeh et al. (2009) reported 31% cervical cancer patients of low pelvic radiotherapy, 43% inappropriate sexual stimulation, 35% low vaginal moisture, and 42% unfavorable orgasms. It was reported that 41% of the women complained about intercourse and 24% of the patients were dissatisfied with their sexual function [2]. A number of these findings, including sexual dysfunction and orgasm are similar to the findings of our study. The results of our study shows that those who experience different stages of admission, change in role, and social and family functions often suffer from disturbances in different phases of sex and marriage relationships, which require counseling and treatment support.

Regarding the reduction in desire, the participants in this study showed a low desire in spouses due to the use of Tamoxifen and consequently reduced their sexual activity. It seems that menstruation and the type of treatment were unaffected by sexual function. Due to hormonal effects, decreased desire affected by age, vaginal atrophy, dyspareunia, burning and, as a result, reduced pleasure during sex, appeared to be an effective factor. This finding is in line with the findings of the study conducted by Shandiz et al. (2016) [19].

The positive side of this study was its examination of all dimensions of sexual relations (distress, function and sexual behavior) in women with breast cancer, which were compared with other influential characteristics. One of the limitations of this study was participants' self-reports that could not be regarded as accurate and reliable responses to the questionnaire.

The results of this study can be used to develop local health promotion plans for the treatment of breast cancer patients who can improve their marital problems. If this counseling is

supported immediately after the diagnosis of cancer in the treatment program, it can lead to greater strength of their lives and also increase the support of spouses. Further studies are recommended to focus on women suffering from breast cancer, the impact of counseling models on sexual behavior, and the sexual function of breast cancer patients immediately after diagnosis as well as empowering counseling providers to help cancer patients resolve their sexual issues.

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